

GOODMAN RESEARCH GROUP, INC.
Program Evaluation • Consultation • Market Research

*Pushing the Limits:
Making Sense of Science*
Summative Evaluation

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TABLE OF CONTENTS

Acknowledgments	2
Executive Summary	4
Introduction.....	7
Phases I and II of the PTL Program	7
GRG’s Evaluation of the PTL Program	10
Methods	11
Summative Evaluation Design	11
Evaluation Instruments.....	11
Procedures	13
Results.....	14
Who Are the Library Professionals and Science Partners?	15
How Useful Were the PTL-Provided Resources?	18
How Did the PTL Programming Unfold?	24
How Successful Was the Implementation of the PTL Programming?	29
What Was the Impact of the PTL Programming?	36
How Could the PTL Program Be Improved?	48
Feedback on PTL Items about Different Possible Iterations of the PTL Program	52
Conclusions.....	54
Patrons Are Engaged in Science and Learn About Scientific Topics	54
Library Professionals Gain Self-Efficacy & Capacity as ISE Resources.	54
Science Partners Gain Self-Efficacy & Interest in Public Science.....	54
The Community Landscape of Science Programming is Enhanced.....	55
Recommendations.....	56
Enhance Customizability.....	56
Provide More Supplementary Materials.....	56
Make Most Materials Available Online	57
Expand Availability of PTL Program.....	57
List of Appendices	58
A: Annotated Library Professional Background and Post-Programming Surveys	58
B: Annotated Science Partner Post-Programming Survey	58
C: Annotated Patron Event #1 and Event #4 Surveys	58
D: Annotated Site Visit Observation Protocol	58



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EXECUTIVE SUMMARY

Pushing the Limits: Making Sense of Science (PTL) is an NSF-funded program designed to build the capacity of rural and small libraries to provide programming to enhance public understanding of science and math. PTL provides professional support, technical assistance, specially produced video segments, and funding for library professionals and their local science partners to co-facilitate a series of science café-style public discussions with adult patrons.

In Phase I of the PTL project (September 2012-August 2013), 20 rural and small libraries piloted the program. In Phase II (September 2013-August 2014), the PTL program was scaled up to 74 additional libraries.

External evaluator Goodman Research Group, Inc. conducted the external evaluation of the PTL project, including the second formative evaluation during Phase I and the summative evaluation during Phase II, described in this report. The summative evaluation focused on the effectiveness of the PTL project in meeting its goals for the library professionals, their patrons, and their science partners.

METHODS

GRG's summative evaluation design included background and post-programming surveys for the Phase II library professionals, post-programming surveys for their science partners, patron surveys after the first and fourth PTL event at 19 libraries, and observations at 10 libraries. Responses rates were excellent for the library professionals (93-94%) and the patrons (84-88%) and very good for the science partners (73%).

KEY FINDINGS

- The Phase II PTL libraries have moderately low staffing and STEM resources. The library professionals are very experienced with adult programming, but only a quarter had experience with adult science programming.
- For the science partners, fewer than half had experience with public science programming for adults. Before PTL, they gave themselves fairly high ratings in interest, ability, and comfort in public science programming.
- Library professionals found the PTL-provided PD resources — particularly the website, listserv, and webinars — very helpful in preparing them to plan, market, and implement their PTL programming. They gave high marks to the organization and clarity of the PD and felt it was especially strong in preparing them to plan and facilitate events.

- The majority of science partners felt the PTL-provided materials prepared them to co-facilitate the program; most also drew on their own professional background in science.
- Library professionals and science partners customized their events to the topics, audience interests, and their local community and culture in interesting ways, including with food, activities, demonstrations, and examples.
- Library professionals and science partners reported great success in planning the series, engaging audiences, and facilitating lively discussions. On average, across all objectives, 79% of library professionals and 85% of science partners rated themselves as *very* or *extremely* successful in accomplishing them.
- The PTL programming successfully drew a crowd that was not necessarily already interested in STEM topics; 61% were only somewhat or less interested. At most libraries, the PTL events drew people who don't usually attend the programming. More than half said PTL events drew more men than usual, and a third had bigger crowds than usual.
- PTL events were very successful in engaging patrons. The most engaging component was the science partners, followed by the audience discussion. Library professionals also gave high ratings to the PTL programming in terms of broader goals, particularly advancing library goals and serving their communities.
- Patrons at the 19 surveyed libraries were extremely engaged, interested, and curious to learn more about the topics. Fully 59% were more interested in the science, technology, and engineering aspects of the event than they had expected. In describing what they had learned, 41% mentioned something involving science or technology.
- Library professionals made large gains in self-efficacy, especially in science knowledge, comfort finding science resources, and comfort facilitating science programming. They also felt much better prepared to continue developing and planning science programming. This translates into concrete plans to continue science programming for about two-thirds of the library professionals.
- Most science partners plan to continue their involvement with public science programming. Despite their initially high ratings in interest, ability, and comfort with public science, there were significant gains after PTL, particularly in comfort in informal learning environments and in interest in facilitating science programs.

KEY RECOMMENDATIONS

- GRG recommends further enhancing the customizability of the PTL programming by offering several book choices per topic, along with links to existing author videos that could be used with the alternate book selections. Discussion questions at varying levels of scientific sophistication would also help them tailor the program to their audiences.
- Library professionals and science partners wanted some additional materials. GRG suggests providing science partners with a brief written orientation to the PTL program, its goals, and the science partner's role along with a very brief video of the program in action. For library professionals, PTL should supply more customizable marketing templates and expanded lists of related books, videos, and resources. GRG also suggests expanding the discussion questions and providing a set of programming suggestions, activities, and display ideas.
- Because there is a fair amount of turnover in library personnel over the course of a programming year, GRG urges the PTL team to consider placing all of the PTL material, including all media, on the website to make it easier and more convenient for libraries to share materials with new staff and with science partners.
- Because *Pushing the Limits* is a highly successful program, GRG recommends providing libraries with more than four thematic units and expanding the program to additional small and rural libraries, as well as to other libraries.

INTRODUCTION

“This was a wonderful opportunity for a small library to offer a first-class program!”

–Library Professional

Pushing the Limits: Making Sense of Science (PTL) is an NSF-funded program designed to build the capacity of rural and small libraries to provide programming that enhances public understanding of science and math. PTL provides professional support, technical assistance, specially produced video segments, and funding for selected library professionals and their local science partners to co-facilitate a series of four science café-style public discussions with adult patrons at their libraries.

The discussions are structured around the notion that we all use science in our everyday lives to “push limits.” Each discussion topic — Knowledge, Nature, Survival, and Connection — is linked to a popular work of literature and includes two specially produced brief video segments, one featuring the work’s author and the other featuring a human interest story illustrating relevant themes for discussion.

The PTL program aims to increase engagement with and understanding of science among two adult audiences that historically have had less access to scientific programming: rural library professionals and adults in the communities they serve. The program builds library professionals’ capacity to support informal science learning (ISL) in their communities by providing professional development (PD) and by guiding them in selecting and working with a local science partner to coordinate and co-facilitate adult programming on science-related topics.

PTL was created by an interdisciplinary team of library professionals, scientists, and filmmakers from Dartmouth College, Dawson Media Group, Oregon State University, the Association of Rural and Small Libraries, and the Califa Group.





PHASES I AND II OF THE PTL PROGRAM

In Phase I of the PTL project (September 2012-August 2013), 20 rural and small libraries piloted the program. In Phase II (September 2013-August 2014), the PTL program was scaled up to 74 additional libraries.

Topics, Books, and Videos

As noted above, PTL has four topical themes: Knowledge, Nature, Survival, and Connection. Each has a brief author video and a longer related human interest video, as shown below.

Figure 1
PTL Topics, Books, and Human Interest Videos

 KNOWLEDGE	 NATURE
<i>The Land of Painted Caves</i> , Jean Auel Sean Brock, Celebrity Chef	<i>When the Killing's Done</i> , T.C. Boyle Cameron Clapp, Athlete
 SURVIVAL	 CONNECTION
<i>Arctic Drift</i> , Clive Cussler Julie and Cory Shrum, Family Farmers	<i>Thunderstruck</i> , Erik Larson Roxanne Swentzell, Sculptor

Virtual PD Resources for Library Professionals

During Phase II of the project, there was one significant change: Instead of delivering the PD for library professionals via a two-day meeting, the PD was delivered via a distance education model. The PTL program provided a comprehensive suite of resources designed to help the library professionals:

- Become familiar with ISE and the potential role of the library in building a community's capacity to understand science;
- Develop competencies for planning, coordinating, and co-facilitating PTL programs; and
- Prepare a customized action plan for implementing the PTL programs in their community.

There were two live webinars, and participants received a DVD that included six video PD units. Additional resources were provided online on the PTL website and through a listserv discussion group that served as a virtual community of practice where library professionals could share experiences, seek advice, and ask questions of other participants, the PTL leadership team, and several of the pilot library professionals.

The two webinars were held in September and October of 2013 and covered the following topics:

- *Planning Your Programming*: General background information, specifics related to planning the PTL program series (slides available on website).
- *Programs in Action*: Techniques to promote audience discussion and inquiry, including strategies to handle difficult facilitation situations (slides available on website).

Library professionals were instructed to view the first five units before the first webinar and the sixth before the second webinar:

- *Unit 1, Introduction*: PTL project and goals, what series might mean for community (handout on website).
- *Unit 2, What Is Informal Science Learning (ISL)?* Key aspects of ISL and how libraries play an important role in its implementation (handout & article on website).
- *Unit 3, Libraries as Community Resources for ISL*: Advantages ISL can bring to community and how libraries can benefit from PTL (handout on website).
- *Unit 4, Working with Science Partner*: Creating and/or strengthening relationships with local science partners (handout on website).
- *Unit 5, Marketing PTL Series*: Using the Marketing and Communication Plan template to develop strategies to promote the program series (template on website).
- *Unit 6, Fostering Engaging Discussions*: Tips for leading discussions as a co-facilitator with science partner (handout & article on PTL website).

Other resources available on the PTL website included:

- A STEM video podcast led by two of the PIs covering content-related questions to support library professionals and their science partners.
- A programming toolkit with seven downloadable documents, some customizable, to help library professionals plan and implement the PTL series. These included documents on planning timeline, program sequencing, program format, working with science partners, marketing and communications samples, and a set of discussion questions for each program topic.
- Recommended readings and collection development resources, including books and other supporting materials complementing the PTL themes.

Resources for Science Partners

Science partners had access to the website resources, including discussion questions, the STEM video podcast, and the slides from the webinars for the library professionals; some library professionals also shared the DVD with six video PD units with their science partners.

GRG'S EVALUATION OF THE PTL PROGRAM

Goodman Research Group, Inc., a Cambridge, Massachusetts research firm specializing in the evaluation of educational programs, materials, and services, conducted the external evaluation of the PTL project, including the second formative evaluation during Year 3 of the project and the summative evaluation during Year 4, described in this report.

The summative evaluation assessed the effectiveness of the PTL project in meeting its goals for the library professionals, their patrons, and their science partners. The summative evaluation was guided by the following questions:

- Does project participation increase library professionals' perception of themselves as science resources in their communities and as facilitators of public science programming?
- How effective is the content of the project's PD via a distance education format (i.e., web-based materials and resources, listserv, two webinars, six-module DVD)?
- Does attending a PTL discussion event increase rural adults' interest in and knowledge of science and their motivation to learn more about science and attend science-related free-choice learning?

METHODS

SUMMATIVE EVALUATION DESIGN

GRG's summative evaluation design for Year 4, the final year of the PTL program, included background and post-programming surveys for the 73 library professionals¹ participating in the full scale-up of the project,² post-programming surveys for their science partners,³ observations at a sample of 10 libraries, and patron surveys administered after the first and fourth PTL event at a sample of 19 libraries.⁴ Most libraries held PTL events on a monthly basis, with the earliest occurring in January 2014 and the latest occurring in September 2014.⁵

EVALUATION INSTRUMENTS

Library Professional Surveys

The background library professional survey was designed to gather information about the libraries' baseline resources and history with adult science programming and the library professionals' demographics and own capacity to facilitate such programming.

The post-programming survey asked respondents to reflect on their experiences implementing the PTL program and assess the effectiveness of different aspects of the program, including support and PD materials from the PTL team, their experience planning and facilitating the events, the audience's engagement, their library's capacity to run adult science programming in the future, and their own capacity to facilitate such programming. Library professionals were also asked to provide suggestions for future iterations of the PTL programming. The full list of questions and results from the library professional background and post-programming surveys can be found in Appendix A.

¹ Many of those planning and implementing the PTL programming served their libraries in roles other than librarian, so the term "library professional" is used throughout this report.

² 73 libraries participated in the full scale-up, but only 68 completed their PTL programming by July 31, 2014, making them eligible to participate in the summative evaluation. All library professionals were invited to take the background survey, while only those eligible for the summative evaluation were asked to complete the post-programming survey.

³ Each library had 1-4 science partners; library professionals listed a total of 137. However, science partners at libraries that did not provide accurate contact information for them or whose programming extended beyond July 31, 2014 were not included, leaving 124 science partners as the total N described in this report.

⁴ Twenty libraries were asked to administer patron surveys, but one library had two attendees (who opted not to fill out surveys) at its first event and nobody at its fourth event, leaving 19 libraries as the total N described in this report.

⁵ As noted above, five libraries continued their PTL programming beyond July 2014, but were not included in the summative evaluation.

Science Partner Survey

The post-programming survey asked science partners to reflect on their experiences preparing for and facilitating the PTL program and to assess the effectiveness of different aspects of the program, including the materials from the PTL team, their experience preparing for and facilitating the events, the audience's engagement, and their own capacity to facilitate adult science programming (before and after participating in PTL). Science partners were also asked to provide suggestions to improve the PTL programming and for their demographic information. The full list of questions and results from the science partner post-programming survey can be found in Appendix B.

Patron Surveys

Surveys administered immediately after the first and fourth event at a subset of libraries asked patron attendees about their interests, their assessment of the value and effectiveness of the PTL events, how they heard about and why they attended that particular PTL program, and how the PTL events might influence them in the future. The full list of questions and results from the patron first and last event surveys can be found in Appendix C.

Observation Protocol

The site visit observation protocol was designed to give GRG an understanding of how the PTL events actually unfold, including the structure and organization of the event, the audience's engagement with different aspects of the event, and the discussion among the science partner, library professional, and audience. The protocol included objective, quantitative measures as well as a qualitative narrative. Full results from the site observation protocol can be found in Appendix D.

PROCEDURES

The table below shows the summative evaluation activities, the timeline, and the response rate for each. Procedures are described in further detail beneath the table.

Table 1
Summative Evaluation Activities, Schedule, and Response Rates

	Completed	Participated/ Invited	Response Rate
Library Professionals			
Background survey	July 2013	70/75 ^a	93%
Post-programming survey	July 2014	64/68	94%
Science Partners			
Post-programming survey	July 2014	90/124	73%
Library Patrons (19 libraries)			
Patron survey at event #1	February-April 2014	203/232	88%
Patron survey at event #4	April-July 2014	141/168	84%
Site Visits (10 libraries)			
Site visits, observations	March-June 2014	72 ^b	n/a

^aThe original scale-up included 75 libraries, but two dropped out shortly after background survey invitations went out to library professionals.

^bResponse rates are not applicable to the site visits. Instead, the number of attendees present is reported.

All surveys for library professionals and science partners were administered online, whereas patron surveys were administered on paper. To select the libraries for patron surveys, GRG conducted a random sampling of libraries whose first event was held no earlier than February 2014 and whose final event was held no later than July 2014. As noted earlier, 19 libraries distributed paper surveys to all patrons attending the library's first and fourth (final) PTL event. Library professionals returned completed surveys to GRG via overnight mail.

To select the 10 libraries for site visit observations, GRG chose events held between February and July 2014 in geographically diverse areas across the United States where researchers would be available to conduct site visits. GRG staff conducted four visits and field researchers hired by GRG conducted the other six. Researchers were passive observers at the events, and library professionals were instructed to run the program normally without attention to the researcher.

The library professional, science partner, and patron surveys achieved high response rates. For their respective surveys, library professionals and science partners received an email invitation and up to four reminders to complete it. The library professionals, who were in communication with GRG and were familiar with GRG's evaluation of the PTL program, were the most responsive to the surveys. As library professionals also controlled the administration of the patron surveys, patrons were also highly responsive to the surveys. The science partners, who were less familiar with GRG and with the evaluation, were relatively less responsive to their survey, although almost three-quarters of them did respond.

RESULTS

In this section, we first describe the demographics and background experience of the library professionals and their science partners as well as their initial ability and interest in facilitating public science programming. Next we turn to the usefulness of the web-based professional development (PD) resources in preparing library professionals to plan, coordinate, publicize, and co-facilitate the PTL programming and the materials provided for science partners in preparing them to plan and facilitate events.

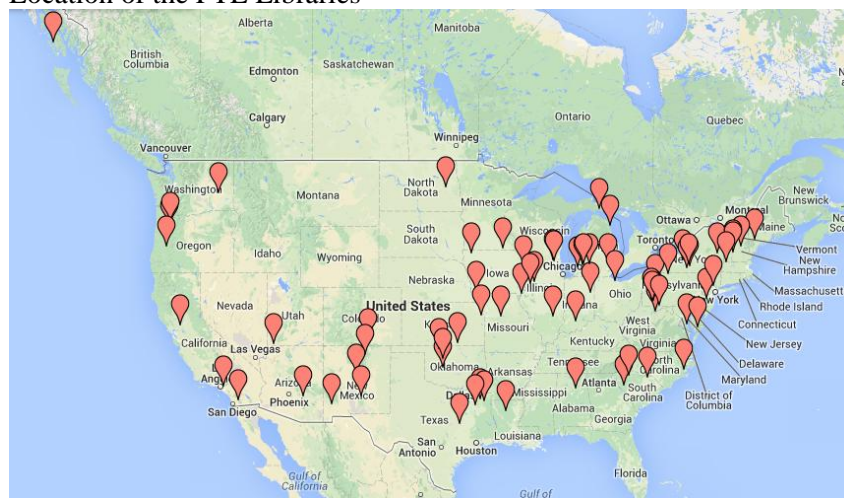
In order to illustrate the way the PTL events tended to unfold, we describe field researcher observations of 10 selected PTL events, followed by quotes from the listerv describing how library professionals and science partners customized the PTL events to make them their own. Next we present data from library professionals, science partners, and patrons assessing the quality of the PTL programming and offering suggestions for improvement.

Finally, we turn to the impact of the PTL programming on library professionals, science partners, and patrons. Appendices A-D show quantitative and open-ended findings from the library professional, patron, and science partner surveys and from the PTL event observations.

WHO ARE THE LIBRARY PROFESSIONALS AND SCIENCE PARTNERS?

Libraries serving towns with a population of 10,000 or less were invited to apply for PTL funding of \$2,500 each. Initially, 75 libraries were selected from 102 that applied; two dropped out before any PTL programming began. The 73 libraries participating in the full scale-up of the PTL program are distributed across the United States, from Craig, Alaska to Julian, California, and from Paris, Maine to Chesterfield, South Carolina. Sixty-eight libraries completed their PTL programming between April 1 and July 31, 2014, and were thus eligible to participate in the summative evaluation.

Figure 2
Location of the PTL Libraries



The libraries have moderately low resources. The median number of full-time staff is just three, plus four part-time staffers and five volunteers. Just 10% of the libraries rate their library's STEM resources as *very good*, although 41% rate them as *good*; the rest rate them as *fair* (41%) or *poor* (9%).

Library Professionals

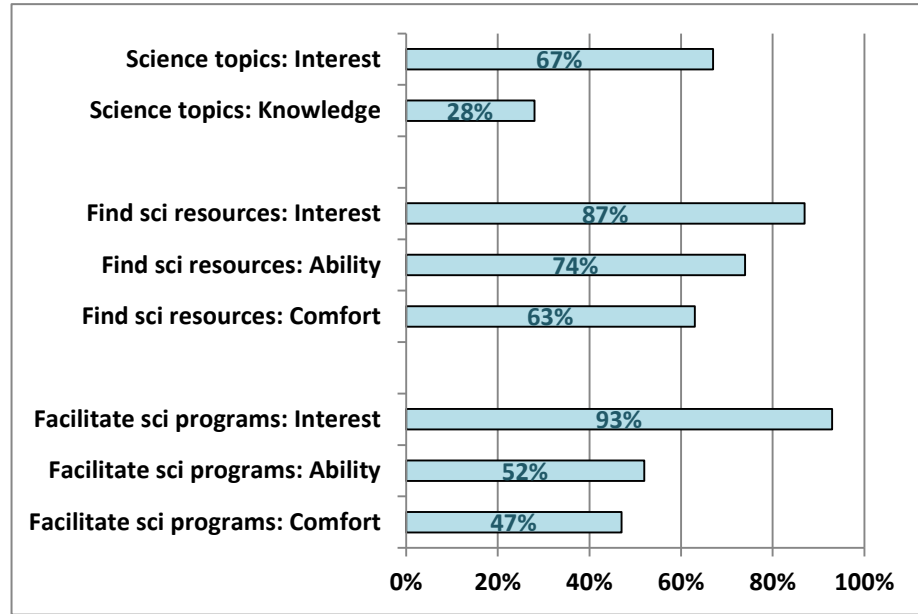
Most of the library professionals are women (86%), and almost all are White (96%). They have been employed as library professionals for a median of 8 years (range = 1-37 years), and almost three-quarters (71%) have a master's or professional degree.

These library professionals are an accomplished and motivated group in terms of PD and adult programming experience. Almost three-quarters (73%) have run more than 10 public programs, and more than half (57%) have participated in more than five PD programs within the past two years. Most (78%) have partnered with professionals outside the library in this programming.

However, only a quarter (25%) have experience with science-related adult programming, and just over a third (37%) have done adult programming

integrating books and videos. Not surprisingly, then, the library professionals see a fair amount of room for improvement in their interest, ability, and comfort in serving as informal science education (ISE) resources in their communities. This is especially true for knowledge of science topics and for ability and comfort in facilitating science programming.

Figure 3
Library Professionals' Initial Self-Efficacy as ISE Resources



N=69-70

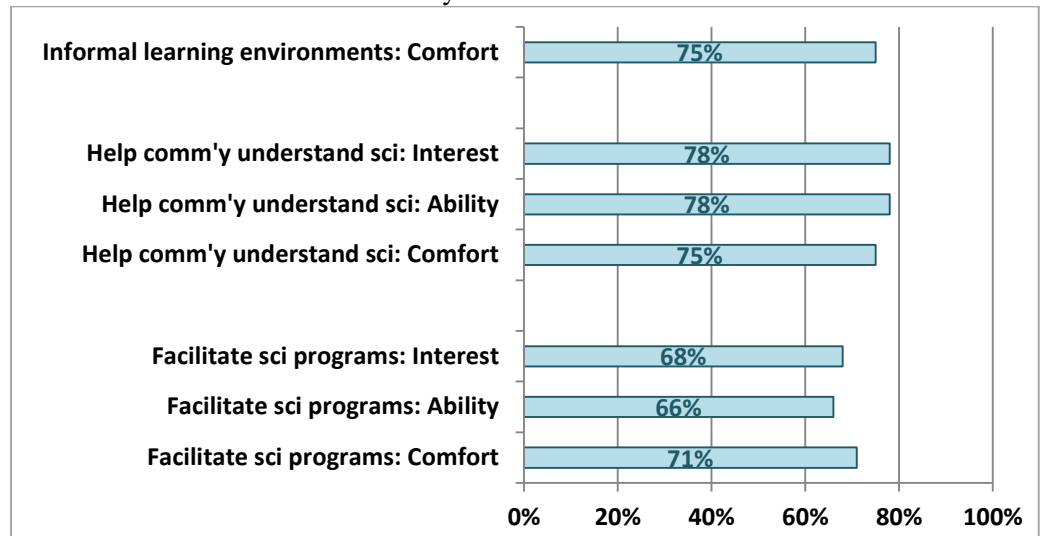
Note: Bars represent the percentages who responded *quite a bit* or *a great deal*.

Science Partners

In contrast to the library professionals, the science partners are evenly split between men (50%) and women (50%). As with library professionals, almost all are White (99%). Almost three-quarters (72%) have a master's, professional, or doctoral degree. Fewer than half (46%) of science partners have previous experience with public science programming for adults, including public or school-based fairs, festivals, events, presentations, and lectures, most often in the areas of science, history, and nature.

Asked to reflect on their interest, ability, and comfort in public science programming before their PTL participation, science partners gave themselves fairly high ratings, with over two-thirds responding *quite a bit* or *a great deal* to each item. Not surprisingly, those with previous experience with adult public science programming rated themselves significantly higher than did science partners without prior experience for every self-efficacy item, with one exception: Regardless of past experience, science partners are equally interested in helping people in the community understand science-related topics.

Figure 4
Science Partners' Initial Self-Efficacy as Public Science Communicators



N=88-89

Note: Bars represent the percentages who responded *quite a bit* or *a great deal*.

Science partners were fairly evenly distributed in terms of which PTL events they helped facilitate. On average, they facilitated between two and three events, but 47% facilitated only one and 35% facilitated all four.

Almost three-quarters of science partners (73%) volunteered to participate in the PTL program because of personal interest. About two-thirds (65%) mentioned their educational and/or occupational background in science, and about a quarter (24%) mentioned participating in similar science programming previously. Almost a third of science partners (32%) participated, in part, simply because the library professional or a colleague asked them to.

HOW USEFUL WERE THE PTL-PROVIDED RESOURCES?

Library Professionals' Preparation to Implement PTL

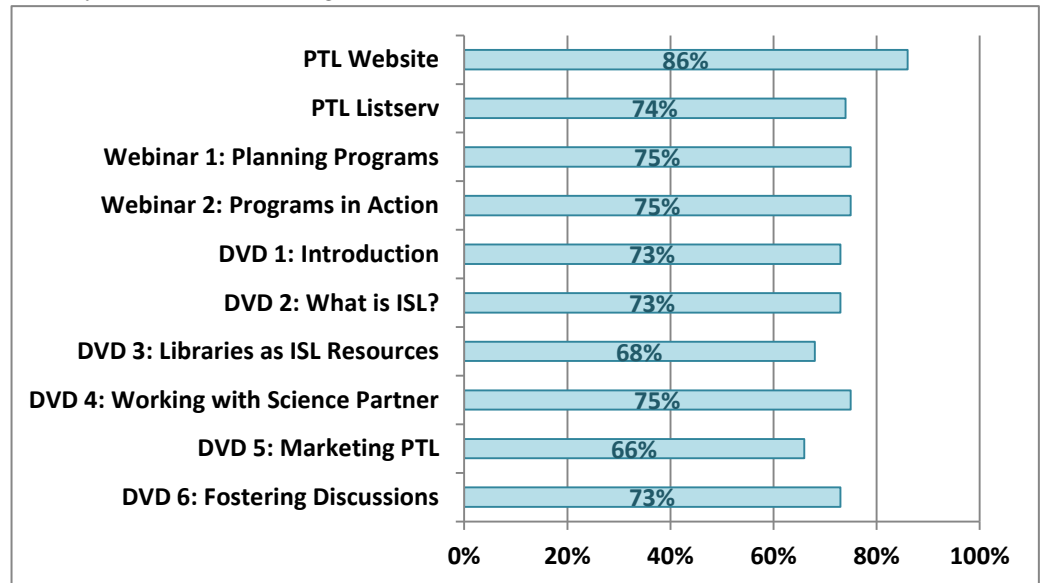
Library professionals found the PTL-provided PD resources very helpful in preparing them to plan, market, and implement their PTL programming. They were particularly appreciative of the PTL website, but most also found the webinars, DVDs, and listserv to be quite helpful as well:

“A very good program, and ‘out of the box’ easy to run.”

–Library Professional

It’s so great that we have this listserv to share what happens with the series in all our libraries — exciting to see all this discussion going on and to see that patrons like the events!

Figure 5
Library Professional Ratings of PD Resources

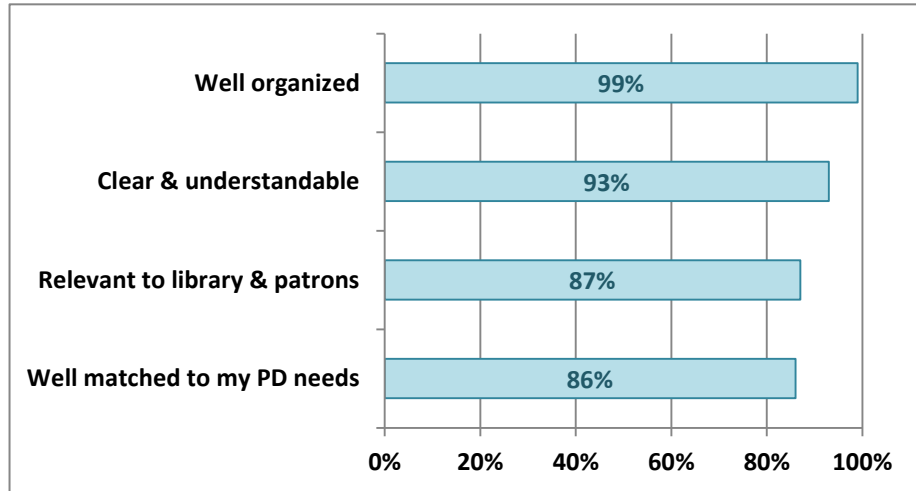


N=59-64

Note: Bars represent the percentages who responded that the resources had prepared them *quite a bit* or *a great deal* to plan, market, and co-facilitate the PTL program in their library.

The library professionals gave extremely high marks to the overall quality of the PD provided to them by the PTL team, particularly in terms of the PD’s organization, clarity, and understandability.

Figure 6
Library Professionals’ Ratings of the Quality of the PTL PD Resources



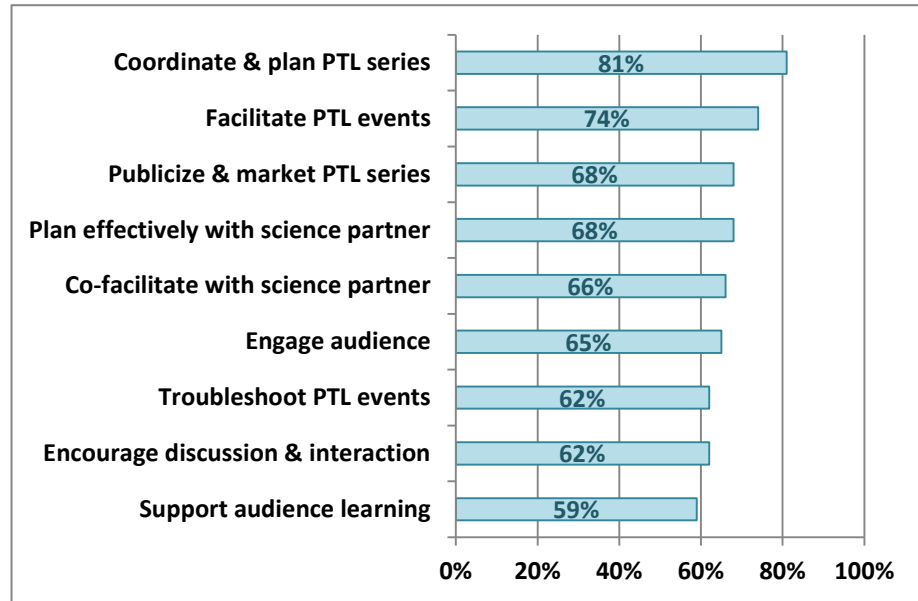
N=62-64

Note: Bars represent the percentages who *agreed* or *strongly agreed* that the PTL PD and training had these characteristics.

The PD resources were designed to help the library professionals develop specific competencies in planning, coordinating, and co-facilitating PTL programs, and the majority felt that the resources did so. The library professionals rated the PD as particularly strong in the areas covered in the two webinars: (1) coordinating and planning the PTL series, and (2) facilitating individual PTL events.

“I thought the program was wonderful. Very well organized and lots of information provided to make planning the events easier.”
–Library Professional

Figure 7
 Library Professionals’ Preparation to Implement PTL



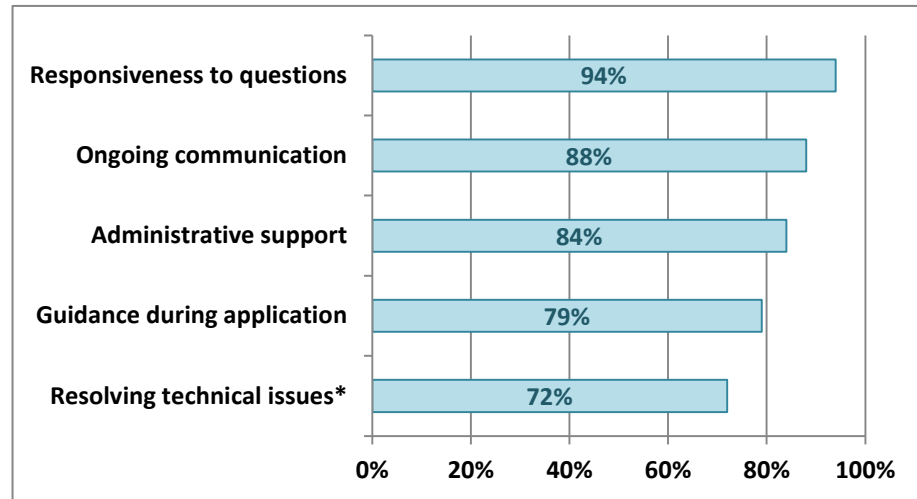
N=42-63

Note: Bars represent the percentages who responded that the PD prepared them *quite a bit or a great deal*.

PTL Team Support of Library Professionals

The library professionals felt well supported by the PTL team, especially in terms of responsiveness to questions and ongoing communication.

Figure 8
Library Professional Ratings of Quality of PTL Support



N=42-61

Note: Bars represent the percentages who responded that the quality of support in each area was *very good* or *excellent*.

*Note that fully one-third of the library professionals reported that this question did not apply. Of the two-thirds for which the question did apply, 72% found the support *very good* or *excellent*.

Science Partners' Preparation to Implement PTL

Almost two-thirds of science partners (62%) indicated that the materials provided by the PTL team prepared them *quite a bit* or *a great deal* to co-facilitate the PTL program. Most science partners felt prepared and knowledgeable to co-facilitate the program by drawing on their own background in science, using the materials provided by the PTL team and conducting further research on the PTL topic events:

The materials provided by the Library and the PTL program were wonderful for preparing me as the science partner. I felt that I was very well prepared to be a discussion leader for this topic. I had ample time to do further research and reading on invasive and introduced species so that I was able to contribute additional information that was pertinent for our area.

At the outset, I wasn't sure what I'd agreed to do. The librarian who worked with me, though, explained things well enough that after I'd reviewed the materials, I did feel well prepared. I knew more than enough to help guide readers' discussions about science and the nature of knowledge.

I am a scientist so felt comfortable with the content, and as a professor, was adequately prepared for each event.

Nonetheless, there were some additional materials that science partners would have found helpful. Science partners who did not feel *extremely* successful at accomplishing the program goals for science partners in facilitating the PTL program (91%) were asked which materials or training could have better supported them in running successful and engaging PTL events. These science partners most frequently selected video of similar programs and written material describing successful strategies. For example:

I think providing links to videos of the program being carried out at other libraries would be helpful. I ended up finding a recording of a session through YouTube and found that very helpful in preparing my discussion.⁶

⁶ It should be noted that the PD DVD for library professionals did actually include this type of material, so it is already available.

Table 2
Additional Helpful Materials and Training

	Percentage
Video of similar programs in action so I could observe the process	43%
Written material describing strategies that are successful in this type of setting	41%
Live webinar or other interaction with people who communicate science to the public	19%
Other	12%
None of the above	28%

N=75

Note: Percentages exceed 100% because respondents could select more than one response.

“Other” responses related to: increasing attendance (2), better/more discussion questions (2), access to demonstrations/rubrics for the program (2), better books, more science information relating to the books, and more preparation materials in general.

In their open-ended comments, science partners offered more detailed suggestions for how the PTL team could help them feel better prepared, including providing them with a more detailed description of the role of the science partner, more information on the science in the books and videos, and improved discussion questions, particularly so that they do not need to do as much of their own research in advance of the events:

I think it would be helpful to improve upon the narrative that describes to the science partner what PTL is trying to do and how you expect it to be done. I spent quite a bit of time sifting through the material to get a better sense of what I should be doing.

As an educator and a scientist, I found the PTL questions to be restrictive.

I think this was a great program. It would have been nice to have a short summary about why each book was chosen, especially for “The Land of the Painted Caves.” A short explanation of the science in each book may have also been helpful, especially for “Arctic Drift.” I did a bit of research before our discussion of that book, but it was sometimes still difficult to separate fact and fiction.

One of the library professionals agreed:

I would also like to have seen a web section that showed the science partner exactly what they were meant to do so they didn't feel that they had to go through so much information. It could have listed sample classes that included book, video, questions.

HOW DID THE PTL PROGRAMMING UNFOLD?

As noted earlier, field researchers visited and observed 10 selected PTL events across the country. In order to give a sense of how the PTL events typically unfolded, we describe some of the commonalities and differences in the observed events below (fuller details on the results of the site observations can be found in Appendix D).

“I felt that the audience was very engaged in our discussion — we had a good time! I think that there was an appreciation and recognition that scientists like me are “real people, too.” We found common ground in discussing science education and our society’s need for innovation.”
—Science Partner

Commonalities Among Observed PTL Events

Each observed event occurred in the library, either in the library proper (book stacks) or a designated meeting room. Regardless of room size, the attendees sat relatively close together, often in a circle or semi-circle with the facilitator(s) at the front. Nine of the 10 libraries provided refreshments, ranging from snacks to a full dinner.

At all ten observed libraries, events began with a discussion of the book and then flowed naturally into discussion of related ideas and topics. At the eight libraries that used the PTL videos, the author video was typically shown next, followed by the human interest video, with brief discussion following each video. One library had a more defined structure for the event, in which the library professional started with an overview of the event agenda and described goals for the event; this event was received very positively by attendees.

Field researchers noted that the science partners had done advance research on the book, the theme, and related scientific topics. Science partners also typically had some discussion questions in mind for the audience, whether those provided by the PTL team or their own. In some instances, the library professional had also done advance research and come prepared with discussion questions.

Most attendees were highly engaged in the events and interested in the discussion. At nine libraries, field researchers rated attendee interest and enjoyment as *high* or *very high*. Even those who were less vocal during discussions were interested and attentive. On average, observers rated attendees as being actively engaged — that is, contributing comments or asking or answering questions — 74% of the time, and more quietly engaged — listening, nodding, looking at the person talking or at the book — 25% of the time.

The topics discussed and the ideas shared tended to become broader and more science-oriented toward the end of events. The book was often used as a launching pad for later scientific discussion of related topics. At eight events, field researchers specifically noted attendee interest in scientific discussion and how attendees were, at least in part, spurring or driving the scientific conversation by contributing comments and asking questions; the facilitators were not the only ones guiding the discussion toward scientific topics. Field researchers estimated that, on average, both facilitator and attendee comments and questions were more often related to science topics than to details of the books or the videos.

At seven libraries, field researchers noted that some or all attendees knew the library professional and one another well, whether because they had attended prior PTL events together, were regular attendees of the library's other programming or book club, and/or were regular visitors to the library. These attendees were especially comfortable sharing ideas, disagreeing with one another, and infusing jokes and humor into the discussion. Attendees who had been to prior PTL events often referenced these events during the discussion.

At eight of the libraries, attendees were not terribly enthusiastic about the book itself, and not all attendees had read or finished it. (At the other two libraries, attendees seemed to have enjoyed the T.C. Boyle and Clive Cussler books.) Nevertheless, most attendees still enjoyed discussing and critiquing the book. Discussion was lively, although less so among those who had not read the book.

Differences Among Observed Events

Among the libraries that used the videos, there was slightly mixed success in incorporating these into the discussion. At five libraries, field researchers noted that both the author and human interest videos helped encourage discussion. One researcher noted that the conversation became deeper and more complex as attendees and the facilitators integrated information from the videos into their discussion of the book and of the scientific topics.

At two other libraries, field researchers reported that the human interest video was more effective than the author video at stimulating further discussion. At one of these, the library professional included a second clip to compare with the PTL human interest video; both were very successful at stimulating discussion.

In contrast, at one library, the field researcher noted that both videos seemed to interrupt a naturally flowing conversation. At this event, the discussion had already moved to broader scientific topics before the videos were shown, so when the conversation was paused for each video, the video did not particularly relate to the discussion that was happening.

At four libraries, the library professional and science partner acted as co-facilitators, leading the event together or each leading a portion of the event. At two of these, the library professional was the primary facilitator, whereas at one, the science partner was. At the fourth, the library professional and science partner truly facilitated together and quite equally. At the other six libraries, the science partner was the facilitator and the library professional typically participated in the discussion as an attendee, if at all.

At five of the libraries, field researchers noted that the facilitator had to play a fairly active role in prompting and guiding the discussion, whereas at two libraries, attendees carried on lively discussions with little to no prompting. Observers rated seven of the science partners as providing *very good* or *excellent* facilitation. Of the six library professionals who played a role in facilitation, three were rated as providing facilitation of that quality.

Ways of Customizing the PTL Events

The PTL listserv was a rich source of data on the different ways library professionals and science partners customized their PTL events to their topics, audiences, and locales.

Topical Food, Activities, and Demonstrations

At some libraries, library professionals and science partners incorporated food, activities, and demonstrations related to the PTL event's theme (i.e., Connection, Knowledge, Nature, Survival). Some library professionals were very creative in customizing the refreshments to the topic:

I made a midnight black chocolate cake with fresh whipped cream and frosted so it looked like snow drifts, lemon balls rolled in coconut so they looked like snowballs, and "ice cube" chocolates, plus hot chocolate with marshmallows. [Survival]

For our first session on "Arctic Drift," we served Arctic Punch (blue with ice cream icebergs) and "survival food" – jerky, dried fruit, trail mix (and my idea of survival food: chocolate cupcakes). [Survival]

We just finished the Nature program. We had a really good turnout for this one...We had one discussion and had gummy rats as a treat for everyone. [Nature]

Science partners also showed their creativity in coming up with scientific activities and demonstrations to illustrate the event's theme:

Our science partner started the program with two "ice breakers," one actually involving ice cubes to demonstrate the effect of cold on your motor skills. The other one involved carbonated water/tap water demonstrating the acidification of oceans and what this means for crustaceans. [Survival]

For Knowledge, we just finished our event with a member of the CalPoly–Pomona Robotics club. This was a completely hands-on event with all participants making their own simple brushbots and a watercolor-painting vibrobot...The highlight was the 80-year old woman learning to strip wire and tweak her little robot. [Knowledge]

My two science partners were from the Rec department of our US Forest Service Ranger Station. Both have backgrounds in invasive species from the governmental policy angle. Wow! The conversation moved from fox farms to mink farms to endemic species to wolves to invasives to transplanted Aleutian sea otters to wild horses in the American Southwest...! [Near the end of the event], they announced a field trip to a test plot near town, so we

all piled into cars and took a field trip! By the time it was over, EVERYONE was talking about how much fun it had been. [Nature]

We were able to get a Senior Criminologist from the Los Angeles department of the Coroner! For reference, this is the criminologist that collected and analyzed the samples from Michael Jackson's body as well as testified in the Phil Spector case. It was an amazing (albeit somewhat disgusting) presentation (at one point she showed photos of stomach contents and let people guess the cause of death). Technically she was talking about people that did not survive things, but it still tied in nicely with the books and videos. [Survival]

My science expert made a Morse code machine out of spare parts and hooked up to a radio as a tuner and "sparked" while doing an SOS. [Connection]

Our science guide is a local teacher, very well known and well liked. Great discussion and tasty treats. [Our science guide] showed us 23andme.com and his genetic makeup — he is 3% Neanderthal — everyone thought that was pretty cool! [Knowledge]

Audience Interests

At many libraries, library professionals and science partners planned the PTL events and discussion topics with the interests and comfort levels of their attendees in mind and allowed attendees to guide the direction of discussion:

We reviewed the T.C. Boyle book, but our audience had let me know in advance that they were most interested in talking about science and the impact of invasives in the Great Lakes. We discussed Asian Carp and Zebra Mussels and cormorant control, and we invited a local soil conservation officer to talk about phragmites. Her information spilled over into several other plant invasives, and our audience was riveted. [Nature]

We talked about Neanderthals and human origins, innovation and its effects on culture, and the evolution of methods of passing on knowledge. I was surprised when the discussion turned to intergenerational communication today, and the value of community. It was cool. [Knowledge]

We had some debate about whether humanity can rely on technology to protect us from climate change. Attendees expressed their opinions about water management and genetically modified organisms. [Survival]

We had so many people interested in geo-thermal heating, wind turbines, solar panels, and recycling that we could've continued in that vein for the whole evening. [Survival]

Local Connections

Some library professionals and science partners made particular efforts to connect the PTL events to the local community and/or culture through discussion, food, and activities, and at some libraries, the patrons made these connections themselves:

We branched out to discuss some local equivalents of rats; namely, wild hogs and fire ants that have invaded our area. [Nature]

We had 17 this evening who came out for local foods (corned bear, halibut, locally grown greens, and sea asparagus) and discussion. [Knowledge]

The presenter for the night was the Director of our local Nature Center. He was wonderful at speaking about the book and connecting it in with local events. [Nature]

I mentioned how the video goes into local and heirloom foods, and the nutritionists at SEARHC (Southeast Regional Health Consortium) got all interested, so it looks like we're going to be having a program with a local, Native potluck dinner and then the video and book discussion. [Knowledge]

We hosted [a] New Mexico State Climatologist — great presentation on New Mexico weather patterns, historical data, regional climate, U.S. and global. [Survival]

Book Substitutions

Almost half of the libraries (47%, or 30 libraries) elected to make substitutions for the recommended books, with 29 of the 30 replacing Jean Auel's *The Land of Painted Caves*. Of these 29, 22 substituted *The Clan of the Cave Bear*, the first book in the Auel series.

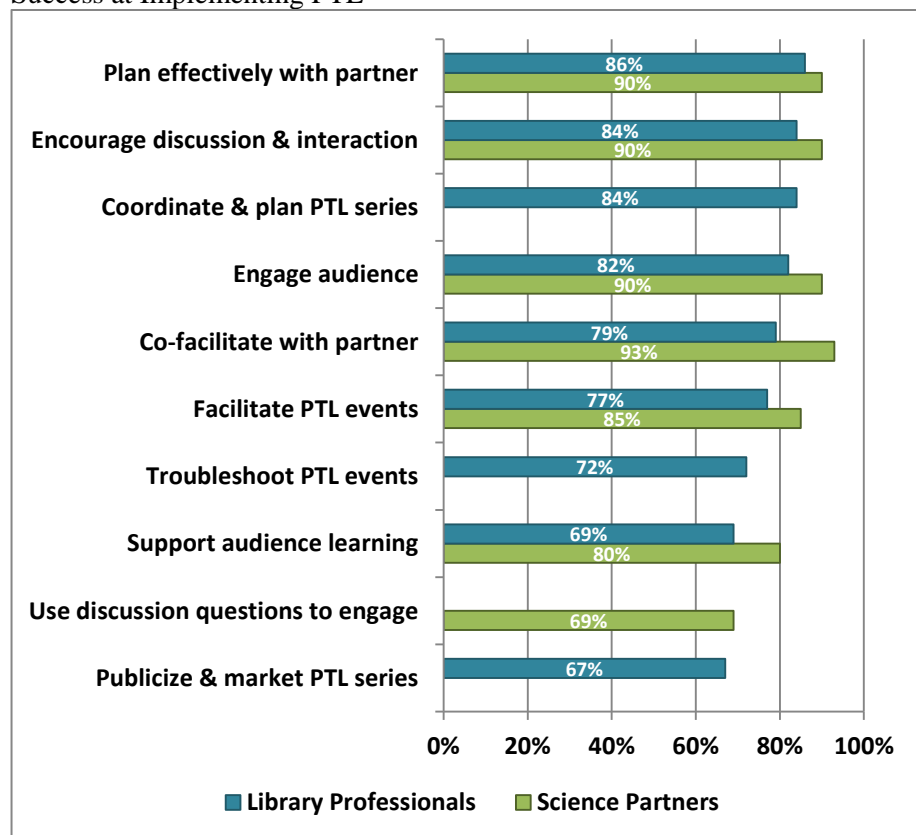
HOW SUCCESSFUL WAS THE IMPLEMENTATION OF THE PTL PROGRAMMING?

In this section, we present data from library professionals, science partners, and library patrons on the success of the planning and facilitation of the PTL programming, the degree to which the different program components successfully engaged attendees, and the extent to which library professionals were able to draw a diverse audience of people who were not necessarily initially interested in science topics.

Success of Planning and Facilitation

Both library professionals and science partners reported great success in planning the PTL programming, engaging their audiences, and facilitating lively discussions. Both library professionals and science partners believed they were especially successful at co-planning and co-facilitating events with their partners as well as engaging patrons and encouraging audience discussion.

Figure 9
Success at Implementing PTL



N=63-64 library professionals, 88-89 science partners

Note: Bars represent the percentages who responded that they had been *very* or *extremely* successful in accomplishing each objective. Library professionals were not asked about using discussion questions, and science partners were not asked about publicizing/marketing, coordinating/planning, or troubleshooting.

On average, across all objectives, 79% of library professionals and 85% of science partners rated themselves as *very* or *extremely* successful in accomplishing them. Library professionals and science partners commented on the successful implementation of the PTL programming:

It was exciting to watch the group and see how engaged everyone was. This is a very good thing for our community!
[Library Professional]

Great program! It encouraged me to go outside the box for the usual programming, to learn the appropriate technology, and to stretch my patrons in their thinking (and civil discussions). The program went beyond simply reading a book and talking about it to incorporating thematic (science-based themes!) discussions. It was a very valuable program for our library — great time! Thank you, thank you! [Library Professional]

I really enjoyed the event and loved working with the librarians. At first I thought that the pairings of the film and literature too disparate, but once we engaged in discussion the topics supported each other. [Science Partner]

We had a small group of participants (in a small community), but they were very interested and discussions were deep and varied. The program sparked some spin-off activities in the community, and we are holding more book sessions. [Science Partner]

Compared to library professionals, the science partners were somewhat more confident in their success, especially in terms of facilitation, audience engagement, and supporting audience learning. These findings are not surprising given the respective roles and expertise of the science partners and the library professionals.

Library professionals felt slightly less successful at publicizing and marketing the PTL series than they did at planning, facilitating, and engaging audiences at these events, although about two-thirds still rated themselves as *very* or *extremely* successful in this area. As one noted,

I really needed to do more marketing, but that was “on me.” The professional development materials gave me the background I needed, I’m just a relatively new director that is figuring things (including what works in my community) out.

Science partners felt slightly less successful in using discussion questions to engage the audience, although, again, about two-thirds still rated themselves as *very* or *extremely* successful in this area. About half did not find the discussion questions provided by the PTL team especially useful or relevant to their audience’s conversation, and others prepared their own discussion questions:

The discussion questions were not well thought out. The result was that I spent a great of time coming up with my own questions. I did a great deal of research on my own, as well, but I was OK with that.

Success at Drawing Diverse Audiences

“Word spread through the community about how much fun the program was and I’ve given away all 10 free books, and all the audiobooks I bought for the library are out for the next one.”

–Library Professional

The PTL programming was successful in drawing a crowd that was not necessarily already interested in STEM topics. Averaging across science, technology, and engineering, just 39% of patrons who completed surveys said they were *very* or *extremely* interested in those topics, while 61% were less so. As one library professional noted, the PTL books fell outside many patrons’ comfort zone:

We had great discussion on the science of modern technology and the communication of people. Many people reported this [Erik Larson’s “Thunderstruck”] was not the style of a book they would normally pick up but enjoyed it very much. They were amazed by the footnotes and that most of the book was factual based on very interesting research.

Most of the library professionals (84%) agreed that the PTL events brought in people who don’t attend the library’s usual programming:

I think the book club people are struggling with the technical nature of these books, but there is a core of people that have NEVER participated in library programs before that have engaged with the nonfiction aspects of the books.

Our community really responded to this programming, and the people who did come in were very, very interested and often not the folks who attend humanities programs (although there was some good overlap).

We really enjoyed the events. This program pushed me to reach out to portions of my community that I had not before, and my patrons enjoyed meeting people from fields they were not familiar with.

Thank you for including us in this program. We hold a regular book club, but I had not realized that there was such an interest/need to have science-specific book club/talks. This brought out more men and new faces. I will definitely work to continue this theme in library programming.

More than half (53%) said PTL events drew more men than usual:

We have been thrilled that we have a fifty-fifty mix of men and women, and one of the surprise outcomes of these programs is that we get married couples to attend.

Of the 18 people, we had 5 men. I was totally thrilled about that, because it is my objective to attract more men to our programs, and to this science-focused one in particular. Success!

Finally, about a third (33%) reported that the audiences were larger than usual:

This was only our second program. The first had been about invasive species, a hot topic around here. I thought our good attendance on that day was due to the subject. This time, more competition for people's time, and an even better turnout.

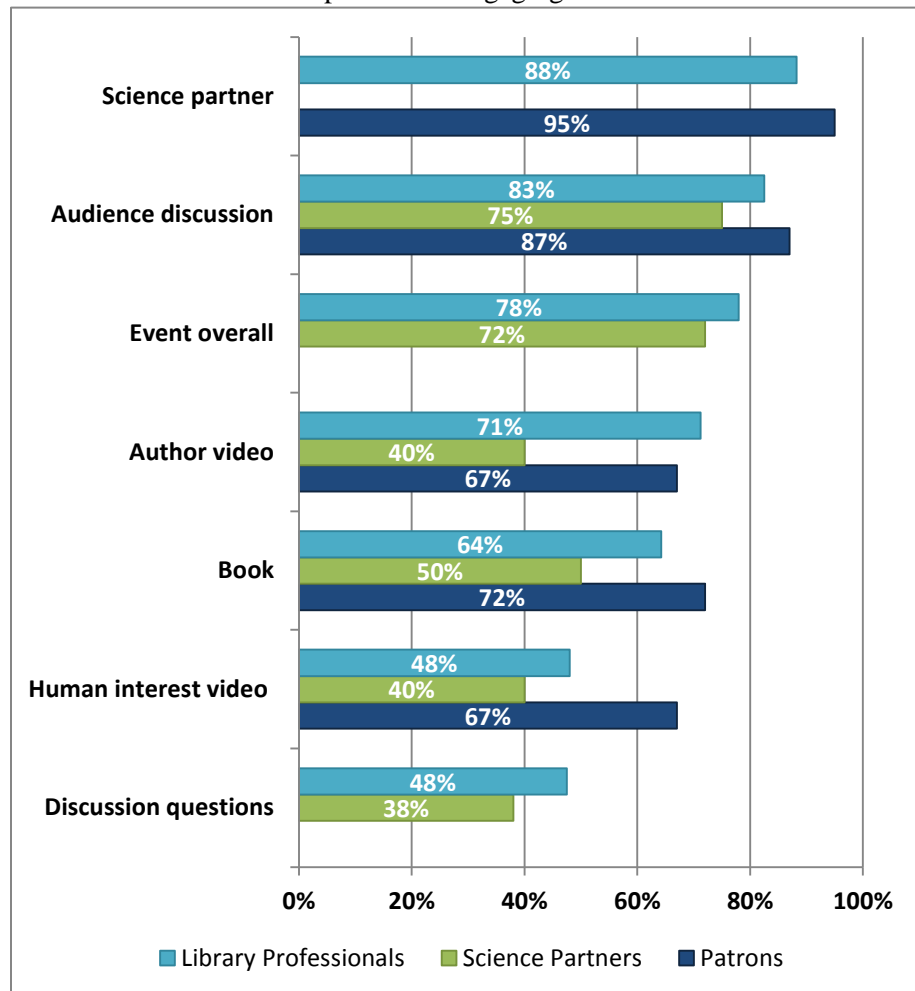
Success at Engaging Audiences

The library professionals and science partners found that the PTL programming was very successful in engaging library patrons: The majority of each group rated the PTL events overall as *very* or *extremely* engaging to the audience. Library professionals rated the science partners as the most engaging component of the programming, and their patrons agreed. All three groups agreed that the next most engaging component was the audience discussion.

“AWESOME! Let's do it again!”

–Patron

Figure 10
Effectiveness of PTL Components at Engaging Audience



N=51-64 library professionals, 78-87 science partners, and 295-337 patrons.

Note: Bars represent the percentages who reported that the component was *very engaging* or *extremely engaging* to the audience. Science partners were not asked to rate themselves, and patrons were not asked to rate discussion questions or the event overall.

“Exceeded expectations. A diverse group of people with some surprising insight due to personal experience.”

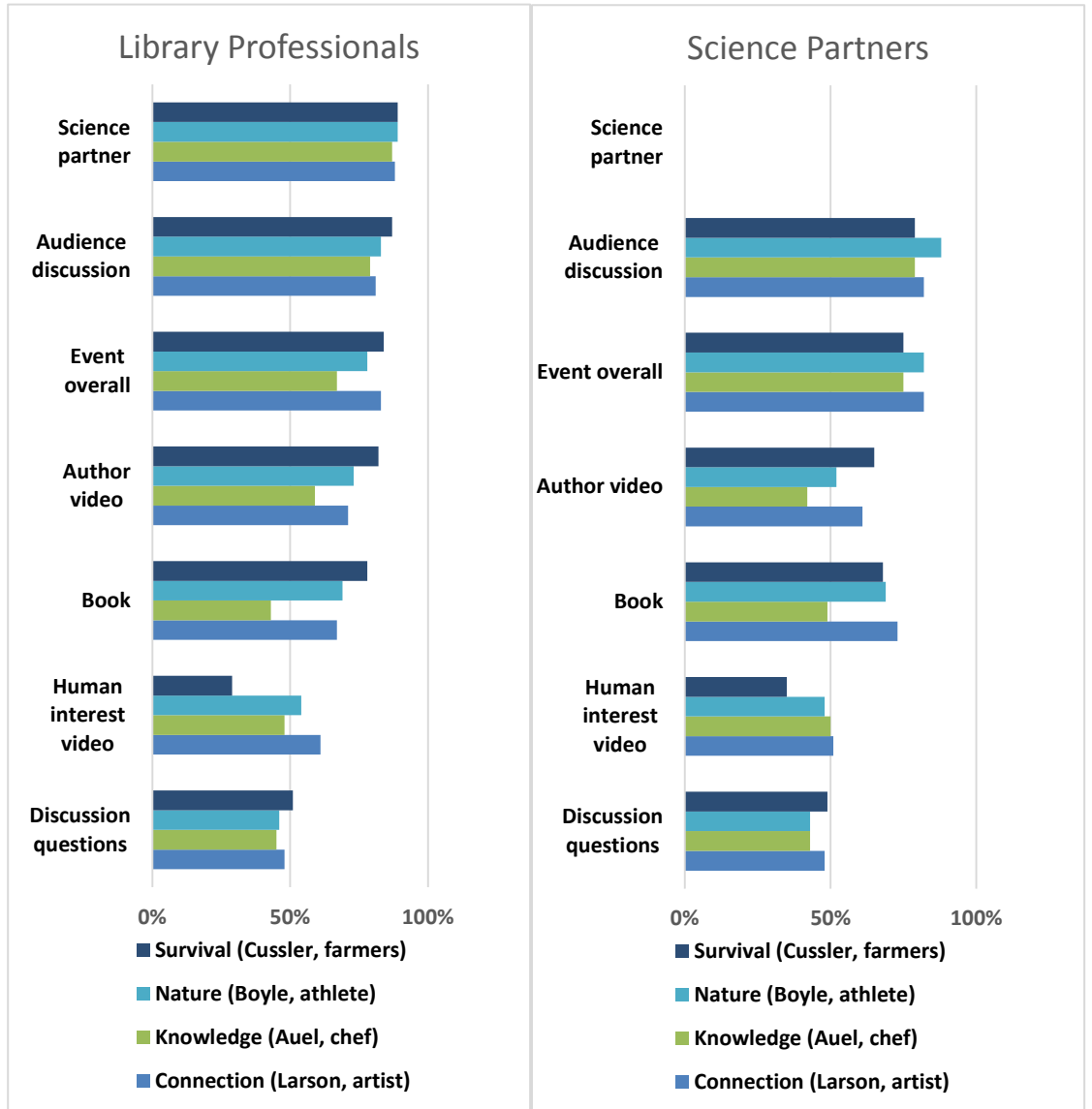
–Patron

Although library professionals and science partners were less enthusiastic about the human interest videos, just over two-thirds of patrons found them *very* or *extremely* engaging. For the author videos, science partners were not enthusiastic, but two-thirds or more of the patrons and library professionals rated them as *very* or *extremely* engaging. Finally, 48% of the library

professionals and 38% of the science partners thought the discussion questions were *very* or *extremely* engaging to the audience.

Library professionals and science partners made separate ratings of each PTL program. As shown below, both groups gave relatively lower ratings to the Jean Auel book and video and to the human interest video about the farmers in the combine demolition derby.

Figure 11
Effectiveness of PTL Components at Engaging Audience for Each Topic



N=51-64 library professionals and 78-87 science partners.

*Science partners were not asked the starred question.

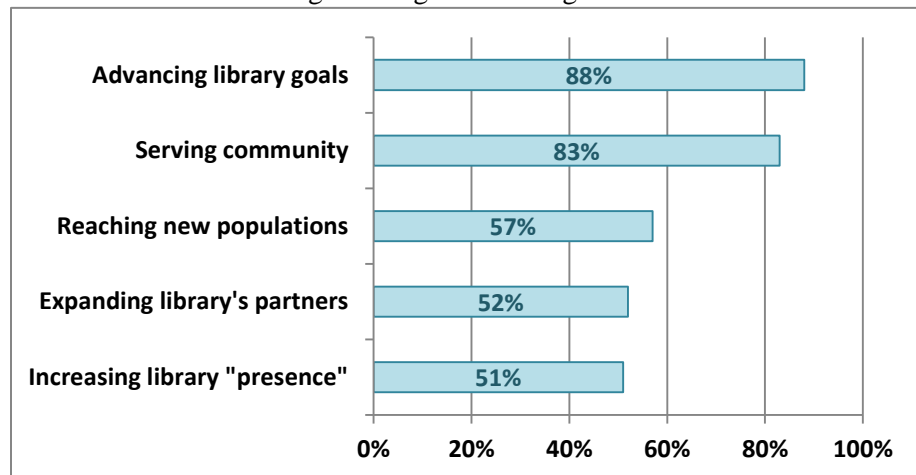
Note: Bars represent the percentages who reported that the component was *very* engaging or *extremely* engaging.

Success in Serving Broader Library Goals

Finally, the library professionals also gave high ratings to the PTL programming in terms of broader goals, particularly advancing library goals and serving their communities. For example, one library professional noted:

We loved being able to offer our adult community an opportunity for serious, thoughtful discussion about science issues. During one of our sessions, an audience member spoke of the importance of community, and how it is becoming a rarity. Yet there we were, creating “community” because of this program, a circumstance not lost on anyone. All attendees seemed to very much enjoy the programs, and our science partner (who participated in 3 of the 4 events) expressed equal pleasure with being a part of it.

Figure 12
Effectiveness of PTL Programming in Reaching Broader Goals



N=62-64

Note: Bars represent the percentages who responded *very effective* or *extremely effective*.

WHAT WAS THE IMPACT OF THE PTL PROGRAMMING?

Impact on Library Patrons: Science Engagement and Awareness

“It was a wonderful program and discussions; people enjoyed and learned so much more about the science around them.”
–Library Professional

Library patrons at the 19 surveyed libraries surveyed PTL events rated their engagement in the events extremely highly, especially in terms of making them want to learn more on the topic and holding their interest:

Interesting in format; I've certainly increased my desire to explore the scientific world. [Patron]

One of the attendees said this program is pushing her limits, because the books selected aren't ones she would normally read, but since she read them for the program, the themes have gotten her more interested in reading the science books we purchased for our display. [Library Professional]

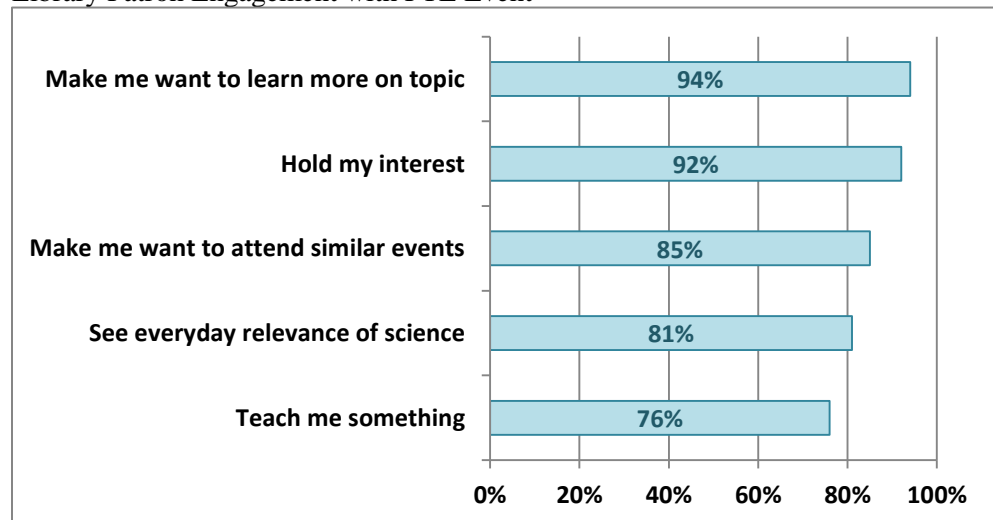
A number of patrons discuss specific topics they had learned about and that had piqued their interest:

This evening's presentation and discussion has sparked my interest to learn more about humans' origins and lives.

[It met my expectations] very well; learned quite a lot about electromagnetics.

I learned more about local invasive species.

Figure 13
Library Patron Engagement with PTL Event



N=334-43

Note: Bars represent the percentages who responded *very effective* or *extremely effective*.

Remarkably, 59% of patrons said they were *more interested* in the science, technology, and engineering in PTL events than they expected to be. Another 39% were *as interested* as they expected to be, which is consistent with the 39% described earlier as being *very* or *extremely* interested in STEM topics already.

“Enjoyed this discussion/videos very much. Hope to have more in the future.”

–Patron

Patrons were asked to describe what they had learned at the event that was new to them. Of the responses that provided enough information to code, 41% of patrons learned something involving science or technology.⁷ Science- and technology-related responses ranged in specificity, but some were as follows:

Types of waves for communication; how radio, telegraphy actually work.

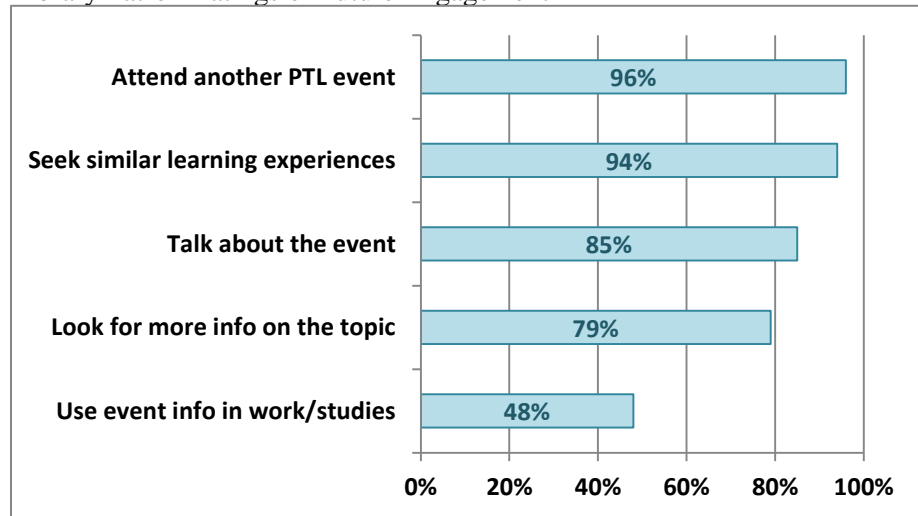
That plants really do make a difference if the environment, but not quite the way I thought.

More about why invasive species take over.

Photosynthesis and how they are attempting this synthetically; algae provides most of our oxygen.

Patrons also reported that the PTL event had piqued their interest in similar programming and topics, as shown below.

Figure 14
Library Patron Ratings of Future Engagement



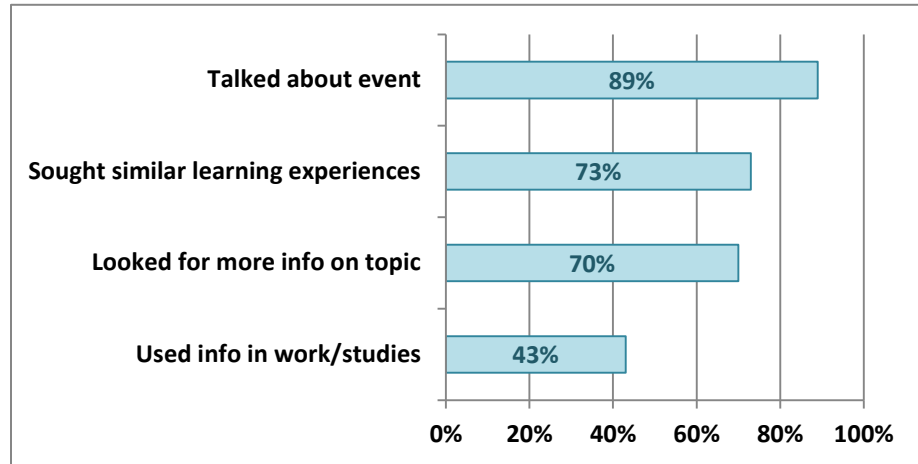
N=202-343

Note: Bars represent the percentages who responded *likely* or *very likely*.

⁷ The non-science responses included things about the books and authors, history, culture, and hearing other people’s viewpoints.

Patrons who had attended prior PTL events were asked whether they actually had engaged in these behaviors; most had at least talked about the event, and the majority had sought out similar learning experiences and looked for further information about the topics discussed.

Figure 15
Library Patron Ratings of Engagement Behavior



N=107-114

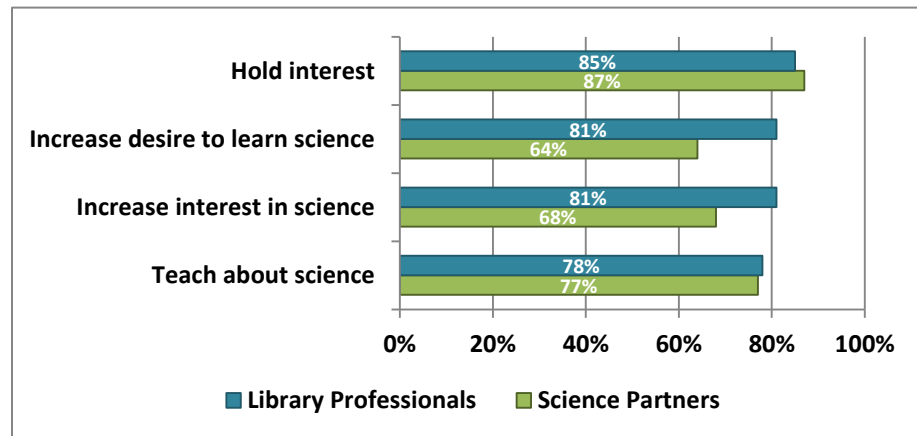
Note: Bars represent the percentages who responded that they had engaged in the behavior.

In terms of learning, 70% of patrons reported being more aware of the science, technology, and engineering in everyday life and of the role of these STEM topics in civic, cultural, and economic affairs. More than half (53%) assigned greater importance to the role of science, technology, and engineering after the PTL series than they had before.

“”
–Science Partner

Library professionals and science partners were also asked about patron engagement and learning, with more explicit reference to the science-related aspects of the programming than the items patrons saw.⁸

Figure 16
Library Professional & Science Partner Ratings of Patron Engagement and Learning



N=62-64 library professionals and 77-87 science partners.

Note: Bars represent the percentages who responded *very effective* or *extremely effective*.

The library professionals gave high ratings to both patron engagement and patron learning. Science partners agreed with the library professionals that the PTL programming held patrons’ interest and taught them something about science, but they were somewhat less sure the programming had increased patrons’ interest in science or their desire to learn more about it.

⁸ The Limits team made the decision not to foreground the science aspects of the programming with library patrons in order not to alienate those who might not initially be interested in science. Therefore, the Event #1 patron survey did not make explicit mention of science, whereas the Event #4 patron survey did.

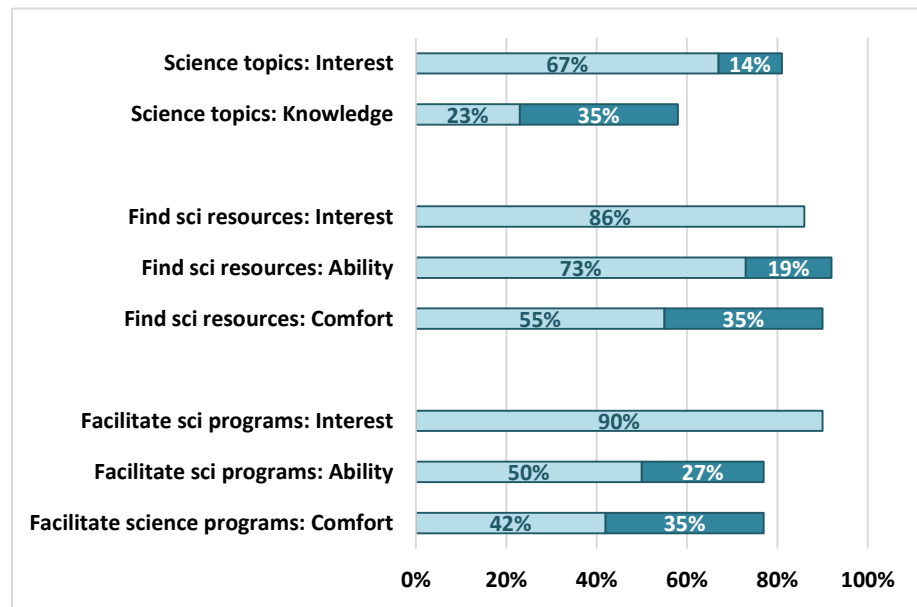
Impact on Library Professionals: Self-Efficacy and Capacity as ISE Resources

One of the primary goals of the PTL project was to increase the capacity of library professionals at small and rural libraries to plan and facilitate science programming and to serve as ISE resources in their communities. Their interest in finding science resources and in facilitating science programming was already high. However, the PTL library professionals made great strides between baseline in July 2013 and the post-programming survey in July 2014.

These gains were especially notable in the areas of science knowledge and in comfort with finding science resources and facilitating science programming. In all three areas, 35% more library professionals reported *quite a bit or a great deal* of knowledge, comfort, and interest after participating in PTL than had before. There were somewhat smaller, but still impressive, gains in ability to facilitate science programming (27%), ability to find science resources (19%), and interest in science (14%).

“Thank you — great program — enriched my library, my patrons and myself.”
 –Library Professional

Figure 17
 Library Professional Gains in Self-Efficacy as ISE Resources

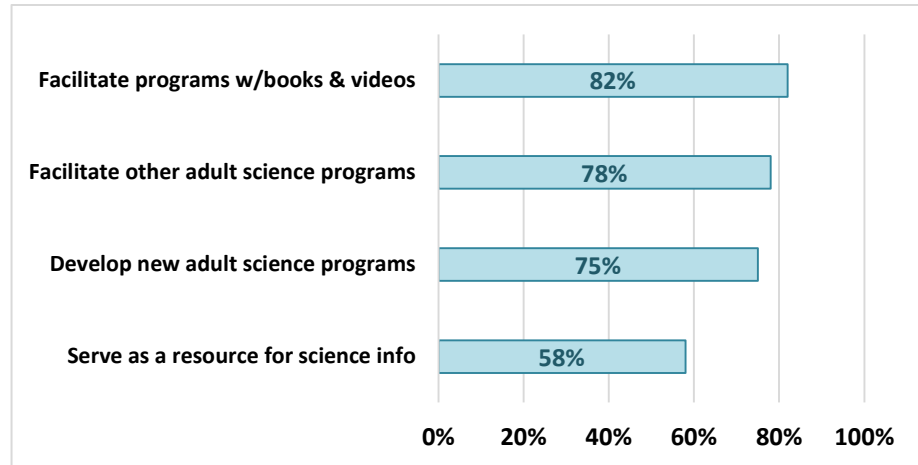


N=64

Note: Each bar represents post-programming ratings of *quite a bit or a great deal*. The lighter segment shows baseline ratings, while the darker segment shows gains from baseline to post-programming ratings. For all gains, means were significantly different at the $p < .05$ level.

In terms of capacity building, the library professionals also reported gains in how well prepared they are to continue to present such programming.

Figure 18
Library Professional Preparation to Present Science & Book/Video Programming



N=64

Note: Bars represent the percentages who responded that their PTL experience had prepared them *quite a bit* or *a great deal*.

Several respondents eloquently described capacity gains:

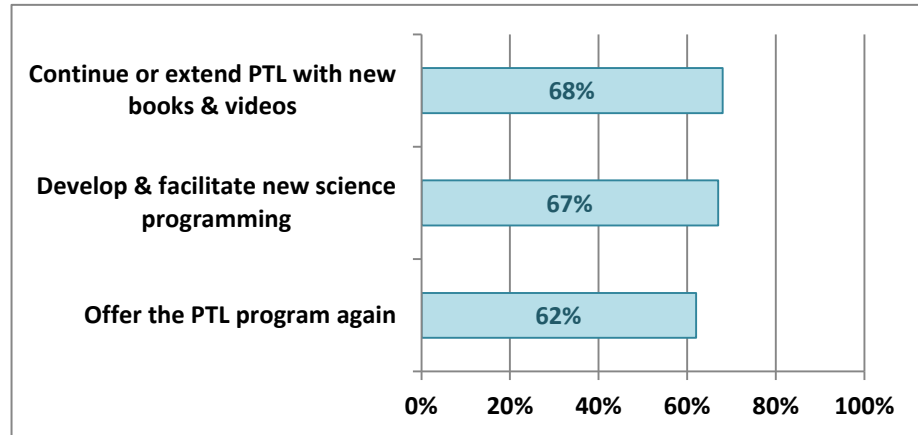
Overall, awesome! I made some new connections, my science partner wants to work with me again (and got a library card), I learned how to do an effective poster campaign, and I got much more comfortable with leading discussions. I learned that next time, I need to buy more copies of the books.

This is a wonderful program, and I am so grateful to be chosen for the grant. It has opened up the possibility of a totally new type of programming for our community and helped us establish new partners. I used 3 science partners, and they all want to participate again. In addition, I have 3 or 4 other science professionals that have indicated they would like to partner. We have a small regional college in [town], so current and retired professors are excited, and also medical people in the community.

“This was a blast. I can't remember the last time I had so much fun with adult programming. We had fantastic attendance, great discussions, and no one wants the program to go away. We will be starting up again in September. It's a keeper.”
–Library Professional

In fact, this preparation translates into plans for about two-thirds of the library professionals, who reported that they were *very likely* or *extremely likely* to develop new science programming or offer or extend the PTL programming.

Figure 19
Library Professional Plans to Present Future Science Programming



N=63-64

Note: Bars represent the percentages who responded that their PTL experience had prepared them *quite a bit* or *a great deal*.

Impact on Science Partners: Self-Efficacy and Interest in Public Science

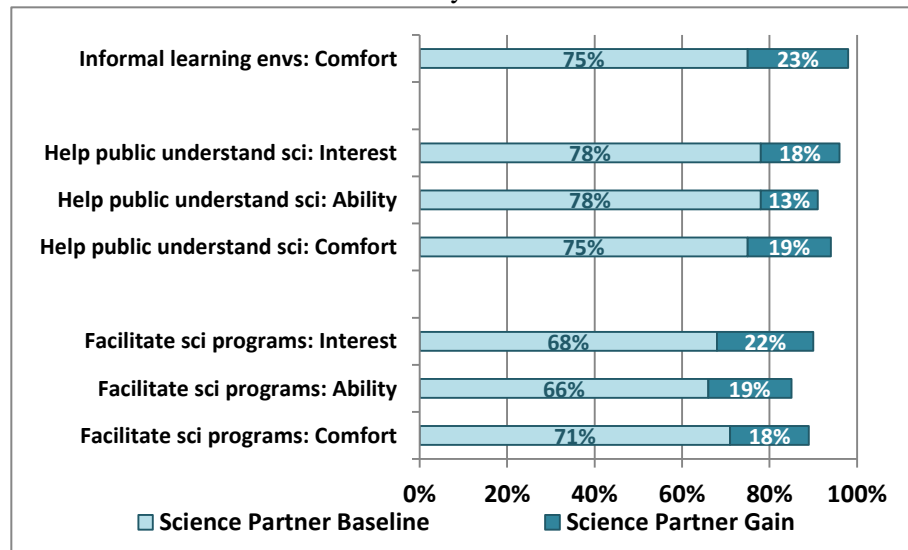
The science partners were not the primary target audience for the PTL program. Nonetheless, to the extent that they are willing to continue working with PTL and other public science projects, the science partners are a key component of their communities' capacity to sustain public science programming.

“The events exceeded my expectations...The attendees were always engaged in discourse, questioning, and looking at various aspects of the science in the text and questioning reliability. It was an energizing experience and I would do this again.”
 –Science Partner

There were certainly indicators of PTL impacts on the science partners. Most science partners (82%) reported that, based on their experience with PTL, they are *very likely* or *extremely likely* to continue their involvement with public science programming.

Further, although the majority of science partners already rated their interest, ability, and comfort in public science communication fairly highly before PTL began, there were significant gains in the numbers giving these high ratings after participation in the PTL program. These were particularly notable regarding comfort in informal learning environments and in interest in facilitating science programs, which bodes well for future public science programming in these communities.

Figure 20
 Science Partner Gains in Self-Efficacy as Public Science Communicators



N=88-89

Note: Each bar represents post-programming ratings of *quite a bit* or *a great deal*. The lighter segment shows retrospective ratings, while the darker segment shows self-reported gains over the course of the PTL program. For all gains, means were significantly different at the $p < .05$ level.

One science partner discussed the importance of scientific literacy and the relevance of PTL topics to the community:

I enjoyed the opportunity to participate in this new program. The idea of bringing science literacy to rural communities (or anywhere) is exciting and crucial. My community is quite

cosmopolitan in feel, despite the low population density, but even though we have a lot of programs about sustainability, local food, and the like, the fact that many people don't understand some basic scientific concepts (about energy or natural selection, for example) makes it difficult to have rigorous and realistic conversations about critical issues.

In their open-ended responses, some science partners mentioned unexpected personal benefits to participating in the PTL program and a desire to participate in science programming again:

I really enjoyed this program and felt like I benefitted from it as much as the adult learners did. I am now leading an informal book club with some of the participants from the PTL program!

I really enjoyed the dialogues my husband and I had about the books together. We hadn't done anything like this since we were in college together. We were both scientists with a love of literature. Our personal discussions were an unexpected benefit from participating in the series.

I was not at all [sure] what to expect from the evening. I must say, I found it a marvelous experience. The attending folks were so eager to talk about the book and related topics therein with a "real scientist." And it is always great to debunk the myth that scientists are by nature aloof and unfriendly. My presence was very well received, and most of the attendees inquired individually afterwards if I would be able to join the next month's session.

"This was a very exciting program. I really enjoyed discussing the books, the science, and other related aspects with the participants...They were extremely interested, engaged, and willing to share and participate. I believe that they felt that they got a lot out of it too."

–Science Partner

Impact on Communities: Future Science Programming

As noted earlier, about two-thirds of the library professionals reported being *very likely* or *extremely likely* to develop new science programming or offer or extend the PTL programming. Many of them used the project listserv to share ways in which they plan to extend or add to the PTL program and to discuss other similar adult and science programming they plan to run at the library in the future.

I'm thinking of purchasing multiple copies of some of the supplemental reading books to use as a continued book discussion. We won't have author interviews or the other video, but we may be able to find something on YouTube, and I'm sure there are discussion questions out there for most of these titles, to get us started...I hate to lose the momentum we have gained with these programs and would love to hear your ideas or suggestions.

"I had a blast being a part of this project. We had a consistent following of 10-20 people at each discussion that were able to produce a lively discussion. We were so successful that we have decided to move forward with some additional discussions"
–Science Partner

The discussions have been great, and we have already made the decision to hold additional programs next year using this STEM science café format. One of our science partners is willing to conduct the same type of program with our 8th grade students in the school system, with the library sponsoring the program. Very excited to have this opportunity, as we are working with the school system to bring classes of students to the library for programming that will support their curriculum and promote the library to the students.

I met with a high school science teacher who is a consummate brainstormer, and together we came up with a solid four months' worth of science programming to take us through the rest of the year. I'm excited to get started.

Many of their comments illustrate how the experience of preparing for and running the PTL events increased their interest and confidence in running adult science programming:

I am in the process of planning our additional program...I'm going with "Flight Behavior" too. And I found a couple interviews on NPR and the Diane Rehm show with Barbara Kingsolver. I think I will try to use a segment of one of those. I also found a TED talk by Louis Schwartzberg about the hidden beauty of pollination, and the talk showed clips from the Disney nature film "The Wings of Life," which he directed. And from there I discovered that we have a copy of this movie in our collection...I am also hoping to get one of our local birders or butterfly experts to attend and offer insight. I've never planned a program like this entirely on my own, so here's hoping for the best! And thanks to the Pushing the Limits folks for showing me how something like this can be done.

I'm also bringing an adult program to [the library] (going back to the human feature video related to the chef). On July 31, there will be a program "Food Preservation: What's Science Got to Do with It?" I am thrilled to be offering such diverse programming to promote science.

I have a list of ten subjects to explore for a slate of science programming for the fall. This has tapped a vein of interest I was unaware of, and presents some great opportunities.

We are looking into continuing this program under a similar structure utilizing TED Talks and books. I just love the idea of offering this opportunity to adults. I believe it has touched on an unmet need among adults for meaningful discussion on the community level, and I've been glad to be a part of it.

Some of their comments also reveal how the PTL program increased library patrons' interest in science and the demand for adult science programming in the libraries:

I appreciated the comments about continuing with other book choices sans the wonderful videos to keep things rolling. Already people are asking me what is next!

The audience was really riveted as [the science partner] spoke and unanimously requested a separate program or series of programs addressing these types of issues [i.e., climate change and humans' impact on the environment].

One of the people called me the next day to say that she thought this was the best discussion we've had so far and that she was sure hoping I'd have enough money left for additional events. I've checked our expenses and it looks like we could do one more after the Auel event in June. Our science partner is enjoying this series and is willing to facilitate another discussion if he can work it into his schedule, probably later in the summer. I am so pleased with how this series is turning out for us and our patrons! I think it's showing us new possibilities.

Overall, the PTL program was a great outreach opportunity for the libraries, particularly in drawing new people into the library and helping establish the library as a resource for scientific learning.

Four newcomers joined our book discussion, and they were very welcome additions. Our science partner was also new to the library. Several men joined the discussion and remarked they had no idea the library had such depth in their discussions. New nonfiction selections have been suggested and added to our collection. We partnered with the county extension to present two adult programs coordinated with our discussions. The library has added several new patrons and formed new partnerships due to its participation in the Pushing the Limits program...This turned into a great outreach program for our library.

We only had 7 people in attendance, but the bright side was that 3 were high school students who have been drawn into the series through their serving as presenters for an earlier event.

HOW COULD THE PTL PROGRAM BE IMPROVED?

Participants were also asked for their suggestions for improving the PTL program. Suggestions fell into several common themes across the three groups. Librarians were also asked to provide detailed feedback on several potential future iterations of the program.

Provide a Range of Possible Books for Each Topic

Some participants rated the PTL books highly:

Being a biology professor, I felt very comfortable leading the discussion on the Boyle book and the nature of science. I believe that it was a great choice of a book for getting people to think about nature, what is natural and the role that science plays in understanding the nature around us. It also provided a basis for talking about the tension between science and society. I really enjoyed leading the group. [Science Partner]

Excellent program, book was interesting, speaker excellent. Totally met/exceeded expectation. [Patron]

I enjoyed the book; discussion topics are wide reaching. [Patron]

In contrast, some library professionals, science partners, and patrons commented that certain books, particularly the Auel book, could have been more effective in terms of length, patron interest, and science content. Aside from that example, responses to the books varied quite a bit by library and by patron.

Several science partners and a number of library professionals suggested providing a list of related books so that library professionals and/or patrons could choose among them:

Maybe having more than one [book] option for each of the themes might be helpful. [Science Partner]

Having a choice of 2 or 3 books for each theme would be helpful in creating events to interest our audience. [Library Professional]

Having a range of books would allow library professionals to better tailor their choices to the particular populations they draw. Two library professionals mentioned challenges tailoring the material to their very different audiences:

I need more assistance in making the series interesting to people with less than a college education. [Library Professional]

To be honest, we (and our patrons) didn't find the recommended books sophisticated enough from a science perspective for our people. [Library Professional]

Clarifying Linkages Among Theme, Books, and Videos

Library professionals and science partners sometimes had difficulty seeing the linkages among the topic, the videos, and the book:

Our science partner and I often had a hard time getting people to see the connection between the book and the videos, especially the human interest videos. [Library Professional]

We didn't always see a direct connection to the human interest stories and the books... [Library Professional]

I'm still not quite sure where they were going with [the human interest video] and how it connected with the book. There [was] not as much in-depth material to accompany the video. [Science Partner]

I think the author videos are helpful in sparking discussions related to how the author developed the story and science behind the books...I think if [the human interest] videos could have a clearer, more tangible connection to the discussion topic, they would engage the attendees in more discussion. [Science Partner]

A few patrons had corresponding difficulties, not surprising if some facilitators themselves were not completely clear on the linkages:

Better coordinate the presentation to book themes. [Patron]

Talk about both books and how they relate to the series topic. [Patron]

However, many of the comments the facilitators made were about difficulties linking the book to the video, when the goal was actually to link both book and video to the broad, overarching theme. This could be addressed by providing both facilitators with an overview of the goals and the rationale behind the program design. Written documentation could also include more specific linkages among specific themes, books, and human interest videos:

While [the videos] are all connected to the other materials, it would have been good to have that be a bit of a stronger connection. I thought there should be a little more material on how some of the personal interest videos tied in with the book. [Library Professional]

Closer alignments between video segments and topic and/or more information about those relationships; i.e., summaries and [discussion] questions related to highlighting connections. [Science Partner]

Finally, one of the library professionals had a helpful way of describing the linkages:

We are meeting with our science partner...to see if we might tweak a few things before the next event, such as pointing out the relationship between theme, book, and video more strongly and noting that the discussion is about more than the particulars of the book — that the book is the vehicle into the discussion, but not necessarily the whole discussion.

Provide More Supplementary Materials

In addition to material on thematic linkages, both library professionals and science partners requested a few other types of supplementary materials. Library professionals were interested in specific suggestions and ideas for planning their programming:

[One] idea would be to provide plans for four simple, low-cost, hands-on activities related to each theme that could be set up on a table in the library. A hands-on station would serve as a means for anyone to consider the theme, as well as the opportunity to sign up for [the] discussion series.

Provide science experiments to go along with [the program].

Maybe some suggestions of types of science partners for each subject; i.e., meteorologist or environmentalist, for Arctic Drift.

It was very helpful to get the ideas from the listserv. Maybe they could be collated as an ideas packet.

Science partners were also interested in resources and ideas to help them on the day of the event:

Icebreaker activities or other ideas for things to do while people enter would be nice. I could have also used some ideas for ways to wrap up both the individual sessions and the entire program. I came up with them, and sometimes they were just organic, but it's nice to have a few ideas coming into the event.

Provide hands-on objects or demonstrations. People like to see some of the science in action.

As noted earlier, science partners would also have appreciated a focused, clear explanation of the PTL program and their role.

Bring in More People to Events

Patrons, library professionals, and science partners all wanted to see more people attending the PTL events. For example, two of the patrons said,

Better promotion. More people should be able to know about this.

Wish we could reach more people; I think they would enjoy us.

A couple of library professionals regretted not doing more publicity, but others offered suggestions for things that would make it easier for them to market the program, primarily revolving around easily customizable promotional materials. For example:

I needed help in developing promotional materials (I'm just not very creative). Perhaps some generic forms that could be edited for the individual library's name/logo and event date, time, place

Better marketing materials that are easy for librarians to access and adapt to their library. Short video promos would be fantastic.

Several science partners also mentioned some ideas for drawing a larger audience:

By merging with groups like Master Gardener, adult learning groups, adult outdoor volunteer groups to catch a larger audience of interested people to possibly engage more discussion and even action at [the] local level with local issues related to discussions.

Need larger audience, although local promotion was thorough. Perhaps offer during school year and partner with science teachers at local high schools.

FEEDBACK ON PTL ITEMS ABOUT DIFFERENT POSSIBLE ITERATIONS OF THE PTL PROGRAM

Library professionals were also asked to give their feedback about several possible future iterations of the PTL programming. First, they were asked to select from a list of possible resources which ones would have made them more successful in establishing their library as a resource for informal science learning.

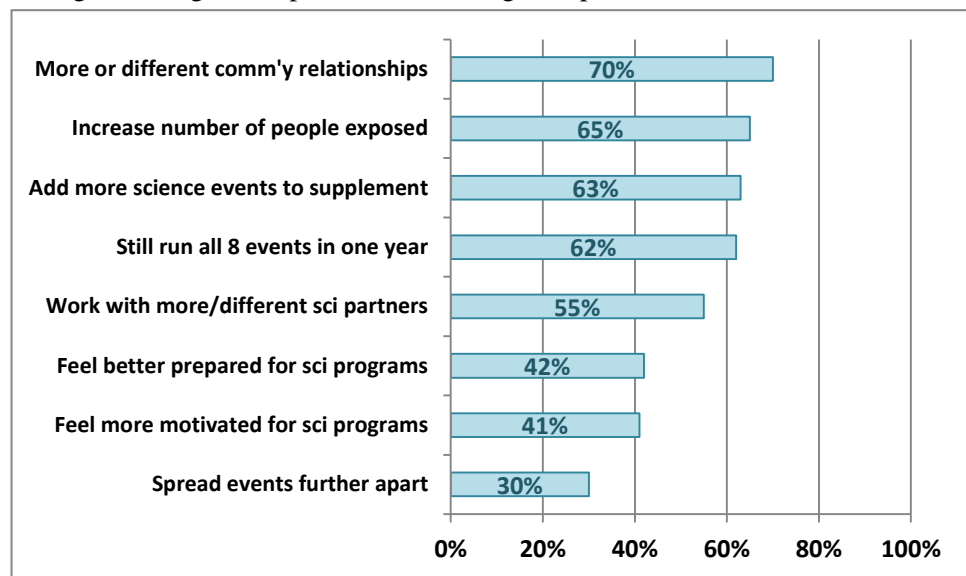
Just over one-fifth said no additional resources were necessary because the program was already successful. However, almost half (47%) would have liked materials to hold more than four thematic events. Almost as many (42%) would have appreciated being provided with some shorter videos for promotional use. One-third (33%) would have liked additional funds for books or other circulation materials.

Library professionals also indicated how they would implement the programming if they had materials for eight thematic events rather than four. The most commonly endorsed responses were the ones related to expanding the scope and reach of the programming: forming more or different community partnerships to enrich it, adding more supplemental science events, and increasing the number of people exposed to the programming.

“We loved the program. The patrons who attended were sad it was over so soon. It has only been within the last several years...that the library has begun to offer adult programs, which the adults love. PTL helped in a big way for us to move past simply offering programs for children. We want more!”

–Library Professional

Figure 21
Changes to Program Implementation if Eight Topics Instead of Four



N=63-64

Note: Bars represent the percentages who responded *very likely* or *extremely likely*.

Finally, library professionals were asked about two different potential program models, one in which there were no books, and one in which there were multiple book options for each topic, but, therefore, no author video. A quarter or more of the respondents had no opinion or were not sure how successful these models would be compared to the original model.

Of those who did express opinions, they were somewhat polarized. The majority (60%) preferred to retain the book component of the programming, but fully 40% disagreed. The quotes below articulate each position well:

[KEEP BOOKS] I prefer having the books to augment the programs. It give[s] the participants a chance to read and think about topics before the events. While some of the titles were not what I would have chosen, they set the stage for discussion. Those who did not read the books still came, so it was not exclusionary, but it gave everyone a starting point for the conversations.

[DROP BOOKS] In our case, I think we would have had more participation without the books. The books seemed daunting to some, and many did not finish the whole book. I think the videos and discussion questions would be a huge draw and help widen the audience. Book clubs are everywhere, but this discussion format would be a new idea.

The majority were also in favor of offering multiple book options (59%), even if that meant no author video would be provided. However, a number of the dissenters were against dropping the author video more than they objected to providing multiple book options. The following quotes summarize the pro and con positions:

[OFFER MULTIPLE BOOKS] I would like multiple book suggestions as community interests often vary with the community. I think this would be a very successful model. Although people like the author videos, they did not add to the discussion as much as the human interest videos did.

[KEEP ONE BOOK] Our readers gravitated to the author videos. The readers wanted to “know what the author thought.” The lead-in provided by the author and library narrator were enough to start the conversations.

CONCLUSIONS

Data from library professionals, science partners, and library patrons converge to demonstrate that the PTL program was quite successful in its aims to engage and inform patrons and to increase the capacity of library professionals to provide informal science programming for adults in their communities.

PATRONS ARE ENGAGED IN SCIENCE AND LEARN ABOUT SCIENTIFIC TOPICS

The PTL program was very successful in engaging patrons with science, stimulating their curiosity about science, and raising their awareness and knowledge of scientific topics. They particularly enjoyed hearing from and interacting with the science partners and the lively, wide-ranging discussions. Books and videos were generally effective at stimulating discussion, even when patrons did not particularly enjoy them (e.g., the Auel book, the combine demolition derby video).

LIBRARY PROFESSIONALS GAIN SELF-EFFICACY AND CAPACITY AS ISE RESOURCES

The PTL program and resources greatly enhanced library professionals' self-efficacy as ISE resources and their capacity to develop and implement new science programming for adults in their communities. Library professionals found the PTL PD, materials, and resources quite helpful, although they would have liked some more material on the linkages among theme, book, and human interest video. They had positive experiences with the programming and were generally quite impressed with their science partners. A number of them have already extended their PTL programs on their own.

SCIENCE PARTNERS GAIN SELF-EFFICACY AND INTEREST IN PUBLIC SCIENCE COMMUNICATION

The PTL program increased science partners' self-efficacy in public science communication and their interest in continuing to work in informal settings to raise scientific awareness. A number of them are continuing to work with the library professionals to implement additional adult science programming. The science partners would have felt more prepared if they had been provided targeted information about the PTL program and their role, as well as more information about thematic linkages.

THE COMMUNITY LANDSCAPE OF SCIENCE PROGRAMMING IS ENHANCED

The PTL program broadened adult public science programming in the participating communities, and is poised to continue to do so. Many of the library professionals — along with some of their science partners — already have plans in place to implement future adult science programming to meet the heretofore-unmet need they discovered in the course of their participation in the PTL program.

RECOMMENDATIONS

GRG has several recommendations to make future iterations of this successful programming even more effective. Most do not require large additional expenditures of money or time. They include making it even easier for library professionals to tailor the programs to their particular communities, providing a few more supplementary materials for library professionals and their science partners, enhancing the repository of materials stored on the PTL website, and expanding the availability of the PTL program to more communities.

ENHANCE CUSTOMIZABILITY

As described earlier, the PTL program offers library professionals and science partners many opportunities to tailor their programming to their geographic area, community, and particular audience. GRG recommends providing several book choices for each topic would allow further customization, or a chance for patrons to collectively choose which books the group will read.

The PTL materials already include a list of other related books for each topic. However, only two of the 30 library professionals who substituted books used one of the books from that list. This may have been because they wanted to make use of the author video, as did the 29 who replaced the Auel book with an earlier book from the same series.

Some librarians tracked down their own videos to use via sources such as YouTube and TED Talks. Perhaps future PTL materials could include an author video for the primary recommended book and links to existing alternate video clips for the alternate book selections.

Including discussion questions at varying levels of scientific sophistication would also help library professionals and science partners to tailor the PTL program to their audiences.

PROVIDE MORE SUPPLEMENTARY MATERIALS

GRG suggests that PTL materials include a one-page written orientation for science partners describing the PTL program itself as well as the expected role of the science partners in the programming. This would assist science partners in preparation, but would also be helpful to library professionals as they begin reaching out to potential science partners.

Some 43% of the science partners would also like to see video of programs in action to help them prepare; a few-minute clip would likely suffice to show how science partners and patrons interact. Because this type of video material already exists on the PD DVD for library professionals, GRG recommends making this material available to science partners and considering whether any of the other DVD materials might be useful to science partners as well.

For library professionals, GRG recommends providing more — and more easily customizable — templates for creating marketing collateral, as well as expanded lists of related books, videos, and places to go for more information on the topical themes.

GRG also suggests expanding and deepening the discussion questions as well as providing a list of programming suggestions, activities, display ideas, and so on. Much of this could be compiled from existing material, both in the listserv archive and in library professionals' and science partners' survey responses.

MAKE MOST MATERIALS AVAILABLE ONLINE

There is a fair amount of turnover in library personnel over the course of a programming year. For example, at 12 (19%) of the libraries responding to the post-programming survey, the person in charge of the PTL programming had changed. To accommodate this turnover, GRG urges the PTL team to consider placing all of the PTL material on the website. This includes the program video clips and the PD units that are currently only available in DVD format, as well as archived recordings of the two introductory webinars. Even if these were in a restricted, password-protected area, it would be easier and more convenient for libraries to share materials with new staff or with science partners if it were all available online.

EXPAND AVAILABILITY OF PTL PROGRAM

Given that the data from both phases of the PTL program indicate that *Pushing the Limits* is a highly successful program, GRG recommends providing libraries with more than four thematic units and expanding the program to more small and rural libraries, as well as to other libraries.

LIST OF APPENDICES

**A: ANNOTATED LIBRARY PROFESSIONAL BACKGROUND
AND POST-PROGRAMMING SURVEYS**

**B: ANNOTATED SCIENCE PARTNER POST-
PROGRAMMING SURVEY**

**C: ANNOTATED PATRON EVENT #1 AND EVENT #4
SURVEYS**

D: ANNOTATED SITE VISIT OBSERVATION PROTOCOL

APPENDIX A
Pushing the Limits
Annotated Library Professional
Background & Post-Program Surveys

	Responded	Invited	Response Rate
Background Survey	70	75	93%
Post-Programming Survey	64	68	94%

	Number
Original scale-up sample	75
Dropped out	2
Finished programming after 7/31	5
Eligible for summative evaluation	68
Completed post-programming survey	64

	Number
Same individual completed both surveys	52
Different individuals completed the two surveys	12
TOTAL	64

QUESTION ASKED ON BOTH SURVEYS

1. **BACKGROUND:** At this time, how would you describe: / **POST-PROGRAM:** Now, after your participation in the PTL program, how would you rate the extent of each of the following:

BACKGROUND

Overall 3.80; 42% quite a bit or a great deal

	Mean (1-5)	None (1)	Only a little (2)	Some (3)	Quite a bit (4)	A great deal (5)
...your personal interest in science-related topics?	3.87	–	6%	27%	41%	26%
...your personal knowledge of science-related topics?	3.17	1%	13%	57%	24%	4%
...your interest in helping adult patrons find resources on science-related topics?	4.38	–	1%	11%	35%	52%
...your ability to help adult patrons find resources on science-related topics?	3.91	–	3%	23%	54%	20%
...your comfort with helping adult patrons find resources on science-related topics?	3.74	–	7%	30%	44%	19%
...your interest in facilitating adult programming on science-related topics?	4.46	1%	1%	4%	36%	57%
...your ability to facilitate adult programming on science-related topics?	3.51	1%	10%	36%	41%	11%
...your comfort with facilitating adult programming on science-related topics?	3.44	3%	11%	39%	33%	14%

N=69-70

POST-PROGRAMMING

Overall 4.04; 56% quite a bit or a great deal

	Mean (1-5)	None (1)	Only a little (2)	Some (3)	Quite a bit (4)	A great deal (5)
...your personal interest in science-related topics?	4.14	2%	–	17%	45%	36%
...your personal knowledge of science-related topics?	3.68	–	3%	38%	46%	13%
...your interest in helping adult patrons find resources on science-related topics?	4.22	2%	–	8%	56%	34%
...your ability to help adult patrons find resources on science-related topics?	4.11	2%	–	9%	64%	25%
...your comfort with helping adult patrons find resources on science-related topics?	4.05	–	2%	16%	59%	23%
...your interest in facilitating adult programming on science-related topics?	4.25	–	–	13%	50%	38%
...your ability to facilitate adult programming on science-related topics?	3.88	–	5%	22%	55%	19%
...your comfort with facilitating adult programming on science-related topics?	3.98	–	3%	22%	48%	27%

N=64

QUESTIONS ASKED ON POST-PROGRAM SURVEY ONLY

PREPARATION AND IMPLEMENTATION

- 2. Please rate the overall quality of the support provided by the PTL team with respect to each of the following.**

Overall 4.33; 72% very good or excellent

	Mean (1-5)	Poor (1)	Fair (2)	Good (3)	Very good (4)	Excellent (5)	Does not apply or not sure
Responsiveness to any administrative questions (e.g., about project, reporting, use of funds)	4.53	–	–	10%	27%	63%	(5%)
Ongoing communication	4.46	–	–	12%	31%	57%	(3%)
Overall administrative support	4.32	–	3%	13%	32%	52%	(5%)
Guidance during the project's application process	4.23	–	–	21%	35%	44%	(17%)
Resolving technical issues (e.g., with using the listserv and video clips, creating publicity materials)	4.10	–	2%	26%	31%	41%	(34%)

N=42-61

Note: Percentages in columns (1)-(5) are of those who were able to answer the question. Percentages in the final column are of all those who responded to the question.

3. To what extent did each of the following PTL professional development materials and training prepare you to plan, market, and co-facilitate the PTL programming in your library?

Overall 4.01; 58% quite a bit or a great deal

	Mean (1-5)	Not at all (1)	Only a little (2)	Somewhat (3)	Quite a bit (4)	A great deal (5)	Did not use
Website materials and resources (pushingthelimits.org)	4.48	–	–	14%	23%	63%	(–)
PUSHINGTHELIMITS listserv	4.08	5%	2%	19%	30%	44%	(2%)
Webinar #1: Planning Your Program Series	4.06	–	3%	23%	39%	36%	(3%)
Webinar #2: The Programs in Action	4.08	–	5%	20%	36%	39%	(8%)
DVD Unit 1: Introduction	3.92	–	5%	22%	49%	24%	(5%)
DVD Unit 2: What Is Informal Science Learning (ISL)?	3.92	–	5%	23%	48%	25%	(5%)
DVD Unit 3: Libraries as Community Resources for ISL	3.85	–	5%	27%	46%	22%	(8%)
DVD Unit 4: Working with Your Science Partner	4.03	–	7%	18%	41%	34%	(5%)
DVD Unit 5: Marketing Your “Pushing the Limits” Series	3.94	–	7%	27%	32%	34%	(3%)
DVD Unit 6: Fostering Engaging Discussions	4.05	–	7%	21%	34%	39%	(3%)

N=59-64

Note: Percentages in columns (1)-(5) are of those who used that resource. Percentages in the final column are of all those who responded to the question.

4. Thinking of the PTL professional development materials and training as a whole, please rate your level of agreement with each of the following statements.

Overall 4.40; 86% agree or strongly agree

The PTL professional development materials and training:	Mean (1-5)	Strongly Disagree (1)	Disagree (2)	Neutral (3)	Agree (4)	Strongly Agree (5)	Does not apply or not sure
...were well organized.	4.61	–	–	2%	36%	63%	(–)
...were clear and understandable.	4.47	–	–	7%	40%	53%	(–)
...were well matched to my professional development needs.	4.27	–	–	14%	45%	41%	(–)
...were relevant to my library, community, and patrons.	4.25	–	3%	10%	46%	41%	(2%)

N=62-64

Note: Percentages in columns (1)-(5) are of those who were able to answer the question. Percentages in the final column are of all those who responded to the question.

5. To what extent did the PTL professional development materials and training prepare you to:

Overall 3.90; 52% quite a bit or a great deal

	Mean (1-5)	Not at all (1)	Only a little (2)	Somewhat (3)	Quite a bit (4)	A great deal (5)	Does not apply or not sure
...coordinate and plan for the series of PTL programming?	4.13	–	3%	16%	45%	36%	(3%)
...facilitate PTL events in your library?	4.03	–	3%	23%	42%	32%	(2%)
...publicize and market PTL programming in your community?	3.92	–	6%	25%	38%	30%	(2%)
...work effectively with your science partner in planning PTL events?	3.92	–	5%	28%	38%	30%	(5%)
...engage audience members during PTL events?	3.89	–	5%	31%	36%	29%	(3%)
...encourage audience discussion and interaction during PTL events?	3.86	–	6%	32%	32%	30%	(2%)
...work effectively with your science partner in co-facilitating PTL events?	3.84	–	7%	27%	42%	24%	(3%)
...support audience learning during PTL events?	3.81	–	8%	33%	29%	30%	(2%)
...troubleshoot PTL events when things weren't going as planned?	3.74	2%	7%	29%	38%	24%	(34%)

N=42-63

Note: Percentages in columns (1)-(5) are of those who were able to answer the question. Percentages in the final column are of all those who responded to the question.

6. Overall, how successful would you say you were at accomplishing each of the following in your library?

Overall 4.03; 61% very or extremely

	Mean (1-5)	Not at all (1)	Only a little (2)	Somewhat (3)	Very (4)	Extremely (5)
Working effectively with your science partner in planning PTL events	4.17	–	5%	9%	50%	36%
Encouraging audience discussion and interaction during PTL events	4.16	–	3%	13%	49%	35%
Engaging audience members during PTL events	4.14	–	2%	16%	49%	33%
Working effectively with your science partner in co-facilitating PTL events	4.09	–	2%	19%	48%	31%
Coordinating and planning for the series of PTL programming	4.02	–	3%	13%	64%	20%
Facilitating discussion at PTL events in your library	4.02	2%	2%	20%	47%	30%
Troubleshooting PTL events when things weren't going as planned	3.97	–	3%	25%	44%	28%
Supporting audience learning during PTL events	3.91	–	6%	25%	41%	28%
Publicizing and marketing PTL programming in your community	3.80	–	6%	27%	48%	19%

N=63-64

ASSESSMENT OF PTL PROGRAMMING

7. Overall, how effective would you say the PTL programming was at:

Overall 3.97; 55% very or extremely

	Mean (1-5)	Not at all (1)	Only a little (2)	Somewhat (3)	Very (4)	Extremely (5)	Not sure
...holding the audience's interest?	4.27	–	–	14%	44%	41%	(2%)
...serving your community?	4.23	2%	2%	14%	38%	45%	(–)
...advancing the goals of your library?	4.19	2%	2%	10%	51%	37%	(2%)
...teaching the audience something about science?	4.13	–	2%	21%	41%	37%	(2%)
...increasing the audience's interest in attending other public science programming?	4.11	2%	3%	14%	45%	36%	(–)
...making the audience want to learn more about science?	4.09	–	5%	14%	48%	33%	(–)
...reaching new populations in your community?	3.67	3%	14%	25%	27%	30%	(2%)
...increasing your library's "presence" in the community?	3.60	3%	8%	38%	27%	24%	(2%)
...expanding your library's partners to new community groups, organizations, agencies?	3.42	8%	15%	26%	31%	21%	(3%)

N=62-64

Note: Percentages in columns (1)-(5) are of those who were able to answer the question. Percentages in the final column are of all those who responded to the question.

8. Compared to your library’s usual programming, how would you describe the audience that attended the PTL programming? (Check all that apply.)

	Percentage
The audience was larger than usual	33%
The audience was smaller than usual	9%
The percentage of younger people was greater than usual	11%
The percentage of older people was greater than usual	20%
The percentage of men was greater than usual	53%
The percentage of women was greater than usual	–
PTL brought in people who don’t attend our usual programming	84%
Other	19%
None of the above; the audience was similar to those who attend our usual programming	8%

N=64

“Other” responses included (N=12):

- People loved the PTL programs! They want more!
- The audience was similar to other programming for our supplementary science presentations and smaller than usual programming for the book discussions.
- Brought in many highly educated individuals, Dr. ’s, scientists.
- First two sessions attracted more people than usual.
- Very low to no attendance.
- The first two were large for a book club, then tapered off.
- Audience was similar to regular audience, but a few in the retiree demographic who have not attended past book-based events attended this series.
- As a unique program, it's hard to compare to others that we've had. I'd say 6-8 attendees for this series our area is excellent.
- We have no programming to compare to our PTL programs. Initiating some adult programming is a major reason we were to so eager to participate in this program.
- Start to building adult programming at our branch.
- At least initially, most of those that signed up had some history with our science partner.
- Sometimes a smaller audience created a better atmosphere for open and interesting discussion.

9. Did you use substitutions for any of the recommended books? (Check all that apply.)

	Number
CONNECTION: Did not use <i>Thunderstruck</i>	–
KNOWLEDGE: Did not use <i>The Land of Painted Caves</i>	29
NATURE: Did not use <i>When the Killing’s Done</i>	1
SURVIVAL: Did not use <i>Arctic Drift</i>	1

N=30 of 64 library professionals substituted books

Books substituted for Connection, Erik Larson’s *Thunderstruck*

- [Added *Cascade Summer: My Adventure on Oregon's Pacific Crest Trail* by Bob Welch]

Books substituted for Knowledge, Jean Auel’s *The Land of Painted Caves*

- *The Clan of the Cave Bear* (22)
- *Lost Symbol* by Dan Brown (2) [on recommended reading list]
- *Hitchhikers Guide to the Galaxy* [on recommended reading list]
- *Flight Behavior* [on recommended reading list for Nature topic]
- *Easy Money*
- *A Land Gone Lonesome*

- *40 Chances* by Howard Buffett
- [Added *American Nightingale* by Bob Welch]

Books substituted for Nature, T.C. Boyle’s *When the Killing’s Done*

- *My Sister’s Keeper* by Jodi Picoult
- [Added *Cabin Fever* by Bill Sullivan]

Books substituted for Survival, Clive Cussler’s *Arctic Drift*

- *The Seven Daughters of Eve*
- [Added *Listening for Coyote* by Bill Sullivan]

10. Looking back over all four of the PTL programming units, how effective was each of the following components in engaging the audience?

Overall 3.85; 33% very or extremely

CONNECTION	Mean ^a (1-5)	Not at all (1)	Only a little (2)	Somewhat (3)	Very (4)	Extremely (5)
Book: Thunderstruck, Erik Larson (or the substituted book)	3.84	–	5%	28%	45%	22%
Video segment with author Erik Larson	3.89	2%	2%	26%	48%	23%
Video segment with artist Roxanne Swentzell	3.56	9%	12%	19%	37%	24%
Discussion questions provided by the Limits team	3.37	5%	9%	39%	39%	9%
Discussion among audience members	4.11	2%	–	17%	48%	33%
Your science partner	4.25	–	2%	11%	48%	40%
Event overall	4.16	–	2%	16%	48%	35%

N=57-64

KNOWLEDGE	Mean (1-5)	Not at all (1)	Only a little (2)	Somewhat (3)	Very (4)	Extremely (5)
Book: The Land of Painted Caves, Jean Auel (or the substituted book)	3.17	8%	25%	23%	28%	15%
Video segment with author Jean Auel	3.58	5%	9%	27%	42%	17%
Video segment with chef Sean Brock	3.40	9%	7%	37%	30%	18%
Discussion questions provided by the Limits team	3.29	6%	12%	37%	37%	8%
Discussion among audience members	4.00	3%	3%	15%	47%	32%
Your science partner	4.25	–	3%	10%	46%	41%
Event overall	3.85	2%	7%	24%	40%	27%

N=51-62

NATURE	Mean (1-5)	Not at all (1)	Only a little (2)	Somewhat (3)	Very (4)	Extremely (5)
Book: When the Killing's Done, T.C. Boyle (or the substituted book)	3.81	2%	6%	23%	47%	22%
Video segment with author T.C. Boyle	3.87	2%	7%	20%	48%	25%
Video segment with triple- amputee athlete Cameron Clapp	3.52	7%	9%	30%	32%	22%
Discussion questions provided by the Limits team	3.50	4%	5%	45%	30%	16%
Discussion among audience members	4.17	2%	–	16%	45%	38%
Your science partner	4.30	2%	2%	8%	43%	46%
Event overall	4.11	2%	3%	17%	39%	39%

N=54-64

SURVIVAL	Mean (1-5)	Not at all (1)	Only a little (2)	Somewhat (3)	Very (4)	Extremely (5)
Book: Arctic Drift, Clive Cussler (or the substituted book)	3.79	2%	6%	14%	48%	30%
Video segment with author Clive Cussler	3.97	–	2%	17%	38%	44%
Video segment with combine demolition derby competitors Julie and Cory Shrum	2.90	10%	24%	36%	24%	5%
Discussion questions provided by the Limits team	3.49	3%	5%	41%	41%	10%
Discussion among audience members	4.29	–	3%	10%	43%	44%
Your science partner	4.35	–	2%	10%	41%	48%
Event overall	4.14	–	3%	13%	51%	33%

N=58-63

Connection Overall 3.90; 52% very or extremely

Knowledge Overall 3.75; 45% very or extremely

Nature Overall 3.92; 48% very or extremely

Survival Overall 3.86; 51% very or extremely

Book Overall 3.72; 43% very or extremely

Author Video Overall 3.82; 33% very or extremely

Human Interest Video Overall 3.29; 29% very or extremely

Questions for Discussion Overall 3.40; 27% very or extremely

Discussion Overall 4.14; 70% very or extremely

Science Partner Overall 4.27; 83% very or extremely

Event Overall 4.06; 62% very or extremely

THE FUTURE OF ADULT SCIENCE PROGRAMMING IN YOUR LIBRARY

11. To what extent do you feel that your experience presenting PTL programming at your library has prepared you to:

Overall 3.95; 66% quite a bit or a great deal

	Mean (1-5)	Not at all (1)	Only a little (2)	Somewhat (3)	Quite a bit (4)	A great deal (5)
...facilitate adult programming integrating books and videos in your library?	4.23	–	2%	17%	38%	44%
...develop new adult science programming in your library?	4.00	2%	5%	19%	42%	33%
...facilitate other adult science programming in your library?	3.98	2%	6%	14%	48%	30%
...serve as a resource for science information in your community?	3.58	2%	14%	27%	41%	17%

N=64

12. Based on your experience with the PTL program, how likely is it that you will:

	Mean (1-5)	Not at all (1)	Only a little (2)	Somewhat (3)	Very (4)	Extremely (5)
...offer the PTL program again at your library?	3.67	8%	14%	16%	28%	34%
...continue or extend the PTL program at your library with new books and videos?	3.94	5%	11%	16%	22%	46%
...develop and facilitate new adult science programming in your library?	3.81	3%	14%	16%	33%	34%

N=63-64

[IF SOMEWHAT/VERY/EXTREMELY LIKELY TO OFFER PTL AGAIN]

Please briefly describe how soon you might offer the PTL programming again at your library and what you might do differently or the same.

[Click here to see a complete list of responses.](#)

[IF SOMEWHAT/VERY/EXTREMELY LIKELY TO EXTEND PTL PROGRAM]

Please briefly describe your ideas or plans for extending the PTL programming with new books and videos.

[Click here to see a complete list of responses.](#)

[IF SOMEWHAT/VERY/EXTREMELY LIKELY TO DEVELOP/FACILITATE NEW ADULT SCI PROGRAMMING]

Please briefly describe your ideas or plans for new adult science programming.

[Click here to see a complete list of responses.](#)

13. Do you have the resources you need to offer other adult science programming in your library?

	Percentage
Yes	47%
No	53%

N=62

IF NO: Please comment on what resources you lack:

[Click here to see a complete list of responses.](#)

FUTURE ITERATIONS OF THE PTL PROGRAM

The PTL team is looking to expand and extend the PTL program. In this section, we ask some questions about different program models that might be used to support librarians in offering adult science programming in their libraries.

14. What additional resources, if any, could the PTL team have provided that would have made this programming more successful at establishing your library as a resource for informal science learning? (Check all that apply.)

	Percentage
Materials to make the program longer than a 4-event series	47%
Shorter videos for promotional uses (public service announcements, ads, etc.)	44%
Funds to purchase more books or other circulation materials	33%
Other	22%
None of the above; the program was already very successful in this regard	22%

N=64

“Other” responses included (N=14):

- Access to more online materials.
- Funds for supplemental programming.
- A larger variety of discussion questions.
- Expert scientists - places to get the speakers locally.
- More time to run the program. Running 6 events over a 12 month period would be a nice fit. I think a longer running event would establish the library as a consistent science resource. Alternating months would give a break to small staffs and more time for staff and participants to read the PTL selections among all the other personal choice reading they may be doing.
- Maybe a set of six books with the goal of doing at least 4 events.
- Plug and play bookmarks. We copied from other libraries, but I was surprised to find these were not part of the standard offerings.

- Everything provided was wonderful. The only thing additional that would have been nice was more graphics we could use to promote the program. Something that could easily be used digitally too.
- A bibliography of books and videos to expand the program (not necessarily all the bells and whistles that go with that).
- More on-line promotional materials to be downloaded and tweaked to reflect our library.
- The books, particularly the Land of Painted Caves, were odd choices. Different, more current, and more on point titles would've been better.
- A go to website for public use, or even list of sites we might link with. A list that suggests complimentary topics, organizations for programs or 'learning stations' at the library related to each book/theme.
- Further professional development for marketing, although I admit I did not view the video on the disc for that part. The sample posters and press releases were great; however, next time, make the posters 8.5x11 size instead of 11x17.
- It would have been nice to have an alternative to the Land of Painted Caves book - it was the least liked among our patrons.

15. The PTL team wonders about a program model with no books; that is, they would provide just human interest videos and discussion questions for each thematic topic (e.g., Connection). Compared to the current program model, do you think the discussions would be more or less successful without books, and why? Would these materials be more or less useful to you, and why?

	Percentage
Yes, drop the books	30%
No, keep the books	45%
Neutral or not sure	25%

N=64 comments

[Click here to see a complete list of responses.](#)

16. The PTL team also wonders about a program model providing multiple book suggestions, but consequently no author video, for each thematic topic (e.g., Connection). There would still be human interest videos and discussion questions. Compared to the current program model, do you think the discussions would be more or less successful, and why? Would these materials be more or less useful to you, and why?

	Percentage
Yes, offer multiple book suggestions	42%
No, offer one book and keep the author video	29%
Neutral or not sure	29%

N=52 comments

Note: 12 respondents misread the question to mean patrons at the same event would read different books; their responses were not included in the total or in percentage calculations.

[Click here to see a complete list of responses.](#)

17. We would like to know how your implementation of the programming would have been affected if you had been provided with materials to hold eight PTL events rather than just four. How likely would you have been to do each of the following?

I would	Mean (1-5)	Not at all (1)	Only a little (2)	Somewhat (3)	Very (4)	Extremely (5)
...try to increase the number of different people exposed to the programming (vs. having the same attendees meet repeatedly).	3.77	3%	6%	25%	42%	23%
...still run all 8 events in one year.	3.75	5%	6%	27%	34%	28%
...develop more or different community relationships to further enrich the programming.	3.75	6%	5%	19%	48%	22%
...add (or add more) science-related events to supplement the programming.	3.73	2%	16%	20%	33%	30%
...work with more or different science partners.	3.67	2%	11%	32%	30%	25%
...feel better prepared to pursue other library-centered science programming after completing 8 events than I do after 4.	3.23	11%	16%	31%	23%	19%
...feel more motivated to pursue other library-centered science programming after completing 8 events than I do after 4.	3.11	13%	21%	25%	25%	16%
...spread the events further apart.	2.84	14%	31%	25%	16%	14%

N=63-64

FINAL COMMENTS

18. How could the PTL program be improved for the audience, for librarians, and/or for science partners?

	Percentage
Books	35%
No improvements needed	22%
Logistics, scheduling	15%
Marketing	13%
Linking theme, book, videos	13%
Program design	9%
Videos	7%
Discussions	5%
Give more suggestions, ideas	5%
Administration	4%
Other	9%

N=55 comments

Note: Percentages exceed 100% because some responses included multiple categories.

[*Click here to see a complete list of responses.*](#)

19. Is there anything else you'd like to share with us?

[*Click here to see a complete list of responses.*](#)

QUESTIONS ASKED ON BACKGROUND SURVEY ONLY

20. How many staff (excluding volunteers) are employed at your library?

	Mean	Median	Range
Part Time	5.85	4.50	0-26
Full Time	4.42	3.00	0-40

N=62-66

21. How many volunteers do you have at your library?

Mean	Median	Range
12.39	5.00	0-129

N=69

22. How would you describe your library's resources about topics related to science, technology, engineering, and math?

Mean (1-5)	Poor (1)	Fair (2)	Good (3)	Very Good (4)	Excellent (5)
2.51	9%	41%	40%	10%	–

N=70

23. For how many years have you been employed as a librarian?

Mean	Median	Range
10.43	8.00	1-37

N=70

24. In the last two years, in about how many professional development programs for librarians have you participated?

Mean (1-5)	None (1)	1-2 (2)	3-5 (3)	More than 5 (4)
3.34	4%	14%	24%	57%

N=70

25. In the last two years, about how many adult public programs have you run at your library?

Mean (1-5)	None (1)	1-2 (2)	3-5 (3)	6-10 (4)	More than 10 (5)
4.54	–	6%	7%	14%	73%

N=70

26. Have you ever done any adult public programming integrating books and videos?

Percentage	
Yes	36%
No	64%

N=70

If yes, please describe:

[Click here to see a complete list of responses.](#)

27. Have you ever done any adult public programming in partnership with another non-librarian professional in your community?

Percentage	
Yes	78%
No	22%

N=68

If yes, please describe:

[Click here to see a complete list of responses.](#)

28. Have you ever done any adult public programming focusing specifically on science?

Percentage	
Yes	25%
No	75%

N=69

If yes, please describe (N=17):

- We had an “observe the moon” night that more than 30 adults came to. The same NASA scientist who will be helping with this program ran that one. She is also doing another moon program in July 2013. We have a lecture series in the summer that attracts an adult crowd. Often, while it does not focus on science, the topic will come up.
- We have had programs on forensics and astronomy.
- We have had a program on succulent plants and a program on animal trapping.
- Recently hosted a program about Isaac Newton and Arthur Storer...sort of science and local history mixed.
- Through Cornell Cooperative Extension, we have offered workshops on energy savings, composting, and other related topics.
- Just the environmental side, as I spoke of above.
- This summer, for our children’s summer reading company, we are having a woman dress up as Miss Frizzle to conduct science experiments and read to the children.
- In June 2012, I held a public viewing of the Transit of Venus in the library by streaming the live video feeds from the University of New Mexico and elsewhere. This program was open to all ages; ultimately, 8 adults and 6 children attended. In December 2012, Bill Dunmire came to speak about his book, New Mexico’s Living Landscapes. This presentation focused on botany, zoology, and ecology. I have helped with Lego Mindstorms robot demonstrations at our annual open house event. This was open to all ages, but many of the people interested in the demonstration were adults.
- A film screening and discussion about the work of Aldo Leopold. We also ran a sustainability book discussion series that included popular environmental studies non-fiction. We’ve also hosted several gardening-related workshops. Most of our science programming has been more about practical skills.
- Archaeology, tsunami awareness, PSP/tTrichinosis/Giardia dangers, fisheries information, Science and Tech along the Silk Road (history of science and technology), and some with the Denver Museum of Science and Tech.

- We received a grant from NASA for Countdown to Curiosity aimed at children’s services. But we also included adults in some of the programming.
- We had a program put on by an astronomer and one put on by a nutritionist.
- Game wardens of Lincoln County. BioPark. Snakes.
- Solar Home Tour. Solar Pedal Power Palooza.
- The Bat Conservation people have come to talk about bats (October 2012 and once several years ago); and a very long time ago, the Nature Center did a program on birds of prey. Our reference librarian has a Master’s degree in botany and has done programs on wildflowers and on growing gardens to attract butterflies and hummingbirds, as well as winter feeding of birds.
- Same as above.
- See above.

29. Are you:

	Percentage
Female	86%
Male	11%
Prefer not to respond	3%

N=70

30. Which of the following categories best describe your race/ethnicity?

	Percentage
White	96%
Asian	3%
American Indian or Alaska Native	1%
Hispanic or Latino	1%
Black or African American	–
Native Hawaiian or other Pacific Islander	–
Other; please specify	–
Prefer not to respond	3%

N=70

Note: Percentages exceed 100% because respondents could select more than one response option.

31. What is the highest level of education you have completed?

	Percentage
High school diploma or the equivalent (GED)	–
Associate degree(s)	6%
Some college or associate’s degree	4%
Bachelor’s degree(s)	14%
Some graduate school	3%
Master’s degree(s)	67%
Professional degree(s) (e.g., MD, DDS, DVM, LLB, JD, DD)	3%
Doctorate degree(s) (e.g., Ph.D., Ed.D.)	1%
Other; please specify	–
Prefer not to respond	1%

N=70

32. Is there anything else you'd like to share with us at this time? (N=27)

- I am sure there is an interest for the program. I am very excited to be able to bring this program to our patrons! We have a terrific science professional. I am interested to see if I like, am any more interested [in], or feel I understand science any better after the program.
- I have a “helper” on this project who is a retired science teacher.
- Earlier this year, we ran a “Let’s Talk About It” series, which is a book discussion program with discussions led by scholars from local colleges. We had a turnout of around 10 each program, and the participants are still continuing to ask when we can have another one.
- I’m the Community Relations Manager and not a librarian, so some of these answers didn’t apply exactly to me, though I did answer them to the best of my ability. I plan most of the adult programs in our library, but am not a librarian and don’t work one on one handling reference for the library.
- Just that I am excited about the opportunity to be able to offer this type of programming to my community.
- I have done many programs with non-librarians, but none of these professionals were from our community. Science is not my strong suit, but I like learning new things and sharing with others.
- We have been very light on science-related programs, so we are excited about the opportunity to participate in the Pushing the Limits program.
- I am nervous about my ability to generate excitement in my community for science-related topics. I am really counting on Pushing the Limits to help me start that process.
- I’m excited.
- I am interested in coordinating science programming, but don’t have the knowledge to “facilitate” on my own. Very much looking forward to building connections in the science field.
- My highest level of education is an MLIS, but I am also about ready to start my dissertation for an Ed.D. I am an avid fan of science, both fiction and non, and am extremely excited about the possibilities this program offers. At one point in my schooling, I was planning on working in the sciences, but was rerouted here!
- I am very excited my library was selected and look forward to hosting Pushing the Limits programming!
- The blend of media, books, and discussion is a brilliant mix and one I am looking forward to trying!
- I think it is great if school districts would link to their public library. People just don’t know all the resources that a public library has!
- We are very excited to be chosen for this programming and feel confident it will lead to future programs dealing with science issues.
- Two aspects of Pushing the Limits programming will be particularly new to me: the use of video, and facilitating discussions about books and videos.
- I am excited about this project, and thank you for choosing us. We do not have 30 volunteers that work continuously in the library, but at least that many that help with library activities, programs, and fundraisers. Our library opened on April 1, 2010, and is the first library our town has ever had in its more than 100-year history.
- I am very excited to participate in this program. Having adult service librarian is a new position, and adult programming is a new service for our library to be providing.
- I am very excited to be able to have the opportunity to offer the Pushing the Limits programming to my community as a starting point for continued programming in the science and technology fields.
- In addition to serving as the public librarian, we are also a joint venture facility serving as the Elementary, Junior High, and High School Library for the schools. I get to wear the school librarian hat also, which keeps me familiar with the schools’ core curriculum. This helps with adult programming and vice versa.

- Can't wait to get this started! Lots of people in town are coming in to find out when this will start, so I'm encouraged that it will go well!
- Thank you for the wonderful opportunity! Our customers love our programs and will embrace learning more about science subjects.
- We are excited about this grant and are anxious to learn more about what we will be doing.
- We are very excited about bringing the Pushing the Limits program to [our library]!
- I am very excited about this opportunity and am honored that our library was chosen to participate. Our community is thirsting for knowledge and challenges — and the nickname of [our library] is “the little engine that could.” On a personal note, I have a liberal arts background, but the first stage of my working career was as a legal analyst and researcher in a chemical company, followed by years as the administrative manager of a fuels and lubricants testing laboratory. In the last ten years, I have fulfilled a lifelong dream and become a rural librarian — “the original search engine.” Your program appealed to me because it reminded me of Jacob Bronowski's compelling interdisciplinary approach to cultural history in “The Ascent of Man.” We're all excited about Pushing the Limits and growing in literature, science, technology, and the arts! Thank you for this renaissance approach!
- We can't wait to see how this goes! I probably will have retired by the time it happens, but the information PTL provides is so extensive that I'm sure it will be successful!
- I am the Public Relations Specialist for the library and am not actually a librarian. In addition to the PR, I arrange and manage all the adult programming. I don't work the reference desk and do not normally help patrons with finding resources. I do, however, help out with eReader/digital media questions and arrange training for using eReaders with our resources.

Full Text of Open-Ended Responses

12. How likely is it that you will offer the PTL program again at your library?

[IF SOMEWHAT/VERY/EXTREMELY LIKELY TO OFFER PTL AGAIN]

Please briefly describe how soon you might offer the PTL programming again at your library and what you might do differently or the same.

N=45

- I plan on doing the series again with the same books at a later date.
- We already did another book... Encounters with the archdruid. We did the same format, except no videos. We had lunch and our science partner lead the discussion.
- Possibly try and partner with the nature center staff more in the future on programs. I would structure the program the same way.
- If a second program is offered we would love to participate again! Offering the same books would not be a draw but extending the program (see below) and doing additional programming is definitely in our future.
- We will be offering PTL programming beginning in September and following the same format minus the science partner.
- We are extending the program. If there is another PTL offered we will definitely apply for it.
- I focused on a science theme this summer with the adult reading program. I used 2 novels - The Garden of Evening Mists which includes gardening as well as historical, mystery, and artistic themes; and a land more kind than home by Wiley Cash which is about an autistic boy. Films I used this summer were A Man Named Pearl and Temple Grandin.
- I would consider offering it in the Spring of 2015. I would like to conduct the book discussions with the same format.
- This fall we will do another PTL style book club experience! Having the author here live was the key, it was awesome, people loved talking and interacting with the authors in a small (25 person) setting... plus we had awesome food and beer and wine tastings at each event so it was incredible!
- We plan to begin a series of PTL type books again this fall, but we will take this from a slightly different angle. Our community of readers enjoys reading titles that explore issues that arise from science. I will continue to look for a science partner who can speak to the ethical issues that involve the technology.
- We would probably wait a couple of years before we try the same program again, in the hopes of getting a new audience and renewed interest. We are continuing a book discussion series in the vein of PTL and it will continue on for the next year and a half. So, we probably wouldn't rerun the series until that one is complete.
- I believe a good time of year to have a science program would be in the spring. I held the program after the library closed so we can use the DVD player and screen and that made it very comfortable. I would do that again.
- Thinking about offering another series of science discussion in the winter/spring of 2015.
- We will try again in the spring of 2015. We are in the middle of a building remodel and that has to be completed first. I will probably use a variety of science partners. We like having everyone in on the discussion and not breaking into small groups as we had done on a previous discussion. We especially like the interview with the author. We would like them to be little more in depth.
- At least a year. Instead of promoting series like any other event (fliers, newsletter, newspaper pr), I would hold event(s) to promote the book/discussion series, i.e. family science night. Also might pitch to organizations and civic groups. I think this would be helpful to explain that the series is different than a regular book club.
- We have already scheduled an additional PLT discussion on The Anthill by Wilson.
- Be better at sending reminders of the meetings and hopefully better at contacting science partners.

- Possibly as soon as this fall or winter with different book selections.
- I would love to offer PTL programming again with a new set of videos and books. I would host the program at a larger site so folks could sit in a circle. I think they would help facilitate discussion among participants.
- I would love to offer it again next year. The participants really enjoyed it and I think that they would encourage others to give it a try.
- Plans are already underway to continue the programming this year. Books are already being reviewed and 2 of the science partners are already on board and dates just need to be selected. We liked the concept of having a video in conjunction with the book and will continue that practice.
- I will be ready to offer the program again this fall if I have the funding to carry through with it. We have already held one additional session in which we integrated video into the discussion. The program went extremely well with us and I would just hope that we could continue with the same level of effectiveness.
- We have funds left from this grant and hope to do another discussion before mid-September.
- We may try to do another program in the winter. Our February event was the largest attendance. Perhaps due to the appeal of Clive Cussler or the theme Survival. There were lots of relevant issues to life here in the mountains. I may have misunderstood the question, we would use new books and search for new accompanying videos. I am unlikely to reuse the same books and videos. I do not think we would have a new audience.
- We are looking at this year's upcoming book discussions and looking at incorporating the themes.
- The first group asked us to extend the programming. We are planning to choose five books on our own in the fall and continue.
- Already have - in June with the book In Defense of Food by Michael Pollan, complete with videos - people loved it! And we gave away books as prizes.
- I would be very interested in offering this next spring, integrating more online sources and reaching out to new science partners. For the last two programs I was able to better integrate external sources and educational videos. I would keep the core of the program but complement it with appropriate TED talks and other outstanding videos. I would also use more science partners. For instance, I have been developing contacts with the forestry service for the Survival element of Pushing the Limits since their participation would draw in additional interest and enrich the program.
- We would use the Auel book this time and would offer all the programs on Saturday mornings.
- Right now we are pretty swamped with the Summer Reading Program, but I will put more effort into adult programming (and could consider offering the PTL programming again) in the fall.
- I would like to do PTL programming again at some point in the future. Our patrons were very positive and want another PTL Program. In the future I will take more time to publicize and push our PTL Programs.
- My series had a small audience, but all attendees were excited and several are asking me to do something similar again. Because of other programming and outreach commitments, and lack of staff, I cannot do PTL again until at least spring 2015, possibly later. If I offer the series again, I will give myself more time to develop marketing that can reach beyond our population of enthusiastic lifelong learners (retirees). I want to attract some younger adults who do not usually seek out educational programming. As far as conducting the discussions themselves, everything went great this first time around. My science partner enjoyed it more and more as time went on.
- I believe the books selected should be more current (I know they were when it was initiated).
- We might offer the PTL programming again in the winter months. We ended up offering the programs March to June, on Saturday afternoons, hoping to attract a different population. We didn't. Saturdays in the spring were a poor choice to attract participants.

- With this summer's theme centered around science and our summer reading program open to adults as well as kids, now is a perfect time to continue our science programming including a program on paranormal science, how to classes, and much more.
- We would love to use the program again next year. We have been developing themed book groups to try to attract more interest and it seems to be working. I had a different facilitator for each event. I would like to try to find one person to facilitate the whole program.
- I think having another science series next year would be great and that having local science experts come and speak about every day science like we did was very popular. The books chosen for the original PTL program were not popular with our community (save Thunderstruck). If we were to do this again we would perhaps choose our own books ahead of time based on community tastes. We thought last minute to replace The Land of Painted Caves with Clan of the Cave Bear by the same author. In retrospect, I think we needed an entirely different title.
- We have already decided to do a 5th PTL program in late October or November in which my science partner and I will choose a suitable book and locate appropriate video to facilitate the discussion. Participants in the previous programs are quite excited by the prospect.
- This would be great to do next year over the summer as part of our adult summer reading program. I would do most things the same, but maybe add more event reminders in the newspapers in between each session to encourage new people to sign up.
- We plan to offer the series again at another branch location; we plan to retain the format, but will redirect some of the publicity using targeted social media.
- We would love to reapply to the program and continue as soon as funds are made available. We would love to do the program again using the substitution books. In the future we will give the books to the readers to keep for their own from the get go. Rather than wait till the end of the presentation. We would publicize the event to that effect as well. We found having e books available was useful.
- We enjoyed the title selection and the materials that supported it. I would change the location to another branch that is more active with this type programming.
- We have lots of requests to continue to offer similar type programs. We might consider doing that with Ted talks in the next year. We currently offer book discussion groups, but not really anything science in theme. I think the videos helped to facilitate discussion too.
- Fall semester (2014) perhaps with different books. Our partner was great and the audience loved him and wanted to continue the programs.
- We started the month after it ended because those attending really enjoyed it.

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12. How likely is it that you will continue or extend the PTL program at your library with new books and videos?

[IF SOMEWHAT/VERY/EXTREMELY LIKELY TO EXTEND PTL PROGRAM]

Please briefly describe your ideas or plans for extending the PTL programming with new books and videos.

N=49

- I plan on purchasing new titles such as 1984, My Sister's Keeper, etc. to explore the science themes such as technology for 1984 and health technology in My Sister's Keeper.
- We already did another book... Encounters with the archdruid. We did the same format, except no videos. We had lunch and our science partner lead the discussion. ** We plan to do another book in September **
- Possibly with the help of the science partner in a few years develop another program similar to PTL.

- We are continuing to offer related additional programs. We have already done one additional book - My Sister's Keeper and are planning three more for the remainder of the summer. We are working with the same science partner to develop the science component and include a video component
- We are taking Michael Pollan's In Defense of Food with a local expert to facilitate.
- Our patrons really liked the videos so we are trying to select books that have either story content videos or author videos.
- We have added a June and July session with the same professors. These were hugely popular.
- I want to show more documentaries.
- There were a few suggestions on the listserv. I would start there. We are reading a series of books by Jen Wixson this summer, who is a local author and I would like to have someone come in to talk about GMOs.
- Well, we'll likely do something that focuses on ecosystems here in the Pacific Northwest... Old growth forest, estuarine habitat, prairie, Oak Savanna, etc. Plus, we're really into space, astronomy, stars, etc. and have an awesome relationship with NASA and bring a NASA Astronomer here every year to do cool and amazing stuff, so I want to develop that further with a book thing related to space science!
- I intend to use TED talks to supplement discussions and am also glad to report that the nonfiction DVDs that I have purchased with grant funds are very popular! I am planning to spend more money on that DVD genre.
- Actually we are going to discuss the book Still Alice by Lisa Genova tonight using the PTL format and discuss how it relates to the theme of Knowledge.
- We are in the processing of identifying videos and related books for a discussion series later this year.
- I pulled books from our collection that related to the discussion and put them out for viewing. Easy access. I would suggest titles to our collection staff.
- Thinking of using the exact same format - science facilitator, online video and a great book to start with.
- I am not sure yet what videos I will use but I liked several of the ideas from the others libraries.
- We have decided to continue the series in the fall focusing on teens and young adults as our target audience.
- An interest has been expressed in using some of the substitute books to continue on rather than repeat the PTL books.
- Extend into other areas of science and have a more specific focus.
- I am going to choose several fiction books that have a science theme and look for either documentary films or YouTube films that relate. Participants really liked the format of the program.
- Continue using science-related books at our monthly adult book club, use TED talks or online author interviews to supplement discussions.
- As mentioned above plans are already being made and two of the science partners are also interested in presenting programming to public school students. The library partners with the schools and provides author visits so this will expand the libraries presence in the schools and that way we can receive every student. We target one class so about 80 to 100 students and this year the science partners will present programming to the 8th grade students. I am applying for a grant that would allow us to purchase the books for the students and it could be an ongoing project each year with that age level. This will also encourage the students to attend the additional programs at the library and bring their parents, grandparents, etc.
- I have extended science for children and teenagers into the summer reading program. I have recruited local public school science teachers to help with this and I am having the best attendance the library has experienced. I anticipate carrying this book/video idea over to the adult book discussion group this fall.

- Next spring we hope to come up with another discussion series but do not have any detailed plans yet.
- Have already purchased books and created a display of nonfiction science books with a sign thanking PTL and NSF. We will some fiction books with related themes and I would like to set up a display in the Children's area as well.
- We have talked about incorporating more science themed books into our regular book discussions and marketing them as such.
- I don't know how we can get videos, but we do plan to extend the book sessions. One of our choices is a James Rollins' book.
- Am thinking will be next - taking a break for the summer - will start up in September.
- Tentatively looking into developing similarly structured programs utilizing TED Talks and related books, in the fall.
- During our next book discussion group sessions there are plans to purchase some of the next read suggestion with money left from the grant.
- We have some new books in mind and are planning to re-use the existing program and add 6 more books/programs/videos with different themes. 'The Secret Life of Dust,' programs with NASA and JPL, and I would like to include 'Longitude' this time and talk about navigation and its consequences.
- Right now, I am really only thinking about the Summer Reading Program, but I will think more about adult programming in the Fall.
- I like to idea of tying in the PTL Program with the Summer Reading Program in some way. This year's summer reading program centered around science and it was a good lead in to our adult program.
- My series had a small audience, but all attendees were excited and several are asking me to do something similar again. Because of other programming and outreach commitments, and lack of staff, I cannot do a discussion series again until at least spring 2015, possibly later. However, the PTL listserv is full of great ideas for books and videos to use, which I am saving for later use.
- Our first facilitator is planning to come back and do a summary overview of the book series. I have asked for the attendee recommendations for books, and we will choose.
- Here the listserv is offering a lot of great ideas for continuing the theme. Our participants are interested continuing the program.
- 1) We are screening 'Cosmos' weekly, with a discussion after each episode. 2) Plan to integrate a regular facilitated book / science of the book discussion quarterly. Our science partner has offered to collaborate with the library in this, and we will use pre-existing YouTube videos such as MentalFloss and John Greene's channels.
- We have been working on additional themes or expanding themes like 'Survival' which were big hits here to additional books and programs such as a program and book focused around the bee population or for 'Nature' having our local anti-fracking group come in and play a film and talk.
- We are purchasing some new science related books for the collection. We are not purchasing new videos but are using video segments from online to supplement some further programming that we are doing.
- See above answer.
- Loved the concept of the pushing the limits program. Planning on doing one in the fall. Really enjoyed the author segments. Would have a video that ties in more with the book that the human interest videos did.
- We are offering a book discussion on August 2nd about the 'Immortal Life of Henrietta Lack', about stem cells and medical ethics.
- We plan to develop and prominently display a new collection of popular science materials based on the comments and suggestions of program participants.
- We would live to use some if the substitution books and additional materials we identified. And add complimentary DVDs or audio books.

- We have purchase new titles for this group to continue reading and meeting for discussions monthly.
- We don't have definite plans yet, but are considering it for the future, since there's interest from those that participated.
- We had good participation on some of the topics, especially the survival session, and we had interest in other books. We made the books available to circulate before each event and had books for the next event always displayed, but I wouldn't say the majority of people read the books. They were really just more interested in science. However, our science partner recommended several books he read as part of his preparation to lead the discussions, and we will explore continuing with some of those.
- Have looked at books like 'The Immortal Life of Henrietta Lacks' and a couple of Jodie Picoult books dealing with science and morality. Will search for appropriate videos for those titles.
- We have started with the 'Big Tiny' by Dee Williams there are interviews with her talking about her tiny house. We are continuing on with other books that we can videos on.

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12. How likely is it that you will develop and facilitate new adult science programming in your library?

[IF SOMEWHAT/VERY/EXTREMELY LIKELY TO DEVELOP/FACILITATE NEW ADULT SCI PROGRAMMING]

Please briefly describe your ideas or plans for new adult science programming.

N=48

- I plan on purchasing or putting together science program for both adults and children to see if we can incorporate STEM learning for all ages.
- Same... just another book. If there are videos, then we will offer them with the program. If we don't have enough \$ for lunch, then people have offered to do potluck.
- Starting a topical science book club of sorts and having nature center staff come in to discuss current events going on in the community.
- We will be offering a program on edible wild plants and another on conservation this summer as we continue adult science programming.
- We will continue to provide a science and book based program every other month for adults (alternating with a history topic).
- As stated above, we will continue in September and use books that others used during the initial PTL project.
- Right now we are in the middle of our two additional months and Summer Reading Program, which also focuses on science. I expect we will do more in the future as well.
- I haven't had time to think about this but this summer we are going to make soap and learn about the chemistry and the process. I would like to do more hands on programs and Makerspace programs. I have a science background and I enjoy it.
- See above.
- I plan to continue the adult science programming by partnering with local experts and focusing on conversations and skills that are important to our community. Sustainability and learning to provide for oneself while navigating the technology overload are topics that appeal to our readers.
- Food programs are very popular at our library so we have had a nutrition program on using juicing this past week and next week we will have a program on using greens that you can find in your own backyard in everyday cooking. I am on the lookout for other presenters and hopefully thanks to the PTL programming I'm more aware of the variety of programs we can offer relating to science.

- We are planning a series of events with the goal of engaging men in our community. The science video and book discussions were very popular and our project will continue the success of PTL.
- I included a program on Pollinators in this grant. It will be for adults and presented by a local museum. I will continue to seek science programs to keep the momentum going.
- No plans at this point for NEW adult science program. The PTL template works well, why reinvent the wheel?
- We had the Mad Scientist in for our Children's Summer Reading Program, so we are talking about asking him back for an adult program.
- More of the family approach. Many times adults are more willing to take time for a subject if their children will benefit, even though this does not seem to allow for content depth. Maybe a movie, with a 'science partner' for Q&A after, and have a variety of books or book lists available as a hand-out. Individual scientists and their work highlighted in the form of a lecture, most likely historical figures. I.e., we will be hosting a lecture on Einstein.
- Speaker from a local nature center; group discussion of the show Cosmos.
- For our Summer Reading Program we will be doing adult programming on permaculture, forensics, and scientific methods with a ghost hunting group!
- We are planning an expansion of our library space and part of that includes a new community room. Our area is full of amateur astronomers and every time I host a program in this area we have a full house. I would like to partner with a couple of area organizations to host astronomy classes at the library and/or star parties.
- Work with other local organizations to put on monthly or quarterly science discussion evenings.
- We like the fact that we could select both fiction and nonfiction books. In conjunction with the book reading we are exploring additional informational discussion groups revolving around science.
- I will search the listserv and other areas to seek names of books that other libraries have successfully used. I also anticipate trying to form a share group with some other area libraries in which we can share books. Buying multiple copies of the books is quite expensive for a library our size. Since Pushing the Limits was so successful, we want to continue programming.
- We hope to coordinate more programs with our science partner, depending on his schedule. He mentioned using TED talks as a part of the program.
- Our science partner would like to do some additional programming based on participant feedback. He would like to run some Survival type class(es) with orienteering, etc. particular to our area. We would also like to run some children's programs with a similar format to the adult PTL programming (book, video, discussion).
- We plan to do more coding and other STEM-related workshop type events.
- We work with the Master Gardeners and would like to expand into programs concerning ecology.
- Still in the thinking stages but I like the idea of softly incorporating science into our programs.
- Possibly dealing with climate change and local plant impacts.
- As a result of the programs patrons have come forward with ideas for partnering with local educational organizations to do science workshops. We were able to organize a world science learning workshop for summer reading in July, which caters to the entire family as a comprehensive educational experience on topics like cryogenics.
- Genetics and DNA are high interest topics. I would also like to include adult 'maker programs' with hands-on science opportunities (especially working alongside some of the more technologically-active teens as a cross-generational exchange), local foods, preservation, edible wild foods, the science of subsistence, and things like that. I would also like to include a nutrition (especially Vitamin D types of research) component because of where we live.
- We are starting a Makerspace program (which will incorporate science and technology) and will ramp up that program in the Fall.
- Further thought is needed on this at this time.

- Right now our library priorities are to establish computer classes and a makerspace type program. The makerspace will start out geared toward youth, but I want to give adults the opportunity to make things and experiment too. Science concepts can be easily integrated into this, and in time, I can bring in speakers.
- We do quite a bit of nature/environment programming. We will now incorporate books on the same topic prior to the program and have a book discussion afterwards.
- Guest speakers on science topics.
- 1) Inspired by our community's interest in the PTL program, the library has introduced a Telescope Lending program, along with introductory astronomy workshops. 2) We discovered that our citizens enjoy talking & learning about science in a group discussion format rather than the individual experiential formats we had been planning. 3) We saw that the literature (ie, a more literary book choice) is an important component to people in our community when planning future adult science programming.
- Sorry, please see above.
- We are reading In Defense of Food and having a local food advocate come speak with our patrons about local food movements.
- One of our activities included collaborating with the local watershed for a clean stream event. We were thinking of continuing this collaboration and exploring other local areas together.
- We only have some vague ideas at this point, but we're considering locating a local expert on invasive species to come and give a talk, since that was a topic of great interest among our patrons.
- We are working with faculty from a local university to develop programs that highlight research being done at the school of interest to the community.
- We have identified additional science partners and could find complimentary videos and books to enhance their fields of expertise.
- This tied in beautifully with our summer reading program.
- As mentioned we'd like to do book and movie discussions, possibly involving the Ted talks.
- We had a very engaged audience for three of the four programs. However, several people told me that they didn't mind coming a bit late, so we could 'get the book discussion out of the way' and they could just arrive for the science part. We had an interesting discussion on Colony Collapse and lots of interest in using natural materials to survive in the wilderness or in colder seasons and I'd like to bring our survival expert back to talk more about that. We had interesting discussions about colony collapse and plan to bring in a beekeeper to talk about that. The interest in invasive plants and animals was also significant and I can imagine two programs before December on that topic, and we will also likely explore intergenerational programs to allow kids to interact with adults in hands on engineering projects.
- Due to the enthusiasm of our audiences, we'd love to continue the program and are currently researching other book titles we feel would be appropriate to share and discuss. Another theme might include food engineering, with a taste testing element.
- We would like to have a class on alternative energy and are working on planning that right now.
- Our best attended events were with Arctic Drift and bringing the State Climatologist to discuss New Mexico weather patterns and hosting the one Woman play by Susan Marie Frontczak -- Many: Life of Marie Curie.

[Click here to return to the annotated survey.](#)

13. Do you have the resources you need to offer other adult science programming in your library? [IF NO]: Please comment on what resources you lack.

N=33

- Yes/no we are using PTL money for additional programs but once that money is gone we do not have the financial resources necessary.
- Yes and No. We have good relations with schools, etc. to be able to find science partners, but having specific topics to work with and discuss would be extremely helpful as a starting point.
- Yes and no. We can do book discussions, but not something as full as PTL.
- We need other ideas besides books... or books with an activity? IDEAS & programs laid out just like this.
- We need more space.
- We lack funding and will search for grants to cover books.
- We have some resources, but additional funding to pay the scholar, bring in additional presenters, and build the collection would be very helpful.
- We have begun to earmark more budget dollars to this area. We have recently purchased science in context database by Gale.
- We do not have videos. (I have resigned so I will not be here to do other programs).
- We are looking for funding with some grant opportunities. We have science partners that are willing to donate their time so just need to fund the materials and publicity.
- Time, money.
- Still need to beef up our science partner connections but PTL was a real help with this.
- Staff time. We are short 2 FTE.
- Staff time, space. We are working on a new library building right now.
- Space, ideas that are compatible for a small very rural library.
- Some of it is just a financial concern; we'll have to purchase materials to conduct some of these program (robotics, parts to assemble and modify a ball run for engineering sessions, speakers on invasives and bee keeping; but I am working to persuade the director to allocate funds for this purpose.
- Multiple copies of book titles for our audiences and appropriate videos to accompany them.
- Money! It takes money to do these things.
- Money to purchase books and pay presenters would have to be raised.
- Money for paying presenters is always in short supply.
- Materials and patrons.
- Looking for relevant videos.
- Limited budget for guest speakers.
- Larger technology & staff budgets.
- Ideas and contact would be helpful.
- Funding. This grant was such a shot in the arm for our small library.
- Funding may be an issue as well as staff time.
- Funding may be an issue.
- Funding for facilitators is always a challenge and finding a good video interview of the author.
- Funding.
- Funding.
- Although we are somewhat prepared (we have a staff member who holds an MA in Biology), the addition of a Science Partner who was not on staff proved, I believe, to be a huge asset. We aren't budgeted to offer such a great stipend to our presenters, on our own. The Science Partner is so pivotal to the program's success; being able to fund that portion was extremely valuable.
- Actually, yes and no, depending on budget.

[Click here to return to the annotated survey.](#)

15. The PTL team wonders about a program model with no books; that is, they would provide just human interest videos and discussion questions for each thematic topic (e.g., Connection). Compared to the current program model, do you think the discussions would be more or less successful without books, and why? Would these materials be more or less useful to you, and why?

N=64

- I think that some of the titles actually put some of the possible participants off of the program and if they did not get a chance to read or finish the book, the participants let that deter them from attending the program whereas the human interest videos with no books would really make the program more open to everyone.
- The people in the groups had a hard time relating to the human interest videos. It was difficult at best for them to make the connection between the book and the video. The books should stay...!! IMO the human interest videos need to be more closely connected.
- I believe so, just because it was difficult for a lot of people interested in the program to have the time to read the book, therefore the majority came to the program without having read the material.
- Then you miss the point of tying in literacy piece. I would not hold the program in a library then.
- I think that this would require much more marketing and work on the libraries end to get people in to the library. I think it would be an interesting concept. Unfortunately in our community I don't think we would be able to get anyone to come if there wasn't a book tie-in. Many of our attendees were interested in the book first and the program elements second.
- I think books are very important to this program, however perhaps a model with the theme and suggested titles and let the librarians / science scholars pick a book that fits the committee might be a model to consider.
- I prefer having the books to augment the programs. It gives the participants a chance to read and think about topics before the events. While some of the titles were not what I would have chosen, they set the stage for discussion. Those who did not read the books still came so it was not exclusionary, but it gave everyone a starting point for the conversations.
- In our case, I think we would have had more participation without the books. The books seemed daunting to some and many did not finish the whole book. I think the videos and discussion questions would be a huge draw and help widen the audience. Book clubs are everywhere but this discussion format would be a new idea.
- We offered the books for the participants to keep. That seems to have been the huge draw for the program. But I do think that the video only plan could work. We had numerous people who didn't like the videos because they felt that they didn't relate to the book well enough, but just a video alone would solve that problem.
- I think the discussions would be much less successful without the books. I'm not sure that I would offer a film series like the one you describe. I would find the materials less helpful.
- I liked the program the way it was designed. Our patrons love books which for our library I think the program would be less successful. A no books program may draw younger people, would love to try.
- This could work... maybe you could recommend books to go along with the human interest videos, etc... and individual libraries could pick up books if they like...
- The program would have been just as successful without the funding to purchase copies of the books. Our library system is very generous and allows us to request multiple copies of book discussion titles which helps us meet demand readily.
- Yes, more useful. We do a documentary film series and it is incredibly well attended. Sometimes, though it pains me as a librarian to say it, a reading component can inhibit attendance.
- I felt that the books were the key to the program, so I'm not sure how successful our program would have been if we hadn't had a book to discuss.

- More successful. Sometimes people don't have time to read the books.
- I think our discussions would have been less successful without the books. Reading the book in advance got the audience thinking about the issues ahead of time and allowed them to do some research on their own, if desired. I don't know that people would take the time to watch videos in advance and, in my experience, cold discussion tend not to go as deep.
- I like using books as a starting point. I also would like to include an interview with the author. I used the human interest piece as a fall back in case the discussion slowed down. The discussions always lasted more than an hour and it was interesting. I think books are a must.
- I think the books are a good starter to get the discussion going. Having read the same book allows participants to feel connected. Although I'm wondering about the choice of books. I felt, (nobody really said so) people expected to read a more 'serious' book, not popular fiction.
- For my group, the books are a very necessary part of the discussion. Without the books it would be less successful at least here.
- Good question - books seem to work in a library setting. Would films draw an audience? Yes, paired with the right 'science partner' and maybe 'learning station' in the library paired with the film/theme. Then author interview with reference to book title at end as a teaser. Attendees invited to take books and discuss in a meeting at a later date.
- Might be more successful for us - we found that there was too much to fit into one session with videos and book, and discussions tended to be superficial because we were cramming so much in. Our participants (and science partners) were also often confused about how the book related to the videos.
- The inclusion of the right books is essential as I have felt somewhat incapable of choosing the books for this genre. I would love to have a suggested reading list and maybe even alerts as new books are published. What about a PTL for elementary and middle school?
- I think we needed the books as a platform for discussion. They helped illustrate certain ideas and subjects.
- The materials would definitely be helpful, but the books were what drove the discussions.
- Wow those are two very different models. I think our relation to video is very different than our relationship to books. I do think that the program is more successful with the books in my area as our community members enjoy book discussions overall. Many people didn't get the connection to the theme from some of the videos - but they did provoke discussion. These materials would be less useful to us. I think that the book and video challenged participants to think of connections to the themes and relate the emotions and challenges of the characters in the books to the characters in the videos. The author videos in particular were very popular.
- While I'd like to support the idea of a library program centered around discussing a shared book, I know that people often wouldn't attend because they hadn't read the book or weren't interested in the book that month, even if they found the overall topic interesting. So this might not be a bad route.
- Our group really liked having the books to read so I don't know if they would be as interested in participating without the books.
- I think this would work quite well. In our discussion groups probably 50% of the patrons actually read the book. Even though we encouraged people to attend if they had not read the book or hadn't finished the book they were still in the mind frame of literature book talks. I would love to have the opportunity that people could read a book if they chose but that not be the focus of the discussion. Time is of a factor for all of us and many people do not chose to read something if they are not sure they would like it. I think the introduction of the video first could encourage them to then check out a book about that thematic topic. If the group decides to try this approach I would even be interested in using funds to purchase the videos.
- Most people had not read the books before the book/video nights. I built two of my programs using science partners off of the human feature video so I could see setting the program up around those videos.

- I think this would work for part of the time. I had several people say that they would have liked to attend but did not have time to read the book. I told them to come anyway but very few did.
- I think the book provides a good launching point for discussion. I'm not sure how well it would work without the book. I think our attendees discussed more based on the book than on the videos.
- I think all-videos is a good idea as well and may encourage those that tend to not read or finish the books to attend. Therefore we would probably reach more people. In addition to human interest videos, a talk by an expert, e.g. a fascinating TED talk would help facilitate interest and discussion.
- It would be a different model and a different audience if it was just videos/discussion. I think the videos would need to offer more science content than the ones we were provided. I think it would be a model worth a try!
- I think the human interest videos were wonderful. However, working it into the book discussion was the most important element.
- It would be helpful if you provided topics and book suggestions but let us pick the books. The videos were a huge hit and I have added them to my programming.
- I think a case can be made for offering just videos on specific themes to spark discussion. However, the beauty of using books, as well, is to inspire thought about the subject well in advance of the event.
- Books help to pull together the science topics under an educational rubric disguised as entertainment. That said, I think the program could be just as effective without having specifically chosen books. Many patrons were interested in reading new books about the topics after the program and taking the initiative to learn more on their own. The human interest stories provided a lot of that interest and patrons come to the library for so many reasons besides just books, and so more videos/human interest stories would be welcome.
- The relationship between the videos and book was very important to our discussion groups. Being able to have a human interest video with question that I could group with a book of my choice would be great. Both book and video need to be related.
- The books definitely enhanced the program, but, that said, they enhanced the program for those who read them. We had a number of people who didn't read any of the books, but were interested in the topic. Marketing the program as a 'discussion group' rather than a 'book club' made a huge difference, but I would be sorry to not have books included.
- Themed videos would be ok as a librarian should be able to match a book to the content.
- I wonder if that would work better as I don't think some of the books resonated well with the audience. I almost wonder if you could suggest a few books for each topic. But then again, my audience did like the author videos. All in all, I think it would be less successful, because as I just said, my audience did like the author videos.
- I think they would be more useful to our audience. We found adults have very little time to read and prepare for such lectures. For us having videos that spark discussions may work better as patrons can come and discuss the ideas. The videos and programs may include a list of books that tie into the program.
- Discussions without books could work really well for me. I have reason to believe that a lot of community members viewed this as a 'book club,' and did not attend when they did not like one of the authors, or if they did not manage to finish the book. I tried to encourage them to attend anyway in my marketing, but the 'book club' atmosphere did not dissipate.
- I found the author interviews to be more compelling than the human interest videos, however, it all depends on whether or not you are having a science partner. The science partner was the real key to the great discussions and we had some great ones.
- The books attracted the audience we had. I am not sure who would have come if it was just the videos. I suspect it would not have been as engaging for our participants. Reading the books made them more invested in the discussion.

- In the case of our community, a program without books would have been much less successful. The human interest videos, which glossed over the science, were not well-received by our audiences. More science in the human interest stories might have engaged our audiences. The two authors whose books were really based on science, and who spoke to the science involved, had an impact.
- I had quite a few participants who hadn't read the book or people come in the next day/week and tell me that they were planning to attend but didn't because they didn't read the book even though we made sure that everyone knew that they didn't have to. It would be a good idea to have at least one or two programs with no book component.
- I don't know! My participants enjoyed having a book to read and using it as a jumping off point for the discussion. What I do know however is that I had people not participate because they did not feel they could commit to reading the book. I do like the idea of some preparation beforehand so participants are coming in with some background.
- I think that this program would be more successful without the books. I think that people in our community are very particular about the books they choose to read and the book clubs they choose to join. Many felt it was easier to attend our supportive programming featuring science experts. Others wished that we had chosen books more suited to our community.
- I'm not sure if they would prove to be 'more useful', but I certainly think there would be a greater interest from the community if patrons weren't required to read a book first.
- Depends on the human interest videos. Patrons in this group did not understand how the human interest video tied into the book or topic (ex: tractor derby). They enjoyed the author discussion more. I think it would work if the videos had more science in them or relevant information that would spark a discussion. It was hard to have a discussion after watching the human interest videos for some of them.
- I think it would be less successful, because offering free books drew people into the library, and was also an excellent starting point to discuss the overall theme. I thought it was great to see how the book tied in with the author videos and the human interest stories so people could see different aspects of the same topic.
- I think the books were an important component to the program, and that the programs would have been less successful without them.
- I think that type of program would reach an additional audience. Having copies of the videos for distribution, or at least check out would enhance this idea I believe (reinforce, model learning and teaching what one has learned).
- Maybe, my group was more interested in reading and discussion. They didn't care much for the videos.
- More successful! Some are not interested in reading a big book especially when it doesn't grab your attention. If there are online materials, videos, etc. a wider variety that different people can relate to would help.
- Less successful without books. The books provide a frame of reference for the discussion. I do think shorter books would be nice, however.
- I think it would work well too. The books added a way to involve the participants more. But we had several people each session that did not have time to read the books and still enjoyed the program greatly. Plus, I think libraries could potentially still choose books to use if they wanted to. With inter-library loan we borrowed several copies of the books to offer people, since we couldn't purchase one copy of each book for everyone.
- Hmm... that's an interesting idea. In some ways, the myriad magazine and journal articles were almost overwhelming. My audience would have been happy to go without the novel counterpoint, but often the author interviews brought up salient points that provided a good entree to discussion. I think possibly not using the books would work, but providing more interviews. Also, candidly, some of the support videos left our attendees cold. We almost didn't have enough time to get through the questions raised by the authors, and then the hard left into 'here's a family

that has developed their engineering skills to the point that they compete in combine derbies...'
I'm in a rural farming community but that video got a pretty puzzled look from most. However, we didn't have huge attendance since it was summertime and we didn't have tremendous overlap among attendee groups, so maybe if we had handled the sign up differently to make people feel more like that had to attend all four, thing would've been different.

- I don't know that there would be a difference in interest, but the audience we had definitely enjoyed the reading. They weren't always enamored of the books, but they did read and discuss what they had read and the ideas that were formed from the reading.
- Less successful without books. Since books are read prior to attending the program, they begin to stir patrons thinking on the subject which helps to fuel the discussion. Although the titles chosen were not necessarily the most engaging.
- Less successful that books provided more discussion. You could try movies that relate that could offer discussion as well.
- We added a one woman play about Madame Curie to generate interest in science.

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16. The PTL team also wonders about a program model providing multiple book suggestions, but consequently no author video, for each thematic topic (e.g., Connection). There would still be human interest videos and discussion questions. Compared to the current program model, do you think the discussions would be more or less successful, and why? Would these materials be more or less useful to you, and why?

N=64

- I think the discussions would be more successful in this model due to the fact there would be multiple book suggestions not just one particular book.
- Nope, we liked the author video. In fact a lot of times they solved questions about the books. I think it might even be better if the author was available to Skype.
- The author videos were well liked.
- I think having a multiple book selections on each topic would be most beneficial and may open your audience to a wider variety of people. I think the discussions would be more successful and people would have a choice and possibly finish the book if they had options to choose from.
- While my group enjoyed the author videos I don't think they were necessary. I think the engagement and discussion would have occurred the same with or without the author videos. While I, as a librarian, am fascinated about a person's method when writing I don't think it would have made a difference.
- My participants really enjoyed the author video but not having one wouldn't have been a big deficit to the program. The book and the human interest videos were the strongest part of the series. However, hearing what the author had to say about the book, theme, and science connection was valuable as well (I like the current set up).
- If it widened the choice of books then it would be a good idea. The author interviews were helpful and interesting in rounding out the topics. The human interest videos were often such a completely different perspective of the science theme. It is always interesting to readers to find out what the authors think about and how they research their materials.
- I would have liked to be able to select books that still covered the theme but were perhaps more to the taste of our patrons.
- I don't think that would be as good. I think that discussing a common book is what ties them together. And our participants liked the author videos better than the human interest videos.

- I would choose a book from the suggested titles, and find an author interview on YouTube and use it as part of the program. I would integrate the materials into the discussion program.
- I think this model would be successful also. I liked the author video but I think the discussions would be just as successful. Book suggestions for additional discussions would be very useful to us.
- As I said above, this could work well... more flexibility for each library to customize the program for their 'peeps' (people!).
- Actually, our library didn't use any of the human interest videos instead our readers gravitated to the author videos. The readers wanted to 'know what the author thought' - The lead-in provided by the author and library narrator was enough to start the conversations.
- YES!! The books selected weren't great. A greater variety to choose from would have helped.
- That is a great idea, that way each library could tailor the program to the interests and needs of the patrons in their community. I will admit, our participants didn't really enjoy the books but they did offer great discussion topics in spite of our general lack of enjoyment in reading them. Sometimes the books you hate provide the liveliest discussion.
- The author videos were very interesting and actually brought some people to the program.
- I think the author videos were the best part of this for our group so I don't know that it would be as successful without them. It's always interesting to know what's going on in the author's head.
- If we had multiple book suggestions, I would seek out information on the author myself to include in the discussion. I think it is important to understand the background of the material.
- Our audience liked the author interviews but felt the human interest videos were too long and often the participants could not make the connection between the video clip and the theme. I like the idea of multiple book suggestions. I would love to see books that are relevant to our locale.
- This would work well for our library but they enjoyed the author interviews very much. The human interest videos were not as popular but they did spark some discussion.
- Video and discussion first. Multiple book suggestions (maybe library provides books for 2-3) and another meeting to discuss books. Or perhaps books discussed in separate groups (one per title). I think materials would be about as useful (not more less). What has occurred to me just now (in reflection during this survey) is that perhaps human interest video, related discussion happens first. At the conclusion of this viewing/discussion, the author interview is viewed and related book passed out for reading with the date of the book discussion. Then second human interest video/discussion, etc. Sometimes discussing the book, and what the author said after is enough to think about. Then we added the human interest and more discussion immediately. Maybe too much to allow depth of thought and conversation in time allotted for one meeting.
- That might work better, so that we could tailor the program a bit more to better fit the interests and level of engagement of our community. We found that participants wanted more serious literature that was more overtly science focused - less interest in popular fiction.
- I think this is the way to go. The videos were a little long and you could tell people were anxious to start talking.
- We liked the author videos and discussion questions. The human interest videos were difficult to tie into the discussion.
- For us they would be as successful. The videos were great, but our science partner put a lot of time an effort into putting PowerPoints and other materials together.
- I would like multiple book suggestions as community interests often vary with the community. I think this would be a very successful model. Although people like the authors' videos, they did not add to the discussion as much as the human interest videos did.
- I like this idea! As I mentioned above, some people didn't attend because they didn't like the book that month. But if they had a selection of titles to choose from around a given topic, more people might have attended.

- I think this would work well. If the library had money to purchase a variety of books on different subjects I think it would make the discussions even more interesting as people shared what they learned from the book they read. I think it would encourage people to read more.
- I like the idea of choice, it would make people feel more invested but everyone really enjoyed the author video, I think even an author video from a book that was not chosen would be of value.
- I think this would be a good way to go -- multiple book suggestions. Folks did not want to read one book 'on demand' for a program.
- We enjoyed the author videos but we could probably find a u-tube video for most of them. I like a variety of approaches because not all people respond to the same materials and ways of learning.
- This plan could work. The author interviews did contribute to the entire program but are not essential.
- I think that is an excellent option and allows a library to gear the program for their location/demographic. The author videos are interesting but do not add too much to the discussions. We would pause watch the author video then resume the book/theme discussion without too much talk about the author. Also, with the vast info on the internet, some participants came with printouts of info on author or book or history/area etc.
- I don't know that the 'human interest' video model was the most effective way of getting people interested in science. I think there needs to be science content more obviously displayed to get the discussion to where it should be...
- I think this would be more successful. The author videos were great, but we would have liked a choice of books.
- The author videos were a huge hit - the audience loved putting a face/voice to the book - I would keep these.
- I suspect this would work just as successfully as the program we followed; perhaps more so, given that quite a few people were unwilling to commit to some of the books. The author videos were a nice addition, but probably not crucial to the presentation of the program.
- Multiple book suggestions could work, however it would make the discussion portion of the programming more difficult. Having some in the audience talk about one book while the other folks in the audience are more focused on another book would make it more difficult for everyone to be equally vested in the discussion portion of it. The books would have to be related closely enough to interest the folks who had chosen to read something else, but not so closely related that they don't have different things to offer.
- I think the theme was the important issue. The people enjoyed the author interviews but information about authors can be found on the Internet and provided by the facilitator.
- I think it would be less successful without the author video. Granted, when we used an alternate title, we had the author THERE to talk about it, but I don't know if I would have deviated from the program without the ability to have author input. We all thoroughly enjoyed the author videos. It would detract from the program if the author videos weren't included (in my opinion).
- I believe that the videos were very interesting and the participants really enjoyed them. We are now doing a book club after seeing the popularity of this program series. This club does not use videos, but the participants seem to still enjoy the program.
- Less successful because my audience did like the author videos.
- This would be very helpful. Allowing the library and science partners a choice in books would have expanded and enhanced our program. If presenters, librarians and participants were given the choice the programs would potentially be more interesting and successful. Additionally more patrons, library staff, and science partners could be involved increasing the number of people participating.
- I think that each library would still have to settle on one book for all attendees to try to read, so that everyone came at the topic from similar direction to start off. It would be more challenging to bring out the common thread of the theme if several books were used in one library.

- I would prefer book suggestions and accompanying material, Q and A. We have many book clubs that get their materials from the library, but don't necessarily meet here and this would be an added bonus.
- Reading a book in common definitely adds to the discussion. We've tried a similar model described above. It did not work for discussion at all.
- Having more book choices would be very attractive for our library (e.g., we would not have included Clive Cussler :>). The human interest videos would be effective only if they included the science, which was demonstrated & explained along with the human interest story.
- I think that having to decide on a book and find supporting materials takes away time from marketing and other things that can bring additional people in to the program.
- I like the idea of multiple book selections; it offers each library the opportunity to choose books that suit their needs or patron interests.
- We think it would be more useful to just provide the human interest video as this would give us more flexibility in choosing books geared toward our community.
- From our experience, the author videos were actually more effective than the human interest videos. Both me and my science facilitator often had difficulty trying to explain what we thought the human interest videos had to do with the topic at hand.
- I like the idea of multiple book suggestions it gives each individual library to tailor the books to that area. I know for us the clan of the cave bear was not a good turn out and a lot of patrons did not come because they didn't like the book at all. So to get science books that suite the community would be great. The human interest videos need to be more specific to the topic. A lot of the videos we could find no connection to the topic.
- Multiple book suggestions would be nice so libraries could better pick books they think their patrons would like, but at the same time, only having one suggestion and using it led us to read books we normally wouldn't read, which expanded what we were comfortable with. The author video I think I could take or leave as it didn't add as much to the program as the human interest video, but that being said it was still interesting to see what the author looked like and how they got the idea for their book. The program was also exactly an hour with the author video, which is perfect timing for a program.
- Participants liked the author videos, and seemed to better relate to the material when they had a face and person to tie to the material.
- It might be interesting to have an author bio or over view for the suggested materials. Even if there are multiple authors. Putting a human face behind the ideas makes them more accessible to the public. Hey, it's someone like me, or my neighbor, rather than, the people who write this stuff are above me and intimidating. People are inherently curious and nosy. They love hearing life stories and struggles.
- Great idea. At all meetings, we ended the meeting brainstorming similar novels.
- More, especially if there are you tube videos or documentaries about that related subject.
- I think this is a good idea. Let participants compare the ideas in the books. Materials would be more useful because there would be more books for patrons to read (act as a reader's advisory).
- I think that would be a good idea! We could adapt it to our specific needs, depending on if we are able to find a science partner that might have more knowledge of one component of the topic. Or to fit it more for books that would go over better in our varied communities.
- The author interview and the framework for discussion provided that work best for us was Jean Auel. I guess on reflection I like this model, but I would like discussion questions and some sort of expert commentary on the thematic topic more than I'd like the 'human interest' videos. I think our audience came ready to connect to the larger issues and our science partner was good at framing them but the videos interviews and discussion provided a good way to get into the topics. Without the videos, I'd need to find more community support (which would be a good thing, but which might require greater expenditures).

- I like the idea of a model with multiple book ideas. The human interest videos & discussion questions were, in my opinion, the best part of the videos. So, yes, I think the discussions would be just as successful without the comments from the authors.
- My audience actually preferred the author video over the human interest video, possibly because the majority of the group was from our regular book discussion group. I can see using the human interest videos if the series were to drop the book connection.
- Less, the author videos provide insight into the book.
- Getting people to actually read the books was a challenge. The staff got into reading and discussing the books, but our attendance that read the books was small.

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18. How could the PTL program be improved for the audience, for librarians, and/or for science partners?

N=54

- Overall the PTL program has been a wonderful experience and I feel extremely comfortable with the support and the materials for the programs and science partners. I will note that I lucked out with my science partner who was a Jr. High Science teacher but she had also taught high school English so she was absolutely wonderful to partner with.
- A choice of bookmarks & posters that is easy to customize.
- Offering 8 programs would be great.
- I thought there should be a little more material on how some of the personal interest videos tied in with the book.
- I found the grant application and requirement of an agreement letter from my science partner confusing. I took that to mean that I needed to have the same science partner all the way through. I realized later that wasn't the case. I wish the idea of having multiple science partners had been expressed more clearly.
- I think the program is well put together and well done. Thank you. One option that might be useful would be suggested for related programs and possibly presenters and contacts to consider. Regarding the content, I really liked having all three components - the book, author, and documentary. Maybe as the program grows you could offer librarian's several books / themes and let them pick which ones fit their community the best.
- I would have liked better discussion questions (they were very generic). I did a lot of research on the topics and background for the books which might have been helpful to have already. It was very helpful to get the ideas from the listserv. Maybe they could be collated as an ideas packet.
- We were highly pleased with the format and the only improvements might be longer author videos and a choice of books per topic.
- I think this program was excellent. I am so impressed with it and so were many participants. I think that just having the author videos would have been good. Or it may be good to have the human interest videos line up better with the book read. While they are all connected to the other materials, it would have been good to have that be a bit of a stronger connection. I would also like to have seen a web section that showed the science partner exactly what they were meant to do - so they didn't feel that they had to go through so much information. It could have listed sample classes that included book, video, questions.
- I think it's fine as it is.
- I think the program was great. I don't have any suggestions for improvement at this time.
- To be honest... we (and our patrons) didn't find the recommended books sophisticated enough from a science perspective for our people... there are way better science-themed books out there; that's why we added books.

- N/A.
- I thought it was great. The program exceeded my expectations and at this time I can't think of anything I'd change.
- Maybe match the videos to the books better.
- Having worked with other grant organizations, this was by far the easiest and most pleasant experience. Materials provided covered every aspect - from publicity, to discussion development to dealing with difficult people.
- A variety of titles might be nice as well as a list of suggested videos could be helpful.
- Clarity in connecting theme to book and human interest video. Also, I think if I had to do it again I would hold one meeting to view the human interest video and discuss, followed by author interview and book distribution. Then the next month hold a meeting to discuss book. Then the next month the second human interest video, etc. Another idea would be to provide plans for (4) simple, low-cost hands-on activities that could be set up on a table in the library (related to each theme). A hands-on station would serve as a means for anyone to consider the theme, as well as the opportunity to sign up for discussion series.
- More customizable would really be helpful - we found that we attracted more science literate (and knowledgeable) participants than average, and many felt that the discussion was not in-depth enough. Maybe some alternate discussion questions for groups that have more of a science background.
- I needed help in developing promotional materials (I'm just not very creative). Perhaps some generic forms that could be edited for the individual library's name / logo and event date, time, place. Maybe some suggestions of types of science partners for each subject--ie--meteorologist, environmentalist, for Arctic Drift.
- Extend the number of programs, books, and topics.
- Better marketing materials that are easy for librarians to access and adapt to their library. Short video promos would be fantastic.
- I know that our attendees really didn't like the book selections which affected attendance and our science partner and I often had a hard time getting people to see the connection between the book and the videos, especially the human interest videos. We also had a hard time advertising the program because 'Pushing the Limits' really didn't make sense to people -- from the title, they didn't easily understand that it was a science discussion forum for adults.
- Some of the book choices were not appealing to the audience. I think that the length of the books were a bit challenging as we had a short window of time due to weather and community activities. Bad weather does not end until March in our area and we are a farming community so we needed to be finished by the end of May. We would have been more successful at a different time of year.
- Perhaps the books chosen could have been a little shorter to read. Other than that the program was wonderful. I had a fantastic science partner who is continuing to help with teenage programming this summer. If I had not had this fantastic lady, I might have had problems but for us this was all a wonderful program.
- It is an excellent program as it stands. We had one problem with our first event, in that people did not make much of a connection between the Shrum farm story and Arctic Drift. We had some negative comments voiced about that video, but not about others.
- Having more time to hold the events and spread them out (every other month) would be beneficial. I like the idea of 6 events in 12 months. Having a choice of 2 or 3 books for each theme would be helpful in creating events to interest our audience. But overall a very good program and 'out of the box' easy to run.
- More obvious science-content in the human interest videos would be good.
- Provide a list of recommended books that fit the categories. Allow the group to choose the books.
- I agree - add more programs, increase to six or eight programs instead of four. Offer book suggestions but let us pick the book.

- Having more flier templates for publicity purposes would have saved time. I would like to see a more 'readable' selection of books; there are plenty that are equally topic-centered yet perhaps more engaging...
- One thing our science partners did was design field trips and had hands-on experiments and projects for our participants. For communication, we took a field trip to a site, for nature, we went out and talked about (and looked at and pulled up) invasive species, for knowledge, we had the author here and got to talk to him in depth about his writing process and the subject matter, and, for survival, we had some hands-on experiments, AND we talked about predispositions toward survival vs. resilience and then ended up talking about 23andme and genetic testing and the whole nature/nurture ... you get the idea. I think science partners and librarians should be encouraged to bring themselves to the program and think about the types of things that could enhance the program and give participants even MORE to think about.
- This was a great program! I think the participants enjoyed the materials and learned from the presentations.
- I really needed to do more marketing, but that was 'on me.' The professional development materials gave me the background I needed; I'm just a relatively new director that is figuring things (including what works in my community) out.
- I feel we had strong science partners. The programs were informative and enjoyable. The problem we had was not doing a strong publicity piece to get more people involved.
- I like the idea of trying a program without the books connected. My community members looked at the series as a 'book club' and avoided attending if they didn't like or didn't finish the books. I need more assistance in making the series interesting to people with less than a college education.
- It was a great program. I appreciated the opportunity to share it with my community. (There were moments of 'you better watch what you wish for' when you get a grant, as I started to feel overwhelmed by the amount of reading - with other things assigned.
- The PTL program was well organized and presented. Perhaps better books might have been chosen for the themes, or different books and themes. Cussler's book was, far and away, the most popular choice.
- More book choices would have allowed us to cut out books we didn't think would be well-received by our community. Limiting the number of participants for each program would have improved the experience for our audiences.
- I think having more resources and options would help. The structure of having specific books made it difficult to attract interest. What attracted people were our supplemental programs featuring local scientists and technology experts talking about applying their knowledge to every day science and then facilitating discussion.
- 1. Provide alternatives books and videos for each subject (The choice of The Land of Painted Caves wasn't received terribly well by our patrons - partly because of length, partly because of writing style). 2. Provide some additional information on books, videos, other resources that could be suggested for patrons to learn more about each subject. I was very lucky that our science partner spent a good deal of time gathering information on other resources to share with our patrons at the end of each program.
- Expand the time period to do the program. I had a couple of science partners that were not able to do the program because of the time of the year it was offered. Spring is also a busy time of year for a lot of the patrons who had signed up for the program. Would have loved to have the opportunity to do the program in the fall. Also to have a bigger selection of books to choose from that were geared more toward the community that patrons would be able to related to more.
- I can't think of much at the moment! The website had great resources, the science partners got paid well for their time, and the audience was happy with refreshments and discussion. The format was well timed and kept the audience interested. So over all I'm not sure what could be improved upon.
- Might get more input from the public into title selection.

- We really enjoyed the program. Would love more topics. Indigenous peoples was very popular. So was invention.
- The program would be a great addition for our adult summer reading program had the dates worked with Summer Reading (June - August).
- Engage the younger crowd.
- No suggestions on the program materials. We had trouble finding times that there was no conflict for our programs.
- I thought the program was wonderful. Very well organized and lots of information provided to make planning the events easier. We didn't always see a direct connection to the human interest stories and the books, but I think they were all interesting and helped bring the topic full circle on how science is around us every day.
- A little more contact with the managing team up front. Our library had a packed calendar for a somewhat overburdened staff through March, and when I reached out after that to ask for help finding the webinars or using the materials or getting a clean DVD when ours was scratched, it wasn't easy to get answers and they weren't overly helpful. I was a bit disappointed in that. Once the program got going, it was largely successful and I was pleased with the interest it uncovered ... an unmet need in my community. But early on I felt like my timing was not the 'preferred timing' and as a result it was hard to get the support I wanted at the time that I needed it.
- We were very pleased with the PTL program, although not all the books were a success with our audience. Everything was clear, online collaborations were informative and the videos were great.
- I don't see how anyone could have conducted the session in one hour. Mine lasted at least 90 minutes and could have gone longer. I always felt I was having to cut something short to get everything in.
- Provide science experiments to go along with it.
- We have a book club but no one wants to read the same books. Maybe have choices of books on similar science topics. Cover famous scientists like Tesla, Einstein, Feinmen, Curie, Freud, etc...

[Click here to return to the annotated survey.](#)

19. Is there anything else you'd like to share with us?

N=46

- Wonderful opportunity that you have created for rural libraries!
- How about a science related program that could help people in the job market? Or their lives? How about a series on alternative energy? It can start as small as a phone charger, go to wind... a small turbine, and a solar cell that would charge a RV battery. No books... just the basics. Where are the jobs in that?
- Thank you for the experience.
- It was a wonderful program and the discussions people enjoyed and learned so much more about the science around them.
- Thank you so much for this opportunity.
- Great program! It encouraged me to go outside the box for the usual programming, to learn the appropriate technology and to stretch my patrons in their thinking (and civil discussions). The program went beyond simply reading a book and talking about it to incorporating thematic (science based themes!) discussions. IT was a very valuable program for our library- great time! Thank you, Thank you!
- Excellent program! I'm so glad and thankful that we were chosen for this grant. Thank you!
- It was a wonderful program and I am glad we were able to get a grant to present it. Thank you.

- Awesome program! Thanks for letting us participate! Our People loved it and want MORE! And nice survey, excellent questions! We truly appreciate this opportunity that PTL brought us, Thank You!
- Thank you for including [us] in Pushing the Limits! As administrator of the grant, I appreciated the flexibility and support of the program. Thanks for all the hard work that was done to make it an easy, fun program to implement.
- Thank you so much. This has been a great program for our library and I am very thankful we were chosen to participate!
- One of the keys to our success was being able to offer a light dinner with the program. I also sent out personal invitations to community members. Our science partners were also local, except for one.
- I think the listserv was important. We learned how others ran the program and other tips and ideas.
- This was a wonderful opportunity for a small library to offer a first class program!
- Thank you so very much for the grant money without it we wouldn't have been able to do what we did and we feel it was a big success.
- I think that if I had offered food - dinner - I would have had a completely different audience, perhaps the audience that this project is attempting to reach. Food involves extra time and clean-up though, and not paying for food left more \$ for additional science programming.
- Overall it was a worthwhile program, but we would have liked it to be more in-depth. Our participants and science partners struggled with the broad theme and had trouble relating the human interest videos to the books. A more focused, in-depth discussion would have been a better fit for our community. I know other communities really liked the format, so I wonder if finding ways to customize would have helped us. We also just may not have been the target audience for this program. Thanks! We appreciated the opportunity to take part.
- Overall, we really enjoyed the program.
- We loved the program. The patrons who attended were sad it was over so soon. It has only been within the last several years after I took over as director that the library has begun to offer adult programs, which the adults love. PTL helped in a big way for us to move past simply offering programs for children. We want more!
- This is a wonderful program and I am so grateful to be chosen for the grant. It has opened up the possibility of a totally new type of programming for our community and helped us establish new partners. I used 3 science partners and they all want to participate again. In addition I have 3 or 4 other science professionals that have indicated they would like to partner. We have a small regional college [here] so current and retired professors are excited and also medical people in the community. I also see the expansion into the school system as a win, win opportunity. We can educate the students to look at books in a new way and also pull them into the library. The library in the past was a necessity when completing school work but with Internet resources Middle School and High School students do not access our services as frequently as when they were in elementary school. This programming will allow us to remain in touch with the youth in our community (besides just for Internet use).
- This was a wonderful experience. It exceeded our expectations in many ways. Thank you for choosing us to be a part of this program.
- This series has been very successful for us, opening up new possibilities and forming a core group of attendees who have become very comfortable with each other and eager for more events.
- Thank you for including us in this program. We hold a regular book club, but I had not realized that there was such an interest/need to have science specific book club/talks. This brought out more men and new faces. I will definitely work to continue this theme in library programming.
- The resources you provided were excellent and the listserv was also very helpful.
- This was a wonderful experience for the community, the librarian and the science partner. Thank you for giving us the opportunity and we would love to be included again!

- Thank you - great program - enriched my library, my patrons and myself.
- We loved being able to offer our adult community an opportunity for serious, thoughtful discussion about science issues. During one of our sessions, an audience member spoke of the importance of community, and how it is becoming a rarity. Yet there we were, creating 'community' because of this program, a circumstance not lost on anyone. All attendees seemed to very much enjoy the programs, and our science partner (who participated in 3 of the 4 events) expressed equal pleasure with being a part of it.
- This was a blast. I can't remember the last time I had so much fun with adult programming. We had fantastic attendance, great discussions, and no one wants the program to go away. We will be starting up again in September. It's a keeper.
- This program was the first I have done of this type. I have only been working in this library system for 2 years. I am still developing relationships with media and community members. Had those relationships been in place our publicity would have been better and stronger.
- Overall, awesome! I made some new connections, my science partner wants to work with me again (and got a library card), I learned how to do an effective poster campaign, and I got much more comfortable with leading discussions. I learned that next time I need to buy more copies of the books.
- It was a great program. Had we started a month earlier and finished a month earlier, I believe we would have had more people at our last discussion group on June 26 (School was out on May 30 - people tend to go on vacations).
- We should have publicized more as the program was going on.
- Our audiences wanted more real science. In each program, the book was a springboard questions about 'how it is done'. Once we realized this, our science partner came prepared to lecture for a time about the science involved in the story, and when faced with questions she wasn't prepared to answer she searched online with the audience. After the first program, our science partner prepared handouts with links to more in-depth information about the science of the particular program; these were quite popular with our audiences.
- This was a fantastic program and I thank you for letting me participate.
- We really enjoyed the events. This program pushed me to reach out to portions of my community that I had not before and my patrons enjoyed meeting people from fields they were not familiar with.
- We had great turnout at our supplemental science programs and could not have done it without the support of the PTL Grant!
- This was a great opportunity. Thank you for allowing us to participate!
- We absolutely loved the program, it was excellent!
- We did not get as many participants as we had hoped, but those who did attend were very engaged and enthusiastic and clearly indicated that there is an interest in the community for this kind of programming.
- We would love to know how we can reapply to continue this program/and secure another grant installment.
- We had a very hard time getting patrons to attend the PTL events. Attendance was low to zero.
- Thank you for this opportunity.
- Thanks so much for the opportunity to have the program. It was great!
- Our community really responded to this programming and the people who did come in were very, very interested and often not the folks who attend humanities programs (although there was some good overlap). I found that the support presenters I brought in were the most effective in driving attendance... and I got those ideas from the Listserv. This program would NOT have gone well for me without that opportunity to connect with fellow participants and hear what had worked for them and even just what ideas they had. That was the highlight of the program for me and I would like to continue to participate in the listserv as just a group of colleagues sharing ideas for science programs and where they are finding resources.

- Having a short 'teaser' video available to use on our website would be a great addition to the program!
- No.

[Click here to return to the annotated survey.](#)

26. Have you ever done any adult public programming integrating books and videos?

N=24

- Yes, and have recently received another grant to do just that from the National Foundation of Science administered by the Association for Rural and Small Libraries.
- We have a book and movie program for senior citizens that we hold in conjunction with a Senior Exploration event put on by the Parks and Recreation Department. The program is 6 weeks long and the group reads and watches one movie. Normally, they are entertainment books and movies geared for seniors.
- We host “Great Discussions,” which involved short readings and videos on current topics.
- We have done a program where people read the book Tuck Everlasting and then we watched the movie and discussed the similarities and differences. We also recently held a program over the topic of the Film Noir genre.
- We do a series called Cinema Café and sometimes choose films made from books. We do One Maryland One Book each year and usually show a film related to the book to supplement conversations.
- Several years ago, we hosted “Research Revolution,” which was a science-themed program and relied primarily on video, with some suggested reading.
- We have done various presentations that have included reading a book and watching the corresponding movie. We did the ALA initiative “Where Were You in World War II?” that included reading books such as Snow Falling on Cedars and watching documentaries such as From Rosie to Roosevelt: A Film History of America in WWII – The American People. Some of the other book/movie pairings we have done include the book and movie Like Water for Chocolate and a program called Comfort Food that included the book and movie The Secret Life of Bees.
- We held a film and book discussion series a few years ago on the Cold War. As part of a Big Read project featuring the Maltese Falcon, we included a film noir series. We routinely show feature films and host book discussions.
- I have put on lecture series at the library. Been involved in book clubs and presented several adult programs.
- Historically based programs examining Abraham Lincoln through his words and Making Sense of the Civil War program (NEH initiative) incorporating short video clips.
- Our library has had two book discussion groups centered around historical fiction. We have also done many environmental book discussions as well as film discussions. One of these was Menu for the Future, which met several consecutive weeks on each chapter.
- In the adult reading club, the adults read the books and then watched the movie. They could compare and contrast the movie and the book.
- “Don’t Judge a Book by its Movie” – Reviewed book and then watched the video. Civil War Program where we used both books and videos.
- We have had several book club sessions where parts of videos featuring related subject matters were shown. These were provided to enhance the book discussions but were not part of every book club meeting.

- This summer we are offering a “Cooks and Books” program using My Year of Cooking Dangerously by Julie Powell (book) and the video based on the book for a movie and desserts program the following week. We haven’t done a lot of this for adults.
- I have done a book discussion group where I would try to pair a film (or part of a film) with the particular book we were discussing. For example, we read and discussed “Devil in the White City” by Erik Larson and also watched the film “Expo – Magic of the White City,” narrated by Gene Wilder.
- We had an intergenerational book talk with the high school honors class and adults on Farewell to Manzanar. We then showed clips from the movie and other information gathered from the Manzanar National Monument. We did a similar program with The Grapes of Wrath the year before.
- We’ve done Book-to-Movie programs in the past. We haven’t done any non-fiction types of programming integrating books and videos, though. I use the videoconferencing equipment quite a bit to bring in presenters from all over the world.
- [The library] has a non-fiction book club and a movie discussion group. Last year we purchased the PBS special about the Dust Bowl and played the video for the public, followed by discussion, with additional book talks about the subject matter. This summer, we are using non-fiction book talks and programs for Get on Track @ Your Library about trains. In 2012, we received the Lincoln grant from ALA and used book talks and movies about that era to study the topic thoroughly. We also received a financial literacy grant in 2013 from FINRA and ALA, which uses non-fiction subject materials that include documentaries. For example, we do a program based upon protecting yourself from investment fraud using the video, class discussion, and supplemental reading materials.
- Bridging Cultures Bookshelf: Muslim Journeys. Instead of holding a traditional adult summer reading program, I worked with The Greenwood Museum, and we’re holding a joint Adult Summer Learning Experience. I’m using 2 books for book discussion. I showed three of the DVDs. The Museum created a related exhibit called Bridging Cultures, which covers all different kinds of cultures. Attendance has been good, but, of course, the Library has drawn some fire because of the subject matter.
- We have two regular book clubs at [the library]. At my past library district, we used books to go along with programs such as nutrition books and had a dietitian come. Teach your kids about nature using nature books.
- Music History Films. Building Common Ground Grant book discussions and films. Civil War 101 Grant book discussions. Author and historian talks and discussions.
- Teen book discussion: I Am Number Four. Teens read the book and then attended the movie & discussion. January Series: Calvin College, 15 days of lectures on current topics by authors and others experts. <http://www.calvin.edu/january/2013/> Movies, Memories & Milestones: Weekly Movie Group.
- Monthly Book vs. Movie, a novel/movie discussion program.

[Click here to return to the annotated survey.](#)

27. Have you ever done any adult public programming in partnership with another non-librarian professional in your community?

N=52

- We have done several programs through the years during our Summer Reading and during our adult series during the year. For example, we recently completed a Dust Bowl program with the support from PBS.

- We have partnered with the Historical Society. They have provided programs on the local area. The programs are held in our library, and we share the cost.
- We partner with the Parks and Recreation Department for a book and movie program and a computer class session two times a year. We hold a Theater Thursday event once a month with the local hospital and Parks and Recreation Department. In the past, we've done Money Smart Week events with local banks. We've also worked with our local Community Arts Council on co-sponsoring a few art events.
- We have had several people within our community from banks, law enforcement, district attorney, judges, coroner, education specialists, etc., to provide programs for our Tuesday evening adult programming.
- For an emergency preparedness workshop, we partnered with a few different county officials.
- We have done several joint programs with our local historical museum. We have also partnered with People for Paws (the local animal rescue center) to do a reading with Rover program. We have had many community members present programs for us at the library and even had the school media and film club help us videotape and edit a Memories of the 1930s project that was a joint venture with the museum.
- Many of our adult programs are run in cooperation with other community groups, including the Extension Office, Health Department, historical society, and local individuals who volunteer to lead craft and cooking programs.
- Big Read program and North Dakota Read Program. Both programs brought college professors to lead the discussions based on books read by community members.
- The above mentioned "Research Revolution" was facilitated by a local materials scientist. We often have other non-science-related programs where a non-librarian is invited to speak on their topic of expertise. These are generally a one-time event, whereas the "Research Revolution" met over the course of several nights.
- We participated in the Great Michigan Read that partnered us with the local college and diversity coalition, as well as a board of speakers from various colleges throughout Michigan.
- We have partnered with others in the community not affiliated with the library many times. Two examples are New Harmonies and Manifold Greatness: The Creation and Afterlife of the King James Bible. New Harmonies included many musicians doing various programs involving performances and lectures. Manifold Greatness included presentations by a history professor from Southwestern College, an author, and a local minister.
- We held a PA Humanities book discussion group in which a teacher from the high school led the book discussion.
- We have worked with the Riverview Center to offer programming on bullying, domestic violence, etc. including a film discussion and a book club.
- We have had guest lecturers come to the library. I have written grant proposals to provide book groups and lecture series.
- I have had several local speakers come and present to our adults on a wide range of topics. In addition, we have had several authors come and do a reading/signing of their book.
- The New York Council for the Humanities programs mentioned above requires a collaboration with a scholar/facilitator. Dr. Fred Antil was our co-leader for the programs.
- We had a potluck harvest dinner and invited a local farmer from a nearby C.S.A. to come speak. We also invited a person who made a film about community-supported agriculture to speak to us. We had a woman who owns an environmental consulting business also join us for an evening to discuss water issues that were brought up in our book. We have had a medical panel discuss winter health issues as well as an audiologist and an ophthalmologist speak on their fields.
- I worked with WQPT, which is our public radio station. We brought "Daniel the Tiger" to the library, to the delight of 300 children and 118 parents.
- We have partnered with a variety of local experts when planning and presenting adult programming. Lawyers, master gardeners, financial representatives, funeral home directors are

just a few of the professionals that we have had the opportunity to partner with over the past two years.

- We did an ALA Muslim Journeys Grant where the library partnered with Muslim Scholars from a local university (Clarion University of PA) to present the programs. The scholar, Dr. Yasser Ayad, is a professor of Geology.
- Partnered with Marshall Ministerial Alliance in connection with traveling exhibit on King James Bible. Partnered with Marshall Philharmonic Orchestra in connection with traveling exhibit “A Fine Romance” featuring music of Jewish composers and musicians.
- We have partnered with the history department professors at an area college and presented history programs for the public. We also have an active Friends of the Library group that helps us hold “Let’s Talk About It Oklahoma” book series sponsored by grants from the Oklahoma Humanities Council, and local educators (usually with an English or literature background) lead the discussions.
- Many: Antique appraisal, ghost hunting, cooking, crafts, gardening, yoga.
- In February 2013, a local artist came to speak about her artwork, her latest book, and demonstrated her techniques. I have implemented several programs with non-librarian professionals from outside the immediate geographic area, including three author talks and two concerts.
- We have had a number of adult programs where we partnered with other organizations. We partnered with the County Senior Center Coordinator to bring a Baby Boomer Speaker Series to our library. We partnered with the Stony Brook Millstone Watershed as well as a number of speakers to present an Environmental Film Festival in Spring 2013. We partnered with the New Jersey Islamic Speakers Bureau to present the NEH-funded Muslim Journeys programming, featuring speakers and a film and discussion series.
- I have hosted a book club at a local long-term assisted-care facility.
- I have only been an Adult Services Librarian for 3 months at the [library]. I have had a few evening programs for the summer reading program on cooking, genealogy, gardening, and home organizing. I have worked with outside professionals such as the Master Gardener Program, 4-H, Senior Center, and the County Historical Society.
- Herb workshops with a local herbalist, finance/investment workshop with an investment banker, facilitated humanities book discussion with a local scholar, comics workshop with a local artist.
- We have worked with a local organic farm and a heritage farm as well as experts in different fields for programs.
- Have partnered with the Eagle Historical Society, Old World Wisconsin, Friends of Mukwonago River, the Alzheimer’s Association of Southeastern Wisconsin, the Eagle Fire Department, the Village of Eagle Police Department, the local schools, The Eagle Recreation Department, the Eagle Business Association, the Mukwonago Chamber of Commerce, etc. Most of the partnering/collaboration that we have done has been with non-librarian partners.
- I have partnered with the VT Humanities Council and worked with humanities scholars offering book discussion series, and I have worked with the local elementary school and the manager of the assisted care facility in my town.
- We schedule State Park Rangers, Geologists, Biologists to speak about the local wildlife, geology, and reforestation due to fires in the area. These programs are well received. We also have an artist presentation every month and a musical performance each month.
- I partner with the US Forest Service scientists (this weekend, in fact, we’re doing a guided tour/history talk about the Salt Chuck Mine down by Kasaan). I also partner with professionals NOT in my community — I’ve brought in authors and writing coaches as well as literary agents for local and statewide events.
- We often work with Bowling Green State University instructors and also Terra Community College teachers. We have a great relationship with both schools. We are also close to Firelands

Campus and not too far from Heidelberg University. We have had programs from Cleveland Art Institute too.

- Natural Newfield series of talks about the environment that were led by local professionals. Genealogy study group led by a certified genealogist. Home Energy Efficiency Workshop. Writing Workshops.
- Bridging Cultures Bookshelf: Muslim Journeys. I brought in three speakers for the program this summer. One introduced Islam as a religion, the second discussed it with its relationship to other Abrahamic religions, and the third discussed the meanings and read key portions of an Islamic classic.
- We have offered job fairs, technology “petting zoos,” and many workshops in collaboration with outside professionals and experts.
- We have done painting class with local artist, jewelry making, floral arrangements, and writing classes. All classes were taught by local community members who work in those fields.
- We just conducted a six-week program with the Michigan Humanities Council on “Making Sense of the American Civil War.” We have an ongoing monthly poetry spotlight program, an ongoing program on seed saving and gardening, an ongoing training program in basic computer skills and downloadable library books for e-readers and audio devices. We partner with local authors for lectures, and have just been selected by the National Endowment for the Humanities for the “Let’s Talk About It: Muslim Journeys” reading and discussion series for cultural understanding.
- At previous library: Dietitian/nutrition, Nurse/Health, First Aid, chef/cooking, musicians, teaching literacy thru lyrics.
- Job seeking workshops with local non-profits.
- In partnership with a local college instructor/author, I offered an adult program for aspiring writers. We showed participants the entire process involved in publishing, including how to find potential markets for one’s writing, the submission process, and how to craft a synopsis and manuscript to maximize potential interest from editors and publishers. This partnership is evolving. Since ebooks have become more prominent, we plan to offer a different version of this workshop focusing on the ebook market in the Fall.
- We have had various community business leaders come in to give a presentation about their particular area of expertise. For example, a local chef came in to talk to us about seasonings and spices. The owner of a local tea house came in to talk to us about the types, preparations, and benefits of tea.
- We invite local scholars to lead book discussions and authors to present book talks.
- We’ve had several financial specialists, a baker, a knitting instructor, a yoga instructor, several Master Gardeners, a Zumba instructor — just to name a few. We have a number of partnerships with non-librarian professionals.
- Cynthia Orozco, History Professor, ENMU; Walter Pittman, Historian, President Fort Stanton; Professor Pithcaithley, History Professor, NMSU; Professor Les Field, UNM Peace Studies Program; John Cianciosi, Theosophical Society in America; Jack Lehman, Center for Nonviolent Communication; Andrea Reed, Dance Instructor; Justice Charles Daniels, NM Supreme Court; Over a dozen musicians; Chautauqua’s Zoo to You, Albuquerque BioPark.
- Calvin College: January Series <http://www.calvin.edu/january/2013/>. Bridging Cultures: Muslim Journeys with Thornapple Arts Council. Robin Mather, Author Visit in partnership with Pierce Cedar Creek Institute.
- Let’s Talk About It, Humanities Program. Health Series, Care South.
- We have held several Meet the Author evenings with readings, discussions, sales, & signings.
- Local authors have come for readings and signings; one of our local authors is also a book collector, and did a book price workshop (is your old book valuable or not?). Others from the Dept. of Natural Resources or the Nature Center.
- Partnered with the Department of Natural Resources to offer a Birds of Garrett County program this spring. One of the rangers presented the program here, which was quite well attended.

- Simple partnerships with Livewell, County Extension Agent, children's programming with the school. Generally, the library does publicity and sometimes provides space & a/v equipment.

[Click here to return to the annotated survey.](#)

APPENDIX B
Pushing the Limits
Annotated Science Partner Survey

Responded	Invited	Response Rate	N of Libraries Represented	% of Libraries Represented
90	124	73%	59	81%

	Number
Total number of science partners	137
No/incorrect email address provided	3
Finished programming after 7/31	10
Invited to complete survey	124
Completed survey	90

Number of Science Partners per Library

	Percentage of Libraries
One Partner	57%
Two Partners	15%
Three Partners	8%
Four Partners	20%

N=72 libraries and 137 science partners

Note: there are 73 total libraries, but one did not provide any science partner contact information (names, email addresses)

Number of Events co-Facilitated by Responding Science Partners

	Percentage of Science Partners
One Event	47%
Two Events	8%
Three Events	10%
Four Events	35%

N=59 libraries and 89 science partners

Note: there are 90 total responding science partners, but one did not indicate which event(s) s/he co-facilitated

PROGRAMMING

1. Overall, how effective would you say the “Pushing the Limits” (PTL) programming was at:

Overall 3.98; 61% very or extremely

	Mean (1-5)	Not at all (1)	Only a little (2)	Somewhat (3)	Very (4)	Extremely (5)	Not sure
...holding the audience’s interest?	4.16	–	1%	12%	57%	30%	(3%)
...teaching the audience something about science?	3.98	–	1%	22%	55%	22%	(3%)
...making the audience want to learn more about science?	3.85	–	5%	31%	38%	26%	(11%)
...increasing the audience’s interest in attending other public science programming?	3.94	–	–	32%	42%	26%	(14%)

N=77-87

2. For which of the following PTL events did you serve as the science partner at your partner library? (Check all that apply.)

	Percentage
Connection	60%
Knowledge	56%
Nature	57%
Survival	60%

N=89

Note: Percentages exceed 100% because respondents could select more than one response option.

3. Looking back over the programming unit(s) in which you were involved, how effective was each of the following components in engaging the audience?

CONNECTION	Mean (1-5)	Not at all (1)	Only a little (2)	Somewhat (3)	Very (4)	Extremely (5)
Book: Thunderstruck, Erik Larson (or the substituted book)	3.98	–	–	27%	47%	26%
Video segment with author Erik Larson	3.63	–	6%	33%	53%	8%
Video segment with artist Roxanne Swentzel	3.33	9%	14%	26%	37%	14%
Discussion questions provided by the Limits team	3.39	4%	9%	39%	39%	9%
Discussion among audience members	4.14	–	–	18%	51%	31%
Event overall	4.08	–	–	18%	56%	26%

N=43-51

KNOWLEDGE	Mean (1-5)	Not at all (1)	Only a little (2)	Somewhat (3)	Very (4)	Extremely (5)
Book: The Land of Painted Caves, Jean Auel (or the substituted book)	3.43	4%	19%	28%	28%	21%
Video segment with author Jean Auel	3.40	5%	7%	46%	28%	14%
Video segment with chef Sean Brock	3.45	5%	14%	31%	31%	19%
Discussion questions provided by the Limits team	3.23	7%	16%	34%	34%	9%
Discussion among audience members	4.11	–	4%	17%	43%	36%
Event overall	3.96	–	8%	17%	45%	30%

N=42-47

NATURE	Mean (1-5)	Not at all (1)	Only a little (2)	Somewhat (3)	Very (4)	Extremely (5)
Book: When the Killing's Done, T.C. Boyle (or the substituted book)	3.92	–	2%	29%	43%	26%
Video segment with author T.C. Boyle	3.57	2%	7%	39%	37%	15%
Video segment with triple-amputee athlete Cameron Clapp	3.33	9%	14%	29%	29%	19%
Discussion questions provided by the Limits team	3.30	4%	14%	39%	34%	9%
Discussion among audience members	4.26	–	2%	10%	48%	40%
Event overall	4.08	–	2%	16%	55%	27%

N=42-51

SURVIVAL	Mean (1-5)	Not at all (1)	Only a little (2)	Somewhat (3)	Very (4)	Extremely (5)
Book: Arctic Drift, Clive Cussler (or the substituted book)	3.75	2%	7%	23%	49%	19%
Video segment with author Clive Cussler	3.67	6%	4%	25%	48%	17%
Video segment with combine demolition derby competitors Julie and Cory Shrum	3.00	13%	26%	26%	17%	18%
Discussion questions provided by the Limits team	3.43	4%	6%	41%	41%	8%
Discussion among audience members	4.06	–	4%	17%	49%	30%
Event overall	3.92	–	6%	19%	53%	22%

N=46-53

Connection Overall 3.78; 47% very or extremely
Knowledge Overall 3.63; 42% very or extremely
Nature Overall 3.78; 39% very or extremely
Survival Overall 3.66; 40% very or extremely

Book Overall 3.71; 50% very or extremely
Author Video Overall 3.55; 40% very or extremely
Human Interest Video Overall 3.21; 40% very or extremely
Questions for Discussion Overall 3.33; 38% very or extremely
Discussion Overall 4.15; 75% very or extremely
Event Overall 4.00; 72% very or extremely

PREPARATION AND IMPLEMENTATION

4. Now that you've completed the PTL program, please tell us a little bit about how well it met your expectations and whether you felt adequately prepared, knowledgeable, and competent to fulfill your role as a science partner in the program.

[Click here to see a complete list of responses.](#)

5. How well did the materials provided by the PTL team prepare you to co-facilitate the Limits programming?

Mean (1-5)	Not at all (1)	Only a little (2)	Somewhat (3)	Quite a bit (4)	A great deal (5)	N/A
3.76	1%	10%	27%	36%	26%	(3%)

N=87

6. Overall, how successful would you say you were at accomplishing each of the following in your partner library?

Overall 4.15; 67% very or extremely

	Mean (1-5)	Not at all (1)	Only a little (2)	Somewhat (3)	Very (4)	Extremely (5)
Using discussion questions to engage the audience at the Limits event(s)	3.83	2%	5%	24%	47%	23%
Facilitating discussion at the Limits event(s)	4.13	–	–	15%	57%	28%
Working effectively with your librarian partner in planning the Limits event(s)	4.28	1%	1%	8%	48%	42%
Working effectively with your librarian partner in co-facilitating the Limits event(s)	4.28	1%	1%	5%	54%	39%
Engaging audience members during the Limits event(s)	4.25	–	–	10%	55%	35%
Encouraging audience discussion and interaction during the Limits event(s)	4.27	–	–	10%	53%	37%
Supporting audience learning during the Limits event(s)	4.01	–	–	20%	59%	21%

N=88-89

7. For any area(s) above in which you did not feel *extremely successful*, would any of the following types of materials or training have better supported you? (Check all that apply.)

	Percentage
Video of similar programs in action so I could observe the process	43%
Written material describing strategies that are successful in this type of setting	41%
Live webinar or other interaction with people who communicate science to the public	19%
Other	12%
None of the above	28%

N=75

Note: Percentages exceed 100% because respondents could select more than one response option.

“Other” responses included (N=9):

- A larger list of discussion questions, so that the facilitator can choose several that fit with their participants and interpretation of the books.
- More preparation material.
- Science information relating to the books.
- A rubric in which to show learning.
- We unfortunately had poor attendance on presentation night, and it skews the review above.
- After I made my own discussion questions, I felt extremely successful.
- People showing up.
- Attend another session before facilitating.
- Better book.

8. Now, after your participation in the PTL program, how would you describe:

Overall 4.46; 87% very or extremely

	Mean (1-5)	None (1)	Only a little (2)	Some (3)	Quite a bit (4)	A great deal (5)
...your comfort with working in informal learning environments (i.e., non-school settings)	4.61	–	–	2%	35%	63%
...your interest in helping people in your community understand science-related topics	4.53	–	–	5%	38%	57%
...your ability to help people in your community understand science-related topics	4.42	–	–	9%	40%	51%
...your comfort with helping people in your community understand science-related topics	4.55	–	–	6%	34%	60%
...your interest in facilitating public programming on science-related topics	4.44	–	–	10%	36%	54%
...your ability to facilitate public programming on science-related topics	4.33	–	–	15%	38%	47%
...your comfort with facilitating public programming on science-related topics	4.38	–	–	11%	39%	50%

N=88-89

The following question asks you, *knowing what you know now*, to describe your comfort, interest, and ability levels *before participating in the PTL program*.

9. Before participating in the PTL program, how would you describe:

Overall 4.02; 56% very or extremely

	Mean (1-5)	None (1)	Only a little (2)	Some (3)	Quite a bit (4)	A great deal (5)
...your comfort with working in informal learning environments (i.e., non-school settings)	4.13	–	2%	23%	33%	42%
...your interest in helping people in your community understand science-related topics	4.19	–	1%	21%	35%	43%
...your ability to help people in your community understand science-related topics	4.11	–	2%	20%	42%	36%
...your comfort with helping people in your community understand science-related topics	4.10	–	5%	20%	36%	39%
...your interest in facilitating public programming on science-related topics	3.89	2%	5%	25%	36%	32%
...your ability to facilitate public programming on science-related topics	3.81	2%	8%	24%	39%	27%
...your comfort with facilitating public programming on science-related topics	3.89	2%	7%	19%	43%	29%

N=88-89

THE FUTURE

10. Do you think the library should continue to offer public science programming for adults like the PTL program?

	Percentage
Yes, definitely	81%
Yes, probably	18%
Neutral	–
Probably not	–
Definitely not	1%

N=90

11. Based on your experience with the PTL program, how likely is it that you will continue your involvement with public science programming, whether at the library or elsewhere?

Mean (1-5)	Not at all (1)	Only a little (2)	Somewhat (3)	Very (4)	Extremely (5)
4.27	–	1%	17%	37%	45%

N=90

ABOUT YOU

The PTL team is trying to involve a broad group of science partners in the project. The next few questions ask for background information to help them target the program more effectively and better understand the participants and the diversity of their backgrounds.

12. Please tell us a little about why you volunteered to participate in the PTL program — your motivations for participating, the background that you felt prepared you for this task, and your previous experiences.

[Click here to see a complete list of responses.](#)

13. Before participating in the PTL program, had you ever been involved in any public science programming for adults; e.g. science cafés, science festivals, etc.?

	Percentage
Yes; please describe	46%
No	54%

N=89

[Click here to see a complete list of “Yes; please describe” responses.](#)

14. Are you:

	Percentage
Female	50%
Male	50%
Prefer not to respond	(1%)

N=88

15. In what year were you born? (Presented as age.)

	Percentage		Percentage
18-29	10%	50-59	26%
30-39	19%	60-69	21%
40-49	19%	70-79	5%

N=88

16. Which of the following categories best describe your race/ethnicity? (Check all that apply.)

	Percentage
White	99%
Asian	–
American Indian or Alaska Native	2%
Hispanic or Latino	1%
Black or African American	1%
Native Hawaiian or other Pacific Islander	–
Other; please specify	2%
Prefer not to respond	(6%)

N=85

Note: Percentages exceed 100% because respondents could select more than one response option.

“Other” responses included (N=2):

- Middle Eastern
- Multiple

17. What is the highest level of education you have completed? (Check only one.)

	Percentage
High school diploma or GED	1%
Some college or associate’s degree	2%
Bachelor’s degree	26%
Master’s degree	40%
Professional degree	1%
Doctorate degree	30%
Other; please specify	–
Prefer not to respond	(1%)

N=89

FINAL COMMENTS

18. How could the PTL program be improved for the audience, for science partners, and/or for librarians?

[Click here to see a complete list of responses.](#)

19. Is there anything else you’d like to share with us?

[Click here to see a complete list of responses.](#)

Full Text of Open-Ended Responses

4. Now that you've completed the PTL program, please tell us a little bit about how well it met your expectations and whether you felt adequately prepared, knowledgeable, and competent to fulfill your role as a science partner in the program.

N=87

- After years of leading library book discussions for the Humanities Council, I found the format and combination of materials for PTL rather awkward and a bit constraining. One participant said it seemed like I 'had an agenda' but he didn't understand what it was. Although I think a combination of an accessible book (fiction or nonfiction) and some video is a good idea, the Jean Auel book (our library substituted 'Clan of the Cave Bears') was a strange choice for a science-oriented program; I suspect just the title and author's name appearing on publicity materials may have turned some potential participants away, and definitely affected those who attended. It's not that these are 'bad' books (I've read them all!), but they're not 'serious' books. Countering some of the negative reactions to 'Cave Bear' consumed some of my attention and time during our first program. The other materials were fascinating and well-prepared. I did struggle somewhat, as I mentioned, to see how the story videos fit with the main text. I will note, extremely positively, that these programs drew out some participants who have not appeared at my local library's book discussions, even for books that it seems these folks would have enjoyed reading and discussing.
- I felt prepared, more comfortable with my second session. I felt competent as the science partner though I had to research both topics and authors to feel that way. Often times, it was difficult to connect the video to the themes in the book. The Schrum's video seemed to be easiest to find connections. Was it because the participants were experienced in doing so or that is was a reasonable choice? The limited water resource resonated with this crew of erudite male readers. I'd do it again. I really enjoyed the structure of the sessions but several in the group did not and mentioned 'marketing' the series differently not as a typical book club.
- Going into the discussion I felt very well prepared to talk about whatever might come up. The DVD segments were very interesting and helpful. There was one small snag, though: no one showed up for the discussion. And from what I understand, no one showed up for the first one in the series either. This is a problem for our particular library: we have great events that are planned but no audience. It was certainly disappointing. At the same time, though, I got to read a book and learn about a subject about which I knew very little. And that is never a bad thing.
- Served as PTL co-speaker. Interesting topic and dialogue, although very modest audience.
- I enjoyed the PTL program, and was only sorry that there weren't more audience members in attendance. I have a mass communication history background, which was useful with the 'Thunderstruck' book.
- For me, I would have liked longer segments and more information. However, I am a science and history geek, so that might not have been everyone else's wish.
- I felt adequately prepared and knowledgeable. Would have liked to have a larger audience (only 1 person showed up for the event). Perhaps better marketing?
- We felt that we were adequately prepared and had sufficient background on the topics to lead the discussion. I think the one disappointment was overall participation. We had great participation with the first event, but then participation and additional events was lower. I am not sure if it was the time or subject matter or what that made the events less attractive.
- There was only 1 participant who did not read the book beforehand, so I had to improvise.
- I enjoyed the PTL program. I generally felt adequately prepared to lead discussions on the books and topics each month, but some books and topics paired better than others. In particular, I thought that the TC Boyle book did a great job of making people think about natural vs unnatural and how people should behave in light of that dichotomy. I thought a lot of the PTL-generated questions

were good, but some of them seemed tangential to the topics. I had trouble relating the human interest clips to the books and the themes -- they seemed to always rely on alternative definitions of the theme. I think that our participants generally had an enjoyable time and left with a little bit more appreciation for or understanding of the interplay of science, technology, and culture.

- The discussion questions were not well thought out. The result was that I spent a great of time coming up with my own questions. I did a great deal of research on my own, as well, but I was OK with that. Three of the book choices were just great. Both the audience and I loved them. Clive Cussler's book was an enormous disappointment. The science in it was sketchy at best. The videos were a major disconnect for the audience.
- The book was thought provoking and the author video was interesting. People didn't really connect the combine demolition derby with the theme. They were more interested in the fight over the water rights.
- The Painted Caves book was the least attended. I feel the length of the book kept many people from participating. The other 2 books were very enjoyable and were easy to use as discussion vehicles.
- I felt that the audience was very engaged in our discussion - we had a good time! I think that there was an appreciation and recognition that scientists like me are 'real people, too'. We found common ground in discussing science education and our society's need for innovation. In all these aspects, the program was a success. The guiding questions were useful. The only negative feedback I have is that the video program about the demolition derby engineer seemed to be somewhat disconnected and aimed at a different kind of audience. I THINK the intent was to demonstrate that farming communities rely on innovative, creative, engineering-type skills. However, that connection was never directly made, and probably not appropriate for our particular rural community.
- I believe the grant program was successful in getting more adults to learn about science. The library staff was resourceful and helpful. We liked the small discussion groups where each reader had a voice to express their thoughts and opinions. The accompanying videos were not helpful and many patrons expressed their confusion about the survival videos. I did not think they were helpful as well. But it did promote discussion and critique.
- I am an archaeologist and educator and was asked to lead the knowledge discussion. I really enjoyed the experience and I believe the audience did, as well. My main complaint was with the book choice. There are many other books out there that are more engaging 'historic fiction' selections. The audience voiced that they saw little relevance between the book and the topic of knowledge. Perhaps because the book is too far-fetched. Also, some were daunted by the book length. Great program, great idea, but not such a good book choice.
- I felt as though the topic I focused on was Auel's use of plant medicines, since that is my strongest area of knowledge. I barely talked at all about the use of imagery, of caves, or even the origins of humans which were the main themes. The audience was very engaged in my discussion and I heard from multiple people that the conversation was much more interesting than the book. Being that I was the only person in attendance who actually made it through the book, I felt much more prepared than everyone else. So much of the book was not of interest to me or seemingly anyone else. Since the book was so long, it was easy for me to pick out a few peripheral topics and expand upon those which was the books one redeeming quality.
- I feel this program was very well thought out, easy to implement, and very enjoyable. The Jane Auel book, being the last in the series of 6 books and a bit hard to plod through at times, was not as engaging as the other book selections. The guiding questions were very useful and required only minimal effort to adapt to the audience on a meeting by meeting basis.
- Went better than I thought. I'm a paleontologist, not anthropologist, so I felt a bit out of my area. Would have been nice if book was not so huge; time for a complete second reading and/or reading other books in the series would have been nice. I had a great group, some of whom had read all

the books in the series; they thought this was the worst book of the series. (So in retrospect, might have been better to substitute first book in series).

- I felt that some of the books were not very easy to read for most people. We did all enjoy Thunderstruck & arctic drift, but the others were not. The materials provided on the list of materials did not pertain to the books. I had to do my own research to find more information on the subjects covered in the books. I did like the list of questions.
- I'm glad I was invited as a science partner, because the other reading materials and videos had very little to do with nature or survival, and generated no discussion. My own material did.
- I certainly felt prepared. The librarian did a nice job of facilitating the meeting. I think that the book was a poor choice though - perhaps some consultation with the science expert might result in a better choice for future events of this kind.
- I felt confident in my role, although I wished the human interest videos had been better aligned. Some of them were a little too long. Others felt like they went better with other books than the ones they were assigned to. The Land of Painted Caves was too long, so another book might be better to replace that one.
- Some of it didn't really connect with rural people (at least in our area). I don't think it is the fault of the program, but I don't think they comprehend totally what rural culture is about when it comes to making connections with science. Some of the connections were a bit of a stretch.
- I did not like the leap from the context of the book to the video. While both were informative, it was a very weak link between the topics. I could have spent more time on either one. I would have liked to discuss the book and then have more time to talk about gardening and invasive plants, or species that are affecting our local area. Or we could have read a book about the science of prosthetics and continued on with the video. Or a book emphasizing nature vs. nurture and then looking at the video.
- I thought the book selection (although dated) was great and the supplemental videos very entertaining and relevant. I'm the local biology teacher so I was able to talk more about our current understanding of human phylogeny (and point out the non-defunct cro-magnon designation.). I was also able to tie in my own personal genetics results through 23andme and the audience liked that especially when I revealed I share 3% of my DNA with Neanderthals. I think it's important to accurately communicate the scientific understanding of evolution with the general public and I was glad to be that bridge.
- For the most part, I felt adequately prepared to lead discussions. I felt that the audience sometimes preferred to discuss the book more than relate it to a science theme. I enjoyed the books and videos, and I think the audience did as well. I think all of the reading choices were very relevant for the themes.
- I was very pleased by the books chosen and the relevance to today's issues. The groups were wonderful and I enjoyed meeting everyone.
- The selection of books and the program overall were a great success. In addition to the discussion questions I prepared at 20-25 slide Powerpoint presentation that provided more depth to the science concepts. The slides facilitated the discussion and help visualize the concepts for a deeper understanding. They also helped me stay on task in terms of the overall discussion.
- Being a biology professor I felt very comfortable leading the discussion on the Boyle book and the nature of science. I believe that it was a great choice of a book for getting people to think about nature, what is natural and the role that science plays in understanding the nature around us. It also provided a basis for talking about the tension between science and society. I really enjoyed leading the group.
- The events exceeded my expectations. I am a scientist so felt comfortable with the content, and as a professor, was adequately prepared for each event. The attendees were always engaged in discourse, questioning, and looking at various aspects of the science in the text and questioning reliability. It was an energizing experience and I would do this again. In fact, we added a week for a book I chose, 'Encounters with the Archdruid', which they loved. It was their favorite (sorry

about that). As an educator and a scientist, I found the PTL questions to be restrictive. I understand that you need to provide guidance, but if you would like feedback on the types of questions that could be asked instead (which I did ask), I would be happy to assist.

- The program exceeded my expectations in the discussion of the participants and the knowledge base they had on ecosystem and invasive management. I felt prepared for the science discussion and had done some light research to provide other examples of same issues that were closer to home. I had not done anything like this before and enjoyed the experience and discussion with others.
- In addition to my MLIS, my first masters was in plant ecology, and I had several ecology courses that helped prepare me to lead the discussion. I also was a park naturalist and have spoken to different groups about endangered species and other ecological topics. I looked up recent information on invasive species and on invasive species that would have local concerns. I printed off photos of zebra mussels, double-crested cormorants, Asian carp, etc. and the discussion did come around to those species. We also had stories from people in our group who had lived elsewhere tell about pythons in Florida and other invasive species. If anything, we had trouble getting people to quit the discussion in time to close the room and leave! I should point out that anyone who came to earlier sessions was bound to be lured by the imaginative refreshments. This time we had plastic bugs floating in the 'Beetlejuice' punch, 'feral' pigs in blankets, a platter of cheese cubes surrounding a Beanie Baby rat, animal crackers, and several other theme goodies.
- I enjoyed participating in the program very much. At first I was concerned that I had the knowledge and the ability to lead the discussions. However, with the material provided and a group of talkative participants the sessions all went very well.
- I had a blast being a part of this project. We had a consistent following of 10-20 people at each discussion that were able to produce a lively discussion. We were so successful, that we have decided to move forward with some additional discussions based on works by Barbara Kingsolver and Andrea Barrett. I felt that the Clive Cussler book was the weakest of the bunch in terms of both writing quality and scientific accuracy. Although it did produce a great discussion about climate change, I didn't feel that it provided as thoughtful a basis for exchanges as the other three books. We also decided to go with the first of the Jean Auel books. It seemed odd to pick the last of a long running series for a book discussion and the first book in the series did a great job of raising some of the same issues regarding 'Knowledge'. I would urge more thought in the selection of books for similar future projects. The connections of the extra videos to the general discussion were sometimes difficult to make. In particular, although the video about disabled athletes did raise some interesting issues about the nature of 'natural', they were of a very different focus than the ones raised in the associated book. I found it surprisingly easy to transition from the content heavy lectures of my college classroom to the free-wheeling nature of the book discussion circle. The advice from the accompanying materials was helpful in getting me started. For the three discussions in which I participated, I brought a small demo/visual aid just for fun. We had fun with dry ice for Arctic Survival. I sent radio signals to a portable radio with a 9 volt battery and a wire for Thunderstruck. And I borrowed some skull casts from the Anthropology department for Clan of the Cave Bear. In the future, some suggestions on additional 'show and tell' material might be helpful. Science faculty always like doing demonstrations. Although I used some of the questions provided in the material, I made quite an extensive list of additional questions. In most cases, I found the provided questions to be useful examples of some of the directions that I could take the group discussions.
- I was not at all what to expect from the evening. I must say I found it a marvelous experience. The attending folks were so eager to talk about the book and related topics therein with a 'real scientist'. And it is always great to debunk the myth that scientists are by nature aloof and unfriendly. My presence was very well received and most of the attendees inquired individually afterwards if I would be able to join the next month's session.

- This was a very exciting program. I really enjoyed discussing the books, the science and other related aspects with the participants, who were mostly senior citizens. They were extremely interested, engaged and willing to share and participate. I believe that they felt that they got a lot out of it too. In my venue, I ran the entire discussion after the library director welcomed the participants. At first I didn't think I was doing this, just a science portion of the discussion, but it turned out to be best, since I felt comfortable leading the entire discussion. I was not aware of questions or extra preparation materials provided by the pushing the limits team, but it did not matter, since I have the right expertise to deal with most of the topics and the resources to learn about topics with which I am less familiar. I was aware about the pushing the limits website, but I only looked in there for ideas on how to structure the program in general. The usual way in which I ran the program was introduce myself, introduce the general topic of the book (asked participants what they thought was about), talk about the author and their general interest/body of work, then talk about the hard science topics (participants both listened to my explanations and answered my probing questions and asked their own questions), then we watched the author's video and talked about the theme of the day and how it fit with the book and usually this is when participant discussion started and went in many different directions. We then watched the human interest video and tried to tie it into the theme. Finally, we wrapped up by asking for any additional thoughts people had in mind, summarizing the ideas and teasing the next book discussion. There were two aspects I found most challenging. One was the ability to read the books in a timely manner in the middle of a very busy semester. This was especially true for the painted caves book, which is extremely long. At first I thought it should be substituted for a different 'knowledge' book, but the discussion that ensued from it was so rich and interesting, that I am not sure a different book would be as interesting in the topics of discussion that it inspires. The second challenging portion was the tying of the human interest videos to the theme or more to the discussion. They mostly felt disconnected, even though we always did find ways to connect to the theme. I don't think the participants felt overall that the videos fit well, even though individual videos themselves were nice, worthwhile stories.
- I thought the program was wonderful. What really caught my attention was the desire for science that people have when reading books. The passion for education is wonderful to see!
- I loved doing it. The audiences were very receptive to the information.
- This really was a good program. It was difficult getting the audience interactive at first, but the last two sessions went very well. [The librarian] was amazing and deserves praise for her hard work.
- In preparing for the discussion, I really started to understand the intent of this program to open up scientific topics to people who haven't necessarily formally studied that field, and I felt prepared and competent to lead the discussion with that in mind. This was a branch of science that I don't normally deal with, so it was a good challenge for me. One of the program attendees was quite knowledgeable and contributed well, and there were lots of good discussions that branched from the topics in the book (the effect of smart phones on connections and communication in our day and age, for example).
- We had a small, very interested group that carried the discussion well and made connections to many science areas. Though I felt unclear about expectations at first, the librarian and I prepared for the first session and it all went very well. I am familiar with many branches of science and enjoy literature. My teaching background made me comfortable with leading discussion and explaining things. My scientific background allowed me to share applications and connections for science content and techniques.
- Didn't have too many expectations. EE background helped prepare for this particular book. Materials helped somewhat provided some interesting food for thought about connections. More social than technology. Group discussion generated some interesting parallels with modern day Facebook. Science aspect overall was a little light. Found much more useful info on the web... re Marconi's spark generators, multichannel frequency control and difficulties, etc.

- We used a book I wrote, rather than the one suggested, which meant I was quite knowledgeable of the material. I found that only a very little bit of presented material was required of me in order that discussion would take off. That was good, as people interacted with each other, rather than solely through me. But it also meant that the drift of conversation did not always stay close to the topic. Still, good for people to exercise their minds, try out some ideas.
- I was concerned at first... how much did I need to know... the discussions by the audience were wonderful. I felt confident in my ability to lead the discussion. We went way overtime for each meeting!
- Most all of the participants in my groups probably could have handled the science in these books. It was not a difficult task to lead the discussion when several folks had good questions and answers during the discussions.
- I was surprised by the number of members of the group that had already read the authors' previous books and were aware of their styles and interest. This helped generate discussions of comparisons to previous works and topics of the author. The discussion questions were a good map for the group. I searched for actual photographs of the people or areas involved. This was very helpful in *Thunderstruck* and *Children of the Painted Caves*, and *When the Killing is Done*. Since these books were based on actual events or places, it complimented the discussion. I and I think the group enjoyed the series very much. Several wanted to know if another series was on the way. They enjoyed it tremendously.
- I was nervous about leading a discussion about a topic that was very far removed from my area of expertise, but I think we were all able to find common ground in the basic human motives and shared experiences that lead to a lively discussion. At times our discussion veered quite off topic from the book, but was stimulating nonetheless.
- I was a little uncertain about what I was supposed to do before I arrived, but I was enthusiastic about discussing the nature of science with the participants, and we had a terrific conversation.
- I thought the events were very good. My expectations were met or exceeded each time. I felt prepared and knowledgeable and competent to fulfill my role each time. I did not use the discussion questions at all but felt the material provided was better than average in aiding the program overall.
- Yes, it did meet my expectations. I felt prepared and competent to fulfill my role as the science partner. Having an iPad at hand helped to quickly answer some unexpected questions that arose. I would have appreciated more thoughtful discussion questions to use if needed, but we had excellent discussions without having to rely on the questions provided (on the next page I seem to contradict myself - the discussion questions I used were my own).
- I think this was a great program. It would have been nice to have a short summary about why each book was chosen, especially for *'The Land of the Painted Caves.'* A short explanation of the science in each book may have also been helpful, especially for *'Arctic Drift.'* I did a bit of research before our discussion of that book, but it was sometimes still difficult to separate fact and fiction.
- Yes, met expectations. Did not feel adequately prepared.
- I was thrilled to be a part of this program. The materials provided by [the library] and the PTL program were wonderful for preparing me as the science partner. I felt that I was very well prepared to be a discussion leader for this topic. I had ample time to do further research and reading on invasive and introduced species so that I was able to contribute additional information that was pertinent for our area.
- I enjoyed reading the books, some of which were new to me. I felt adequately prepared, but I also did a lot of additional work so that our discussions could delve deeper into the content and explore larger themes throughout the book and for the various time periods they covered/regions where they were centered.
- It met my expectations and I was comfortable in my role. I was disappointed that there were not more participants, but realize we had several competing events that evening.

- At the outset, I wasn't sure what I'd agreed to do. The librarian who worked with me, though, explained things well enough that after I'd reviewed the materials, I did feel well prepared. I knew more than enough to help guide readers' discussions about science and the nature of knowledge. It was a very good experience.
- Although I'm often not so stoked to talk in front of groups, this program was a good opportunity to talk about science and invasive species, and was very well received by the participants. I felt very comfortable and prepared for the discussion, and felt it went well.
- Yes.
- I felt very prepared by the materials and my interactions with library staff and I thoroughly enjoyed facilitating the discussion.
- The Thunderstruck discussion went very well. I had a prior interest and knowledge of Marconi's experiments and was able to gather some apparatus to recreate Lodge's Royal Society demonstration for our discussion group, I am glad [the librarian] sought me out to participate in this discussion.
- I thought this was a good idea. It was an effective way to get the public involved. It is very important to have a science partner with the knowledge and versatility to deal with these topics. I felt I did a good job. The library coordinator was a great help.
- It met my expectations very well, and I don't often read books with certain questions or issues in mind, so it was nice to see the discussion points before I was reading the book. It helped me look at certain parts of the book in more depth than I normally would.
- I like Eric Larson's approach and enjoyed the technical aspects of the development of radio. Given the historical events, it was interesting to consider how something so taken for granted developed. The murder mystery allowed some 'brain rest' time to absorb the scientific implications as well as apply them to real life situations. I am a scientist of the humanities though I enjoy and have spent time in the engineering sciences as well - my psychology background made me very interested in the relationships and motivations not only in the murder mystery, but also into the personalities, brilliance, and pettiness involved in discoveries in the science community.
- First, I would like to thank the PTL team for developing this wonderful program. I enjoyed being a part of it and having the opportunity to connect with members of our rural community and discuss how science is such an integral part of our daily lives. Providing the videos and a list of suggested questions were particularly useful tools that helped me prepare and generate some of my own questions. Similarly, the overall program format and librarian/science partnership was a nice model. Overall, because of the tools provided and the librarian and science partner team approach, I felt quite prepared and competent to lead the discussion. One suggestion is to provide some recommendations for materials such as photos of Marconi's stations, maps identifying the locations of some of the stations, etc.
- I thought the librarian prepared a very good program and I hope that this sort of program continues in the future.
- Excellent program- the only hard part was keeping the discussion going in the right direction and on the topic as hand.
- I think it would be helpful to improve upon the narrative that describes to the science partner what PTL is trying to do and how you expect it to be done. I spent quite a bit of time sifting through the material to get a better sense of what I should be doing. I think in order to be engaging for the audience the science partner needed to prepare a more extensive and well thought out overall presentation than it would initially seem. I found that my second event was much better than my first. I spent more time preparing my own group of discussion items which elaborated more on what I found interesting than using the basic questions provided by PTL. The science partner really needs to be have some substantive science item to delve into with the audience in order to engage them and give them a chance to be introduced to something new.
- I felt the pushing the limits program could have done a better job of explaining what was expected of their science partners, however it did give me the reins to choose my own direction and focus

for the presentation that I put together. Anthropology is my major, and one of my areas of interests is the Neanderthal people, and combine with my passion for art and science I was able to put together a balanced and informative program that coincided very well with the book.

- For the most part, I felt prepared enough to answer the questions posed in the discussion by the attendees. However, I don't think I could have gone much deeper if those questions had arisen.
- I didn't feel adequate on a number of science topics. As a physicist, I could relate to Thunderstruck and Arctic Drift, but Painted Caves and When the Killing's Done were outside my comfort zone. I was able to coordinate with an anthropologist for Painted Caves, and that enhanced our discussions.
- I did feel prepared for this session. I took the subject material very seriously and spent a lot of time preparing a visually interesting PowerPoint presentation on invasive/successful species and our role in the global ecosystem. As a professional paleontologist, I included an historical perspective on the diversity of life on earth and the roll mass extinctions have played in shaping its present distribution and diversity.
- I did much research about related topics and prepared displays to complement our meetings.
- I had research Marconi and read the articles listed in the reference material. I printed out paragraphs from some of the articles, read them out loud, asked questions about those opinions to stimulate conversation and facilitate discussion. Most of the attendees stated that the book got too technical for their interest, but they persevered just to follow the murder mystery portion. The engineer in the group enjoyed the whole story - but he already understood the science involved!
- After reading each book and reviewing the discussion questions, I also did some research online to learn more details about the science content in each book.
- Having access to all the segments and the potential questions was very helpful. Overall, I realized that I was more than prepared for the task of science partner with my background as an anthropologist. As I participated in each segment, they became easier to manage. The time went faster and it seemed each one lasted a bit longer than the one before.
- I felt a little nervous going into the program, but the provided questions and materials helped me prepare.
- My strengths are as a biologist/ecologist/biochemist so the TC Boyle book was right up my alley. I did work a bit on the other science components and was able to answer the general questions that were asked on occasion. Few people seemed to really get into the actual science aspects and were responding more as a book club to the books themselves.
- I was asked to participate because I am a ceramic artist and could make many connections between art and science. Thanks to [the librarian] I was more than prepared to fulfill my role.
- I partnered one program and attended one other as an audience member. I felt prepared after seeing another program which preceded mine. That was valuable in allowing me to observe the conduct of the program and the relevance of the video segments to the topic and the book.
- I felt well prepared for the discussions.
- I felt fully prepared and completely knowledgeable. The topic was well suited to my background in wildlife management and zoology.
- The program was fluid and I felt generally prepared to play my part. I felt that I was able to provide a framework for discussion.
- My rather considerable academic background in the subjects of the history of modern science and technology, coupled with original research and publications carried in the area of archaeology (re: early history of C-14 dating) made the tasks involved pretty straightforward in nature. Also, having earlier twice participated in graduate programs at the U. of CA, Santa Barbara, the described settings for Boyle's book were well known to me.
- I felt somewhat prepared - sometimes wasn't sure if this was to have more a 'book club' approach. But enjoyed preparing topics/ open- ended questions for the group discussions. Our biggest limitation was an extremely low audience attendance. Good turnout at supplemental events but not at book/video discussion nights.

- I felt prepared to fulfill my role as the science partner for the four events.
- I thought the material given was extremely helpful. I felt ready for this topic, it's something that I have teaching to youth already.

[Click here to return to the annotated survey.](#)

12. Please tell us a little about why you volunteered to participate in the PTL program — your motivations for participating, the background that you felt prepared you for this task, and your previous experiences.

N=88

- I have an interest in science communication and outreach. I am friends with the librarian and she thought I might be interested in this program. I am a veterinarian currently enrolled in PhD training. I have extensive experience with communicating medicine to clients and am trying to use these skills to communicate science to the public. I am active with a local cancer resource center, meeting with cancer survivors, patients, and advocates to discuss current cancer research.
- Co-worker had a personal friendship with the librarian / networking through a co-worker. I love reading, and have been involved in science-based book clubs at the university. I am part of an organization that hosts patient-researcher book clubs with clients at the local cancer resource center to help inform people about cancer research, so I was already familiar with this type of program. My friend knew I would be a good fit for the library.
- I was interested in how these novels would be viewed by the public and how what they contain is understood. Being an Anthropologist I believe made it quite natural to help participants see the multi-disciplinary nature of the topics. I have given literally hundreds of talks to public audiences of all sizes and feel very comfortable leading discussions.
- I am a community college science instructor that teaches the general biology series of courses for non-majors, so I work with a wide age range of students that are similar to those that came to the program. I wanted to be a part of the program then because I thought it would allow me to reach people beyond the classroom and help them understand both how science works and why a better understanding of our world is important. My field is biology, so I felt confident with most of the issues in the different books, but I did have to do some additional research for each book to make sure I could talk about a wide range of possible topics that could come up during each discussion. In the past I have done outreach, but usually in the k-12 arena, not for adults, so that part was new for me.
- I am on the faculty of the Chesapeake Biological Laboratory, a part of the University of Maryland Center for Environmental Science. My research focuses on water quality issues in coastal and estuarine ecosystems, and climate change. The applied science aspect of my own work motivates me to participate heavily in outreach and science education. I also work with a citizen monitoring group in the area, frequently give public lectures, and have served on science advisory and technical boards for non-profit and management agencies. I feel it is part of my responsibility as a scientist to make my research accessible to the public. At this particular juncture in time, where public perception of science often feels negative, I feel a special duty to be an ambassador to 'raise the curtain' so that people from all walks of life can find value and application for scientific topics in their own lives.
- We at the nature center believe in community education for all ages for all types of science and environmental programming. We are teachers and wanted out community to see our involvement in other areas.
- Like I said, I am an archaeologist and educator. I have been working with many groups such as GSA, 4H, public schools, state parks, museums, etc. in order to educate children about

archaeology. I try to be involved in the community whenever I can. The PTL program is another worthwhile contribution to public education.

- I was a FT NASA education specialist for 8 years conducting many science events and workshops for both formal and informal audiences, and still do PT work as an E/PO co-PI on various missions. I believe that engaging the public in understanding science and the role they play is essential for them to become more informed citizens in an age of climate change, pseudoscience, and policy dictates. I have to say that I was a bit concerned about the audience here not being able to 'get it' when we had our science discussions, but they surprised me with their acuity.
- Presently, I am a pharmaceutical chemist and college professor. My whole life I have greatly enjoyed learning about different fields of science and communicating them to students (I am a former HS teacher) and the public. I believe that you build communities around schools and general educational programs such as PTL. I think PTL is a very important and worthy program that can not only help educate people but can be an event that can bring young people and adults together.
- I have always had an interest in science. I earned a PhD in Vertebrate Paleontology. I am a curator at a local museum, compile a newsletter for avocational paleontologists, and speak on a regular basis to public audiences about paleontology. I enjoy sharing the thrill that scientific discovery brings to my life...that is why I offered to participate in the PTL program.
- I volunteered because our children/teen librarian was in charge of the program and asked me if I would do the session on nature. I also was free, a great incentive for her. As I stated previously, I have given many nature and ecology programs, taught biology, ecology, local flora, and other science courses as a grad student or adjunct faculty at four universities, and volunteered to direct Earth Day projects for my town and for local schools. I give genealogy, ecology, and other programs to senior citizen groups and at other libraries. I worked for the MDNR as a wetland specialist and botanical consultant. I did endangered plant inventories for Saginaw County Parks and a power company. I usually do one or two nature-oriented programs each summer for our library. This summer they included Butterfly & Hummingbird Gardening and a session on Foraging for Wild Foods. I love teaching and helping people learn. That is one of the reasons I enjoy being a reference librarian.
- I teach physics and chemistry at the local high school and mentor a community robotics team. I felt that it would be a good idea to expand and share an interest in science with a larger community audience.
- I was contacted by the public library director, after being referred by a colleague. I am a meteorology professor, but I also have a very broad background in many sciences, as well as the interest in general audience science books, so even though I was already very busy for the upcoming year, I felt that I was the right kind of person to be a science partner in this kind of program and that it would be a very worthwhile activity.
- I was asked to facilitate these programs because of my interest in the library and my past experiences teaching science in the public school. Teaching a 'hands-on' approach to the science classroom for elementary teachers certainly helped my confidence level.
- When the librarian contacted me I was immediately interested. I enjoy conveying science to others and felt that I could expand my skills while providing a service to my community. I teach high school science (physical and biological sciences) and have interests in many branches of science. I have experience in laboratory and agricultural research and a life-long interest in the natural world. I also farmed for many years, so I can connect to economic and social aspects from both the scientific and commercial communities.
- 1. Library staff members approached me since they were aware of my many research and reading interests in areas pertaining to science and technology, coupled with the fact that their earlier inquiries to science teachers at the local high school had been unproductive. Thus, I was more than willing to agree to participate. 2. Aside from my aforementioned prior academic training, I continue to conduct original research pertinent to certain themes in science. For example, currently

I'm writing for the National Academy of Sciences a 'Biographical Memoir' for the 1960 Nobel Chemist W.F. Libby (developer of C-14 dating). Too, presently I have on file several FOIAs with the U.S. Dept. of Energy, seeking declassification of materials from the WW II-era Manhattan Project. 3. Dating to the 1970s, I've taught history of science and technology courses at the community college and university undergraduate levels, e.g. one entitled 'Life and Times in the Nuclear Age.' 4. Finally, I continue to read a great deal (principally nonfiction) on varied topics related to any number of subjects, both historical and contemporary, related to the fields of science and technology.

- I was asked by one of the librarians months ago if I would be interested in this program. I have never done anything like this but felt like it could be fun so I accepted the offer. I do work with technology in my day job and also tutor in my spare time so I had some technical know-how going in.
- I'm a science and history geek. I read Jules Verne in 4th grade and love all genres of science fiction as well as straight science. I am a published writer in science fiction, fantasy, horror, steampunk and other geeky genres. I have a degree in Industrial Electronics and spent 17 years in a silicon wafer manufacturing environment. I also tutor English and algebra at a community college.
- I love the library, and I love science. I have a Master's degree in biology and have been teaching school for 38 years.
- I am a naturalist at the local nature center with a degree in environmental science. I agreed to do this program because I like sharing ideas with people and being a part of the community. I thought it would be interesting to discuss archaeology and paleontology which is something I was interested in but never studied extensively. It turns out that the book didn't really discuss what I thought it might, but in reading it I realized that Auel was describing plants I was familiar with, used in the way that I had studied. I took many ethnobotany and ethnopharmacology classes in college and I think this background is what prepared me the most for the discussion. I also previously worked at a large environmental research facility so I am familiar with the research process. This experience gave me a perspective from which to discuss the role of science and research in the attainment of knowledge in a way that related to some of the broader ideas in this book.
- I love science. I love people. I love great conversation. I am a good facilitator. I am trained in science and have taught science as well as functioning as a facilitator.
- I am an active member in the local Friends of the Library group and a retired professor of chemistry. I had read 3 of the books before the program was announced and am a fan of Cussler and his stories. I think that discussion groups, regardless of the topic, are great things for small communities as it leads to a closer understanding of your neighbors.
- As a meteorologist and science buff, I love sharing my passion with people. I volunteered because it was an opportunity to share my science background with the public. Also, since there was not a specifically weather related topic, PTL was an opportunity for me to expand my horizons and engage the public in a different manner.
- I'm a trained biologist/biochemist/ecologist who managed a university research lab as a career. Many people outside of an academic setting seem overwhelmed by science and don't understand some basic precepts. Our library's reference librarian is a wonderful person with creative ideas and it is a pleasure to work with her on any project.
- I was a public school teacher for 29 years. I have always been very interested in science and it was my favorite subject to teach to students.
- I am a science teacher at the local high school. I felt very knowledgeable and prepared by both the science background and teaching experience to be a good partner for this program. I was thrilled to be asked to participate in this program. It was wonderful to have the chance to talk about how issues in science can impact our communities and our everyday lives. I have been involved with adult education for community emergency preparedness, but I was very glad to discuss something science-based.

- I volunteered because I love science and learning. I have previously taught middle-school science and felt that I had the ability to discuss the books and search for information to further educate myself about unfamiliar topics. This was my first experience in leading a discussion group.
- I am a Library Board of Trustees member and was interested in the program when it was first described to me. I taught biology at the high school and college levels or about 40 years.
- I've been a teacher for over 20 years. I enjoy helping others understanding science.
- I have taught high school science for 36 years and was interested in working with adults in an informal learning environment.
- I taught general science, chemistry and physics in high school classes early in my career. Later, I worked in a nuclear power plant as a chemist and system analyst provided training for the technicians. I enjoyed sharing my excitement in human discoveries using the scientific principles. That man has the ability to conceive of ideas, postulate solutions, test their theories, then perform experiments to verify their truths is just mind boggling to me! Without scientific thinking, we would still be living as a primitive culture.
- I am a high school science and engineering teacher who has done some public speaking related to education, but never directly related to science topics. I volunteered for PTL as the program seemed be a good opportunity to expand my range of experience in working with members of the public while also tying in my own interest in science. Also, I have been seeking new ways to get more involved with adult learners in my local community and this program allowed me to do that. I also was intrigued in general by the chance to work with the public library, which I had never done before.
- I deal with invasive species and their effects on the native ecosystems every day in my job and was very interested to discuss the broader picture of what is right and wrong for our management. My background in forestry and management of resources, as well as a personal passion for the outdoors and our use of it, lead me to feel confident to participate.
- I am interested in public perceptions of science. My background as a college professor makes me well suited to the task of engaging the public.
- I have been teaching at the university level for 25 years and am currently a biology professor at the local university. I am also on the curriculum committee for the Western Institute for Lifelong Learning (WILL) that is associated with the university. WILL offers courses and programs to the community. I enjoy reading books that have a basis in science and this program sounded like something that I would enjoy doing.
- I am a high school physics teacher. I had never done a book discussion program before, but my superintendent gave my name to our librarian as a suggestion, and I thought it would be fun to read about and discuss science with community members.
- I believe that scientists engaging with local community members on science-related topics can be of great value to everyone involved. I hold a PhD in Ecology, have wide-ranging experience with biological research and conservation, and felt at ease with the topics at hand.
- I have a doctorate in science education and value any opportunity to share information about science topics.
- I volunteered to participate in the PTL program because it was offered by my supervisor, I enjoy public education, and it was something that I have never done before. The stipend was also attractive. My background is in natural resources, so I enjoyed sharing my experiences with the audience.
- I work at an environmental center that is interested in both education and research. While our work is primarily focused on the environment, my background is in science and I have been involved with science related education throughout my career. This was a natural partnership and a way that our organization could help to bring science oriented topics to a broader audience that we typically don't work with.
- I was tapped for the facilitation of the event because of my background in indigenous food systems and my professional work as a chef. My science interest extends chiefly into food science.

- I recently retired from teaching Biology and welcomed the opportunity to be involved in science education again, but in a new way! It's a nice community here and I also welcomed the chance to volunteer and give back in some small way.
- I have a PhD in human genetics... love teaching.... wanted to be involved in the project... wanted to help local library... thought getting adults interested in science was worthwhile.
- I do a lot of outreach teaching kids not to hate and fear science, but to enjoy it as a natural application of their overflowing curiosity. I wanted a chance to work with adults, too! The entryway of fiction made science and a discussion of the scientific method (and ethics and lots of related topics) less threatening for lay readership to engage with.
- I have a long history of facilitating information educational programs. This type of program interests me quite a bit. I was very interested in the location of [the library], as I was surprised that such a small library in a rural setting would be offering this type of program. That intrigued me and definitely motivated me to participate.
- I represent the Tongass National Forest in several education-related forums. I was interested in participating in the PTL program because I have not participated in a program like this one and was curious, plus I am dedicated to providing a public service to the community when possible. Also, the librarian made it sound very fun and she was right.
- I have a background in providing programming to the public via environmental interpretation. So, speaking to the public regarding science, trying to engage individuals, and build excitement about science is well within my interests.
- Topic posed was consistent with my research area of expertise. I am a frequent library user and STEM advocate --- the request to discuss/encourage interest in science from a librarian was hard to decline.
- I was asked by our school media person to contact the local library and investigate this program. The librarian there was extremely helpful and I was excited to have this opportunity to share with the community.
- My wife is the Library Director and she asked, however, I would have participated if I had been asked by another library. This was also an area I am familiar with and I like working with the public. However, the librarian who coordinated the event did not do a very good job. Poorly advertised.
- I am always motivated to help increase community involvement and awareness of issues that combine art and science. My previous experiences have more to do with art than science but I have been teaching at the post-secondary level for some years.
- I have done research in areas of interest to bush Alaskans, and I enjoy communicating what I have learned.
- I have always enjoyed talking about my scouting experiences as it related to science.
- I volunteered for the PTL program because it seemed like it would be a good way to increase engagement in science in our local community. I also was interested in learning more about facilitating public science programs. I felt somewhat prepared for facilitating the program because I've been a public high school science teacher for the past seven years. In addition, I facilitate poetry events, so I am comfortable working with groups of people.
- Teacher within the community - for some community service.
- I read the call for this program and thought my recently gathered data on cyberstalking would fit in well.
- Climate change is a complex and controversial topic but it is already having an impact on people - there is a strong need for people to understand the issue more deeply so that they can understand the difference between true scientific uncertainties from political misdirection. I am a Distinguished Professor and have worked on science topics with a variety of audiences for many years, so I felt quite comfortable coming to speak to a group of non-expert but intelligent and interested individuals.

- I am a teacher of psychology in a community college. The librarian of our school approached me to do one of these presentations. Having enjoyed 'Devil in the White City,' I agreed. I like the understanding of motivations, interactions and accomplishments. I also like other fields of science, especially how people discover new things, how they actually accomplish them and the people they interact with, (and fight with).
- I volunteered because 1) we have a supportive librarian, who loves science, 2) I love the idea of discussing how we are all scientists and apply scientific principles on a daily basis. Related to #2, I would like to share how wonderful it was to point out to participants how they were scientists. For example, during the discussion for T.C. Boyle's book, when the Killing is Done, it was a delight to see one woman's reaction to a simple observation I made of how she was being a scientist in her own back yard by testing various means of keeping deer from entering her yard. I think my best preparation for this has been my practical work experience, which has involved public interaction and public speaking.
- I have a great interest in communicating science to those who do not have much of a science background. I find it very satisfying to be able to distill seemingly complex scientific concepts to tangible, meaningful experiences.
- I am very concerned about our environment and want to help educate the public about the perils we will face, if we don't find alternatives to our current lifestyles. We need to teach people to be stewards of our planet, to help it and reduce the damage humans have done. As in 'When the Killing is Done,' aren't humans an invasive species also, except we can make choices and decisions.
- The overall premise of the program and the topics covered were very interesting to me.
- I was interested in the book and curious to see how the program was going to increase public interest in STEM.
- I enjoy science and believe that it's important for the public in general to understand it better so they can better comprehend what's happening in the world around them and why. I work for the US Forest Service as a Recreation Operations Manager, and although I don't use as much science in my day job, I am very curious and enjoy learning as much as I can when opportunities present themselves.
- I was recruited. I am very experienced in bringing science to diverse populations as a trainer of teachers, consultant for science teaching in elementary schools, former college instructor in science topics, and robotics Judge, curriculum designer, volunteer as a naturalist at local rehab facility, camp creator for marine science, etc. Also worked with science doctoral students, science cafes, festival, etc. while teaching at [a local] College.
- I was contacted by the host library. Outreach is part of my job which is funded by the National Science Foundation. Our research group maintains a website when we are off on scientific expeditions. Members of the research team are frequently contacted for presentation requests at local schools, civic organizations, etc.
- I was asked by a friend to do this, and felt that my educational background and professional background can help people understand the issues better, in the book and locally. I also have led public nature hikes and am comfortable talking in front of people.
- I have been a regular presenter of science-based programming for our library's summer reading program for kids. For the most part, I have not been involved in leading programming for adult learners, beyond my work as a college biology professor. I also conduct regular board gaming sessions with tweens and teens at the local public library. During the past few years, I have taken my summer library shows on the road to rural libraries throughout [the state] on such topics as Arthropod Diversity, Life in a Drop of Water, Bioluminescence and Life in a Cup of Dirt. As a result of this work, I will be doing sabbatical work at Exploration Place (a children's science museum in Wichita) as their scientist in residence. As you can see, I've got a long standing commitment to helping out with science-based outreach activities at libraries, so when this opportunity presented itself, I jumped at the chance.

- Currently pursuing degree in anthropology and archaeology, and a career in teaching. I also have an associate's in electrical engineering technology. I am a passionate photographer and love writing. I also created and teach an extra-curricular science program at a local elementary school for grades one through six. My Science Club program is entering its third year this fall, and has been awarded a funding grant by a local public school foundation, and we were recently honored at the annual school board meeting for our work with our science program.
- My local library director invited me to participate because I have been leading book discussions there (and elsewhere in Vermont) for years, and the participants evaluate our discussions very highly. I love working with adult learners (I also teach college-age students, in both conventional classes and alternative programs), because they are highly motivated to learn and bring a variety of life experience and stories to the discussion. I enjoy preparing for the programs and facilitating lively discussions. I always learn something new, even about books that I've read or led discussions on before. I've been leading Vermont Humanities Council book discussions since 2007 and teaching for the University of Michigan's New England Literature Program since 1995. I also teach at Colby-Sawyer College. Formerly, I've taught Elderhostel (now called 'Road Scholar') and community college classes. I have degrees in English and Environmental Education.
- As a staff member of our community's Nature Center and therefore someone recognized as having a scientific background, I was asked to participate in the program. Other staff members led discussions on the other books, and they all seemed more environment-related than mine did, so I felt a bit more out of my comfort zone, but it stretched me to learn more.
- One of my students was in my Bioethics class. She worked at the library, and suggested me to the coordinator of the program. I have taught Science at our local Alternative High School for over 25 years, and felt very comfortable working with community members.
- A Library Science professor is a colleague who received the grant to fund this project, and asked me to help on the presentations. I've enjoyed scientific popularizations in recent books so I felt it would be more of a discussion on recent advances in science. When I saw the list of books, I had some head scratching as to the science involved, but when I read the books, I felt more confident in the topics presented by the authors. As far as preparations for these discussions, I've taught physics at all levels for 15 years, and have taught seminars similarly structured, so I felt it would be close.
- I was asked nicely so I did. I find there is a large gap in science understanding in the general public. I taught high school science for 38 years.
- Not many people with a science/engineering background in our community and I am a library trustee.
- I am good friends with the librarian. I worked 14 years in a hospital lab and have taught high school physical science & chemistry for 4 years now.
- I had offered to volunteer at the library a few weeks before they offered me this opportunity because I am currently searching for a new job and I was looking for experience to put on my resume. I felt prepared because I have a BA in geology and an MS in crop and soil sciences, plus I know a lot of people in the community and I have some teaching experience.
- I have a BS in science education, geoplanetary physics, MS in science education, MS geology, PhD in science education and geology. Taught public school for 8 years, college/university for 20 years, PI for ~\$2.8 million dollars-worth of education and science grants. Lots of experience.
- It's hard to say no to our library director...she's great! Human evolution can be a touchy subject and I feel like I have the experience and understanding necessary to discuss it with community members.
- I was approached by the library director to facilitate Based mostly on my previous experience with leading book discussions.
- Volunteered by family member librarian :) Past participation with younger adults like Scouting, general community service minded.
- I was called and asked to share my experience as an amputee, and agreed to share.

- I was asked to fill in for the scheduled facilitator due to a medical situation.
- I volunteered because the librarian asked me to and I wanted to support her and the library.
- Was asked, and not good at saying no.
- Was asked.
- I was asked by the librarian.
- I was asked to be the science partner for the events.

[Click here to return to the annotated survey.](#)

13. Before participating in the PTL program, had you ever been involved in any public science programming for adults; e.g. science cafés, science festivals, etc.?

Yes; please describe (N=41):

- Inservices.
- Environmental fairs, natural history festivals etc.
- School science fair.
- Summer Library Shows, Panel Discussions at Museums, Roundtables for Public Television.
- See above.
- National Chemistry Week events at area shopping malls.
- I have run many programs bringing the public to the Johnson's Island Civil War Prison site.
- Weather presentation at the library.
- Featured speaker at organizational meetings (e.g. Milwaukee Yacht Club, Rotary Club etc.).
- Occasional science fair/festival for high school and college students.
- Outreach websites as described.
- One-hour presentations about my recently published book on the Great New England Hurricane.
- As I mention above, invited talks at NGO meetings, citizen monitoring, lectures at master naturalist classes, etc.
- Science fairs and school programming
- I have coordinated all events for Utah Archaeology Week in Southern Utah for the past 3 years.
- High school science fairs, parents' nights.
- NASA.
- Video discussions at the college that I work at.
- Through my job we hold forestry field days for adults, as well as leading hikes/nature walks with adults.
- In addition to teaching physics at the local community college, I have performed science shows for both students and adults.
- I do lots of behind the scenes tours, lectures, fossil identifications at fossil festivals.
- We have many programs at the Nature Center (though most often for children or families).
- I have co-organized a number of science and religion forums.
- All of the above. I have done a lot of programming for adults.
- Vermont Humanities Council Reading & Discussion programs.
- Cafe Scientific, USA Science Festival, our Musuem outreach programs, TV programs.
- Science festivals such as Kid's Fishing Day, Deer Celebration, etc.
- Teaching Adult Ed Science.
- Please see immediate prior response.
- Wrote about science for various publications.
- Science festivals, public nature center interpreter.
- Cancer Resource Center of the Finger Lakes Research Meetings.
- See above.
- Environmental education, university extension work on water quality.

- I have been hired by schools, libraries, etc for years to do these types of gigs.
- I teach cooking classes.
- USNPS Park Ranger – Interpretation.
- I've presented at public speaking engagements for my university.
- Science cafés, science festivals, etc.
- Scholar's Day at my alma mater/Conservation Bio presentation.
- NPS programs, Sigma Xi Science Cafe, Indiana Master Naturalist program.

[Click here to return to the annotated survey.](#)

18. How could the PTL program be improved for the audience, for science partners, and/or for librarians?

N=73

- I mentioned most of my suggestions earlier, but shorter, more aligned human interest videos would be useful. Also, ice breaker activities or other ideas for things to do while people enter would be nice. I could have also used some ideas for ways to wrap up both the individual sessions and the entire program. I came up with them, and sometimes they were just organic, but it's nice to have a few ideas coming into the event.
- Recommendation for science partners to view the video segments beforehand. Closer alignments between video segments and topic and/or more information about those relationships, i.e. summaries and questions related to highlighting connections.
- More examples or suggestions of what is expected of the science partners would help in preparations. I did appreciate the freedom to tailor the discussion to my interests and my style of teaching. I was happy that you have a website, but felt that it needs more explanation of what the PTL programs are all about. Our librarian did a wonderful job. We did have very poor attendance on my evening program, while earlier programs had much better attendance. I think that more advertising and networking would help increase the public's awareness of your program and purpose.
- Better selection of books. Provide examples of additional activities for use during the discussion.
- Provide hands on objects or demonstrations. People like to see some of the science in action.
- It would be nice to spend a bit more time on the books and materials rather than just one day. I'd like to be able to take the video materials home and think about them.
- Strongly encourage all to read the book. Give the scientists the videos to view before the presentation.
- It might be helpful for the science partner to view the videos before the day of the program. Also, some of the discussion questions could be more thought provoking.
- I think some of the book choices could be better. I also think that we could have introduced more supplemental materials (like some other library programs have done) to give attendees the opportunity to learn more, if they want.
- 1. Books could be more reader friendly. 2. Reference articles could be more directly linked to book.
- As mentioned earlier, it would be useful if suggestions were made for various materials that could be used. Please see previous responses.
- Better supplemental materials. Materials that actually related to the topics.
- I think that the book chosen for the knowledge section was way too long for an average person to read. I think that if I was not getting paid to read it I would have found it to largely be a waste of time (even then it was HARD to get through.) Not only did nobody read it, I didn't get the feeling that anyone who attended my discussion had any plans on reading it, even after the engaging discussion. Choosing a book that is 300 pages or less would be much better, especially since these

programs are spaced only a month apart 300 pages is plenty for the average working adult. Why would a person who is not interested in science topics typically read an 800+ page novel? It seems contradictory to the point of this grant to expect people to do that. I heard the comment mentioned that a lot of people signed up just to get a free book. If people are just collecting these books and not reading them, then it's a huge waste of resources. By choosing more engaging or shorter books you would probably get more people to read the books. The discussion part could be improved greatly had anyone in my discussion group actually read it. I think the videos didn't add much in terms of discussion. I heard this from the other science partners, you really have to make a big stretch to connect the complimentary video to the book topic and it cuts into time where more meaningful or relevant topics could have been discussed. I think 1 hour is very short for the amount of time, particularly with the videos involved. I ended up going over my time by almost an hour, so time structure is something that could be planned a little better.

- Some of the connections were ambiguous to the material. Some of the books were hard to get through as well (at least 2 of them).
- Not sure the one video on food relevant enough. Tempted to add another book on similar topic as comparison.
- I felt really good about my own book and the video that went with the 'connection' theme, but I know that two of my fellow 'science partners' didn't feel like their videos had anything to do with their theme. Also, the choice of 'Land of the Painted Caves' was questionable, since it was the last in a series and very long.
- Choose shorter books. I attended all four sessions and read all the books. I struggled with the Land of the Painted Caves. I was one of a few in that group who finished the book. The book had been well researched for ethnobotanical information, but parts were repetitive. Perhaps one or two chapters might suffice. Several participants remarked that they had difficulty relating the videos to the topic at hand, and I think that a video on brown snakes in Guam would have been better suited to the nature discussion than a heroic video of a person recovering from losing limbs.
- The book might be better aimed at the interests of the community where presented. The video on the chef was not well done, I felt. Its production showed too much influence by media folk and insufficient involvement of a solid intellect.
- The video seemed to be off the mark. I'm still not quite sure where they were going with it and how it connected with the book. There were not as much in depth material to accompany the video. I think our rural community, full of small farms, also did not entirely connect with the community represented in the video. I hope that this survey is going out to the participants so that they can express this, along with their specific concerns.
- Take out the videos that accompanied the books or make them more connected with the theme.
- The videos were...hard to tie in with the books and the themes. Really, really hard.
- I was unable to attend the other segments but the supporting video for my segment was a rather weak connection. Something more directly related to survival would have generated a better discussion.
- It may be helpful to have a choice of personal interest videos, so that the facilitators could tailor the presentation to better fit the participants. Also it might be good to have more discussion questions for each book and have the facilitator choose five or so to use, again to allow for community interests.
- A companion video that was more relevant to the book. I get why the triple amputee story was included, but it didn't really help educate the attendees.
- I think the author videos are helpful in sparking discussions related to how the author developed the story and science behind the books. The associated videos were too much of a stretch from the book/discussion topics. I think if those videos could have a clearer, more tangible connection to the discussion topic, they would engage the attendees in more discussion.
- I had a hard time with some of the secondary videos... they didn't seem to go with the science topic. They were interesting though and did generate discussion.

- Some participants wanted a more literary experience- a true book club. I loved discussing ideas, analyzing videos and making connections. I found many participants' view of science is limited to the white coated /unreachable misconceptions. I walked in with a mindset that was enthusiastic for learners of any age as well as science & literacy which helped folks open up and engage with each other more. I didn't have an agenda and delighted in hearing what folks had to say. Some participants chaffed at the idea of the structure (which I liked). Often there was more to say than we could get to, confusion by the connections video yet folks would mull them over and would referred to them throughout the final sessions of the series. Some participants were unhappy with the 'fluffy' choice of Arctic Drift. Suggested The 'Long Walk' to discuss survival themes I was corralling a 'herd of cats' much of the time but I delighted in the inter-conversation among participants. They jokingly responded well to my efforts to rein them in on topic occasionally. We delighted in having ice cream bars for Arctic Drift! So apropos! For When the Killing's Done, a fellow participated because his son was helping to eradicate the invasive species on the Channel Islands. He had hoped for a more heavily science-related conversation. We got all types. Marketing of the series needs some assistance. The book club typical format (whatever that is) was expected. The structured format didn't match many participants' expectations of a book club. But I loved it. I don't have a suggestion on what to call the series or how to market it at present. I thought limited wine would help and wondered about the library sponsoring the event but hosting it elsewhere- town hall, local pub... I loved having it at the library but I am a book-a phile. Just a thought. Good weather made for fewer participants.
- Book selection may increase participation.
- The description of the program provided for publicity seemed confusing, especially because some of the book titles seemed so strange for the purpose of the program. Although I felt I was successful in identifying aspects of Jean Auel's book relevant and useful to a discussion of 'Knowledge' and ultimately the discussion was lively, provocative, and informative for participants and myself, the associations of this book and some aspects of its content made it a difficult choice, especially since we decided to make this the first program in the series. I would change this title, not only from the final Auel book (which is frankly terrible) but to another author entirely.
- For my program, I think that holding a couple of mini discussions-demonstrations the week(s) before the book discussion would have helped our discussion group appreciate the science that was described in Larson's narrative. I think if I had presented my Lodge demonstration as the group began to read they might have a better appreciation of how far Marconi brought the technology in less than 30 yrs. A second demonstration showing a simple and safe chemical extraction (like essential oils from herbs) near the end of the reading period would also help readers appreciate the capabilities of forensic science of that time. I think having early public demonstrations and discussions may also have increased the level of participation in our final book discussion.
- As with many new things we just need to keep at it to encourage more participation. The model seems good to me and it needs to be given the chance to grow.
- It seemed fine to me....perhaps an incentive of some sort to increase attendance?
- Greater visibility and enlarge scope beyond 'rural' libraries.
- More people should know about the program!
- The PTL program is great. I think it is essential to provide learning opportunities for the public regarding science and science-related issues. I can't really think of ways to improve it other than providing public participants with discussion questions ahead of time so that they can think about them as they read and prepare responses for them.
- By merging with groups like Master Gardener, adult learning groups, adult outdoor volunteer groups to catch a larger audience of interested people to possibly engage more discussion and even action at local level with local issues related to discussions.
- I would try and coordinate the PTL program with the schools and try and make it a multigenerational experience. It would also maybe be interesting to try and expand the scope of the program to include a section on science and faith. It would be difficult, but it would be

interesting to try and develop some hands on science demonstrations or labs that would help support the science concepts being presented in the books. The Erik Larson book about Marconi especially could use some electricity type demonstrations to help the students understand what Marconi had to go through to develop long range radio communication.

- Try and work with the local libraries on marketing. It would have been wonderful to have been able to draw more adults from the local community for this program.
- Perhaps it could have been better marketed. Our attendance was pretty low.
- Expand the marketing efforts to attract a wider audience.
- The primary way that we could have improved the events were by having more participants. I am not sure what would have brought more people in, but more participants would have made the discussions better. I particularly like the author videos - they added some insights that were worthwhile. The additional video segments sometimes seemed to be too far of a stretch. They sometimes were a bit of a discussion killer than a way to further the discussion that we were having.
- It is hard to adequately respond to this when you didn't have anyone show up...so I'll mark this as incomplete.
- More guidance in advertising and how to increase attendance.
- Need larger audience although local promotion was thorough. Perhaps offer during school year and partner with science teachers at local high schools.
- A broader range of literary options for each segment.
- The only novel that I did not think was best was the one for knowledge. Part of the problem was this was the last of a series of books, which most had not read. Second, the theories the author presents are not as well researched, especially now. I would think a better novel could be used.
- Better choices of books. The Jean Auel book was silly despite the obvious research the author pursued. Arctic Drift was too much like 'perils of Pauline' and masked the more important science implications. The Marconi book was ok but very repetitive on the experimental process. This is fine for actual scientists but was boring to the general public. It might be useful to have different scientist partners for each category; my strengths are in biology but physics isn't a strong point for me, for example.
- I have already mentioned which aspects were more challenging, but overall, the time commitment is the biggest if one has not yet read the books. Maybe having more than one option for each of the themes might be helpful. The environment book seemed to be the least favorite for my audience. The knowledge book was the hardest to read in time for the program, but was also the one ensuing the best discussion. The communication book Thunderstruck was the one that overall worked best and was most interesting both to me and to the audience.
- Offer a selection of books. Don't pick only 4. The program is too rigid.
- A suggestion would include, and not because I do not think your work is not good, but I think it would be a great idea to allow the librarians and scientists who are putting the grants together to decide on the books, and the kinds of questions they need to ask, AND make sure these items are in the application. I say this because there are so many great science-based books out there, and I also believe that the librarians and scientists can figure it out based on the population in their regions.
- The videos were extremely helpful. I had a hard time with the 'Arctic Drift' book. I liked the book, but I had difficulty with the ending of how people swim and survive in an arctic environment. The power and science themes were good. I only had issues with the ending.
- I think switching a different book for 'The Land of the Painted Caves' would be great. Nobody seemed to enjoy it as much as the other books.
- While these were good books, they were not necessarily of the greatest interest to our patrons. Next time we may opt to do what we learned other libraries have done and make some substitutions in the reading list.

- There are a great number of books out there; I think a selection on a theme might be more interesting.
- I participated in the audience for one of the sessions and as a science partner for another session. There were very interesting discussions that happened in both sessions. The discussions tended more toward the social implications of the science that was presented. I did not feel that there was much science instruction that happened, but there was an increase of awareness as a result of the talks.
- The program materials were excellent. Maybe additional science background on the topic would be beneficial.
- I think it would be good to spend more time on trying to should the public the methods and processes of science.
- Longer and more in depth programs.
- I felt the discussion questions were hurriedly written.
- After reflecting on this question for a few moments, I could not think of any improvements that are needed.
- Better coordination between the library and the speaker regarding background reading.
- Already mentioned in previous answer.
- The only improvement I can suggest is to expand the programming to 6 rather than 4 sessions.
- See my previous comments.
- It seemed fine. I really enjoyed being involved in the program.
- I felt our crowds were fair....enough advertising was done. I felt it was run very well.
- Shorten the survey.
- At this stage I would not alter the program- everything worked out great and everyone enjoyed the program.
- It is helpful for science professional to provide a hands-on experience for the community.
- Keep at it. Perhaps more application to 'life skills' verses strictly the science...
- It is a little confusing to be a 'science partner' instead of just a member of the book club, who happens to have professional training in science and engineering. I loved being part of the conversation, but I didn't feel that my perspective should be weighted more heavily than any other the other members. Maybe scientists need to join more book clubs?
- There were definitely some people at the event who were more interested in having a literature discussion as opposed to dealing with the science angle of the book, which made leading a discussion about the science harder. Maybe offer a book club of the books being used for the program could occur to satisfy those who would like to discuss the nuances of the literature prior to the program.
- Not sure.

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19. Is there anything else you'd like to share with us?

N=50

- I had a wonderful time. I hope this program continues in some form. Perhaps just a listing of additional popular books that could stimulate interest in scientific topics.
- I wonder if there is a way to increase the number of people who actually read the books that are part of the discussion series. Overall, I think this is an amazing program and would love to see it continue and expand. The library did a great job in promoting the program and provided outstanding meals to accompany each session.
- Yes, our attendance was very low at the book/video event nights. Only the friends and family that I brought in! I feel badly that not more community members attended these; however, the

community turn out at related events (i.e. guest speakers, video screenings, demos, etc.) we sponsored in support of the PTL book/video nights were very successful! So while the 'book club' discussions were poorly attended, the overall theme of the grant was still carried out very successfully to our patrons via our supporting events.

- I like the program and believe it is a good idea. I just hope other sections have better attendance!
- Just an awesome program. Hope you continue to expand it by incorporating different books. I would be proud to help lead future programs.
- I think providing links to videos of the program being carried out at other libraries would be helpful. I ended up finding a recording of a session through YouTube and found that very helpful in preparing my discussion.
- It would be useful to see feedback from other libraries which utilized this project.
- It may have been a little difficult to realize the four themes for the project. Each theme was identified and discussed individually, but due to the time span between the programs and the inconsistency of the participation, I'm not sure how many participants got to see all four parts come together or be related in any way.
- I would love to do this again! Great fun and always good to have discussions about science and technology.
- I really appreciate the purpose behind your programs, and your commitment to sharing science. I hope that your program continues to grow, and would be happy to help again in the future.
- Nice to know this type of programming is out there...especially in rural communities.
- I hope PTL continues to be funded. It's a wonderful opportunity for rural communities. Thank you for the opportunity to share my love of science with neighbors!
- We had a small group of participants (in a small community), but they were very interested and discussions were deep and varied. The program sparked some spin off activities in the community and we are holding more book sessions.
- I enjoyed the opportunity to participate in this new program. The idea of bringing science literacy to rural communities (or anywhere) is exciting and crucial. My community is quite cosmopolitan in feel, despite the low population density, but even though we have a lot of programs about sustainability, local food, and the like, the fact that many people don't understand some basic scientific concepts (about energy or natural selection, for example) makes it difficult to have rigorous and realistic conversations about critical issues.
- I think this is a great program, especially for small or rural communities.
- I loved 3 of the 4 books chosen. Good job on those!
- I loved this program! It was fun and I feel it was a great success in our setting!
- Overall, I really liked this program and I hope that it can continue in some format.
- This was a very enjoyable program!
- Great concept - it really works!
- Just my gratitude and encouragement to continue making the program available.
- Thank you!
- No, other than to say keep programs like PTL alive and coming.
- Great job by all who developed this program. It was a pleasure to be involved.
- I'm glad to have participated. Glad to hear you are interested in continuing to improve the program.
- I was pleased to be asked to do this. I felt people left the session feeling better about themselves.
- Thanks for doing this.
- Thank you for creating this program and for giving us the opportunity to offer it!
- Thank you for organizing this program.
- Our program leader and organizer put a lot of work into involving some of the ladies in the Library Friends group in providing snacks. They told their friends and encouraged them to come. The farmer who came to an earlier session entered into a lively discussion with an ecologically minded young lady who was against anything that was not purely organic. He discussed crop production

before herbicides and pesticides and asked how he was supposed to produce enough food if he returned to a time before chemicals. There was no 'winner' in the discussion, but many people entered in their thoughts, and the science teacher who led the session kept people on track. It was quite enjoyable.

- Thanks for making it happen!
- Just that [librarian] was amazing - with all my experiences doing formal and informal science education gigs, these sessions were among my favorite.
- I really enjoyed the event and loved working with the Librarians. At first I thought that the pairings of the film and literature too disparate, but once we engaged in discussion the topics supported each other.
- This is a good idea.
- I was very happy to be involved in this program. We had a great time at each of the meetings. The discussions were lively and varied! I thought it was a great program and I believe the audience liked it too. I also enjoyed the books!
- I really enjoyed the dialogues my husband and I had about the books together. We hadn't done anything like this since we were in college together. We were both scientists with a love of literature. Our personal discussions were an unexpected benefit from participating in the series. I wondered about coupling the series with something for families (adults and their children) could participate in - certain topics, science hands-on activity that accompanies book/ topics? Just adding a multi-generational aspect ;-) I really enjoyed reading the books and preparing for the discussions as well as attending all four sessions. I enjoyed the author videos greatly and loved puzzling over the connections videos with the participants. Thank YOU!!
- I really enjoyed this program and felt like I benefitted from it as much as the adult learners did. I am now leading an informal book club with some of the participants from the PTL program!
- I think this program has lots of promise and would like to be involved in the next set of books. We really enjoyed the author videos and the human interest videos.
- It was a really great experience and I would love to participate again. Thanks!
- I would love to do this again!!!
- I had a marvelous experience with the program! I would love to do this, or something similar, again. The stipend was very appreciated too!
- I enjoyed reading Larson's book and participating in the discussion. I am very interested in participating in events like this in the future.
- No.
- No :-)
- None.
- No.
- No.
- No.
- I imagine that the success of this program depends highly on the library partner and the science partner's engagement, abilities and science preparation. I feel like it was extremely successful for us, but I imagine it might not be in all situations since it depends so much on the expertise and personality of the science partner.
- Mr. Science Teacher ® - The Best Way to Get an A! 'I Want To Help You Excel!'
www.mrscienceteacher.com <http://www.youtube.com/watch?v=bnyschnt0yY>
http://www.youtube.com/watch?v=F_fYc3uvmUw
http://www.youtube.com/watch?v=7G_9hSU2D1k

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APPENDIX C
Pushing the Limits
Annotated Patron Event #1 & Event #4 Surveys

	Responded	Invited	Response Rate	N of Libraries Represented	% of Libraries Represented
Event #1	203	232	88%	19/68	28%
Event #2	141	168	84%		

Library Name	Event #1		Event #4	
	Number	Percentage	Number	Percentage
Ashton Public Library	5	2%	5	4%
Austin Public Library	15	7%	6	4%
Cottage Grove Public Library	11	5%	6	4%
Dixon Public Library	5	3%	2	1%
Hadley-Luzerne Public Library	11	5%	14	10%
Hartland Public Library	6	3%	3	2%
Highland Township Public Library	17	8%	9	6%
Hopkins District Library	16	8%	12	9%
Jackson Parish Library	10	5%	10	7%
James Kennedy Public Library	8	4%	6	4%
Pacolet Branch Library	6	3%	6	4%
Paris Public Library	5	2%	3	2%
P. & J. Chilton Memorial Marlin Public Library	13	6%	10	7%
The Ruth Enlow Library of Garrett County	25	12%	14	10%
Sherrard Public Library District	4	2%	2	1%
Tuxedo Park Library	11	5%	6	4%
Washington Branch Library	5	2%	3	2%
Weathersfield Proctor Library	10	5%	8	6%
Wells County Public Library	20	10%	16	11%
TOTAL	203	100%	141	100%

PTL Topic	Event #1		Event #4	
	Number	Percentage	Number	Percentage
Connection	29	14%	23	16%
Knowledge	16	8%	58	41%
Nature	42	21%	39	28%
Survival	116	57%	21	15%

Number of Events Attended	Percentage
One	21%
Two	18%
Three	20%
Four	41%

N=138

Note: Asked only on the Event #4 Survey

QUESTIONS ASKED ON BOTH SURVEYS

1. How did you learn about the *Pushing the Limits* series of events? If you heard about the events in several ways (listed below), please check off all the ways in which you heard about the series.

	Percentage of Responses		
	Event #1	Event #4	Overall
Library staff members or volunteers	27%	29%	28%
Previous library events or meetings	14%	16%	15%
Posters, displays, flyers, bookmarks, etc. in library	16%	15%	15%
Library website or online calendar	10%	12%	11%
Newsletters, mailings, or emails sent by the library	11%	9%	10%
Word of mouth from friends, family, neighbors, etc.	10%	10%	10%
Stories or advertisements in newspapers or magazines	6%	6%	6%
Social media: Facebook, Twitter, LinkedIn, Google+, etc.	4%	2%	3%
School and/or teachers	2%	1%	1%
Radio promotions or advertisements	–	–	–
Other	1%	–	1%
TOTAL NUMBER OF RESPONSES	437	300	737

Note: Numbers of responses exceed the total number of respondents because they could select more than one response option.

“Other” responses included: Flyer @ Jack Sprats, Book Club.

2. Why did you decide to attend today’s event? (Check all that apply.)

	Percentage of Responses		
	Event #1	Event #4	Overall
To learn something new	18%	16%	17%
To have a discussion with others	14%	16%	15%
To support the library	14%	17%	15%
Topic is of personal interest to me	11%	9%	10%
Seemed worthwhile to attend	12%	13%	12%
To challenge myself	9%	11%	10%
I enjoyed the book	11%	9%	10%
To support someone else’s experience or learning	5%	5%	5%
Topic is of professional interest to me	4%	3%	3%
Other	2%	1%	2%
TOTAL NUMBER OF RESPONSES	690	516	1,206

Note: Numbers of responses exceed the total number of respondents because they could select more than one response option.

“Other” responses included:

- Because of [science partner]. (3) / To see [science partner] and hear about the science.
- Like the author. (3) / Had read the book 30 years ago.
- Friend(s). (2)
- To be with my book club friends. / I hate to miss book club.
- Novel writer: Attended U. of. Iowa writers workshop. / Sci-fi — unpublished writer.
- To see format of discussion!
- GREEDY.
- [Librarian] strongly suggested I attend!
- Knew it would be extraordinary.
- Because my mom asked.
- Cabin fever. / Nothing else to do.

3. Please comment on how well today’s event met (or did not meet) your expectations.

Full list of responses is available upon request.

4. What did you learn at today’s event that was new to you?

	Number	Percentage
Science or technology	87	41%
Non-science or technology	124	59%
General positive (e.g., “a lot”)	12	[5%]
Cannot code	9	[4%]

N=225 comments

Note: Percentages of “science” and “non-science” responses are computed using only the codeable responses. Percentages of “general” and uncodeable responses are computed using the total number of responses.

[Click here to see a complete list of responses.](#)

5. Overall, how effective was today’s event at:

Overall 4.11; 65% very or extremely

	Mean (1-5)	Not at all (1)	Only a little (2)	Somewhat (3)	Very (4)	Extremely (5)
...holding your interest?	4.33	<1%	<1%	7%	51%	41%
...making you want to attend other public discussion events like this?	4.22	–	2%	12%	46%	39%
...helping you see the relevance of science to everyday life?	4.13	1%	3%	15%	44%	37%
...teaching you something?	4.09	<1%	3%	18%	43%	33%
...making you want to learn more about this topic?	3.88	1%	3%	30%	39%	27%

N=334-43

6. As a result of attending today’s event, how likely are you to do the following?

Overall 4.01; 64% likely or very likely

	Mean (1-5)	Very unlikely (1)	Unlikely (2)	As likely as not (3)	Likely (4)	Very likely (5)
Talk about the event with others.	4.17	2%	3%	10%	48%	37%
Look for information on something you learned about at the event.	4.01	1%	5%	15%	51%	28%
Use information from the event in your work/studies.	3.44	2%	18%	32%	30%	18%
Attend another <i>Pushing the Limits</i> event. ^a	4.53	1%	–	3%	37%	59%
Seek out other similar learning experiences.	4.16	1%	2%	13%	47%	37%

N=202-343

^aOnly asked on Event #1 survey.

7. How engaging was each of the following elements of today's event?

Overall 4.14; 70% very or extremely engaging

	Mean (1-5)	Not at all (1)	Only a little (2)	Somewhat (3)	Very (4)	Extremely (5)	I did not experience/ participate in this ^a
Book, TITLE	3.96	3%	5%	20%	38%	34%	(9%)
Video segment with AUTHOR	3.86	2%	5%	26%	39%	28%	(4%)
Video segment with HUMAN INTEREST STORY	3.86	3%	9%	21%	33%	34%	(5%)
The discussion among audience members	4.32	–	2%	11%	41%	47%	(1%)
The co-host, SCIENCE PARTNER NAME	4.63	–	1%	4%	26%	69%	(2%)

N=295-337

Note: Percentages in columns (1)-(5) are of those who experienced or participated in that component. Percentages in the final column are of all those who responded to the question.

	Mean for Connection (N=48-52)	Mean for Knowledge (N=62-70)	Mean for Nature (N=64-76)	Mean for Survival (N=113-132)
Book, TITLE	3.94	3.78	4.07	4.01
Video segment with AUTHOR	4.04	4.08	4.00	3.58
Video segment with HUMAN INTEREST STORY	4.43	4.02	4.08	3.44
The discussion among audience members	4.38	4.43	4.32	4.23
The co-host, SCIENCE PARTNER NAME	4.63	4.76	4.55	4.60

Any comments about why these elements were or were not engaging?

[Click here to see a complete list of responses.](#)

8. How could we improve events like today's?

	Percentage
No improvements needed	31%
Have more events	26%
Logistics, space, scheduling	14%
Facilitation, presentation	13%
Bring in more people, marketing	7%
Change book	7%
Change video	6%
Other	7%

N=85 comments

Note: Percentages exceed 100% because some responses included multiple categories.

[Click here to see a complete list of responses.](#)

9. How interested are you in each of the following topics?

Overall STEM 3.60; 39% very or extremely interested

	Mean (1-5)	Not at all (1)	Only a little (2)	Somewhat (3)	Very (4)	Extremely (5)
History, geography	4.00	1%	3%	22%	43%	31%
Social science	3.89	1%	5%	26%	38%	29%
Science	3.88	<1%	4%	29%	41%	26%
Art/art history	3.87	2%	7%	25%	34%	32%
Languages/language arts	3.73	3%	9%	25%	37%	26%
Technology	3.59	1%	9%	36%	38%	16%
Engineering	3.27	4%	16%	41%	30%	10%

N=310-328

10. Is there anything else you'd like to share with us?

Full list of responses is available upon request.

QUESTIONS ASKED ONLY ON EVENT #4 SURVEY

11. Which *Pushing the Limits* events have you attended as of today? (Check all that apply.)

	Percentage
Connection	46%
Knowledge	48%
Nature	48%
Survival	48%

N=206

Note: Percentages exceed 100% because respondents could select more than one response option.

12. If you have attended prior *Pushing the Limits* events before today, which of the following have you done as a result of attending that event or those events?

	Percentage
Talked about the event(s) with others.	89%
Sought out other similar learning experiences.	73%
Looked for information on something you learned about at the event(s).	70%
Used information from the event(s) in your work/studies.	43%

N=107-114

Note: Percentages exceed 100% because respondents could select more than one response option.

*You may have noticed that the *Pushing the Limits* series has to do with science, technology, and engineering. Based on all of the *Pushing the Limits* events you've attended (range: 1-4 events), please select the statements below that best characterize your opinions.*

13. Your interest in the science, technology, and engineering in *Pushing the Limits* event(s):

Overall, I was _____ than I expected to be.	Percentage
...more interested...	59%
...about as interested...	39%
...less interested...	2%

N=118

14. Your awareness of the science, technology, and engineering in your everyday life:

Overall, I have _____ I did before the PTL series	Percentage
...more awareness than...	70%
...about the same awareness as...	31%

N=118

15. Your awareness of the role of science, technology, and engineering in civic, cultural, and economic affairs:

Overall, I have _____ I did before the PTL series	Percentage
...more awareness than...	70%
...about the same awareness as...	30%

N=117

16. Your perspective on the importance of science, technology, and engineering in civic, cultural, and economic affairs:

Overall, I think they are _____ I did before the PTL series	Percentage
...more important than...	53%
...about as important as...	45%
...less important than...	2%

N=118

Full Text of Open-Ended Responses

4. What did you learn at today's event that was new to you?

Connection (N=42):

- Who made the first wireless.
- Waves.
- Wave lengths.
- Types of waves for communication-how radio, telegraphy, actually work.
- Titles of other Erik Larsen books; learned about Roxanne and Pueblo Indians.
- Thunderstruck- Crippen was exonerated for his crime due to current DNA evidence.
- The potter and the statue she made - 15 ft high without firing – amazing.
- That the body maybe wasn't his wife's.
- That scientists are doing DNA testing on remains and have discovered it was male remains.
- That I want to read the next book.
- Stories from attendees.
- She built a sculpture the way she built a house.
- Science w/the historical connection.
- Roxanne's story.
- Projectors have changed a lot.
- Place to get info on internet.
- Other peoples' viewpoints. New ways to recognize connections.
- One of the characters was local.
- Nothing new, but some clarification.
- Never heard of the nuclear (*illegible*) on Marconi's work. Not thought about how much this invention has affected our lives today.
- More lengths + variations.
- More info about radio waves historically and how far we've come today (videos on tech, short clips).
- More about waves (sound).
- More about Marconi.
- Marconi the man was much different than Marconi the scientist.
- Many things- film clip-about clay+ desert, science of airwaves etc.
- Many things.
- Making connections.
- I realized that Marconi's method was more artistic than scientific and it work. Art precedes science.
- I learned the importance of technology and trial and error.
- I learned about a family living in the desert. They mold clay into whatever they could imagine.
- I especially enjoyed the videos on connections, particularly the Eric Larson video about his research.
- How much our lives connect to one another. I also learned the impact of seen and unseen connections.
- How fast technology has progressed.
- History at wireless telegraphy.
- Have EM waves travel.
- Different ways people interact.
- Difference stuff about technic.
- Connection of paranormal and science interesting to me (oliver lodge).
- Belle's body was never discovered.

- Air waves and how it works.
- About an interesting book.

Knowledge (N=47):

- Where our DNA says we originated from.
- Where Crimonia is/was.
- Too much to list - mostly cromagnon/human link/differences...location.
- To take the time to analyze on a higher mental level as to what is the author really conveying to the reader.
- Thought about evolution.
- The video proved my feeling of what Jean Auel was trying to say in the book. Knowledge grows when shared.
- The relationship btwn neanderthal/cro-magnon.
- The entire story of book.
- The connection between group interaction and how it relates to gender roles.
- The challenges of writing a book... all the research + trying to get it published.
- The challenge of hiking trails, efforts of others to save waterfalls.
- That we all are part Neanderthal.
- Some problems keep returning.
- One member of the discussion brought interesting artifacts to share.
- Occipital bun.
- Not sure yet.
- Not so much learning new information, more thinking about things in a new way.
- New books to read.
- Neanderthals had bigger brains than Cro magnon.
- Maps of where people started and progressed.
- Mankind continues with past, present, future struggles.
- Lifestyle of prehistoric people.
- Life still has the same challenges even w/ all our knowledge.
- Learning of the ancient time of civilization, and of mankind.
- Learned about primitive art & cave paintings.
- Just to think outside the box.
- I learned new info about the war memorial.
- How technology has always existed.
- How other people think on the same subject.
- How little we know.
- Heirloom foods used by chef.
- GMO foods purpose for insects is happening to humans too. Cultures consciousness differences
- Genetic memory; Ms. Auel's thinking about writing the book.
- Expanding knowledge.
- Enjoyed the maps - learned a bit of geography.
- DNA connecting current humans, cave men, Indians, Neanderthals, etc.
- Differences of early man groups geography location of story.
- Difference between neanderthal + pro magnon. Knowledge then + now.
- Co-existence of many species of hominids.
- Ancient man & the distinction of the groups of how they lived, # of years they existed. Relating knowledge to today 2014.
- About the maysons & how much influence they had.
- About the connection between the Masons, symbology and our gov't and leaders. Also about Noetic Science, conspiracy theories, etc. Very interesting.
- About heritage agriculture.

- About early people having a matriar society.
- About different ways we access knowledge and how culture impacts what is permissible.
- A lot of the info about the medicinal plant uses was new.
- "I" learn a lot by the book :) and it was very well read.

Nature (N=46):

- Wide variety of opinions.
- Viewpoints from other participants.
- This is too large an issue for me to elaborate on in the time I have!
- This discussion added to even more questions. Enjoyed the added about the invasive bugs.
- There was info on invasive non-natives I didn't know - eg. history of the Emerald Ash Boror - a new disease on black walnut trees.
- The video about young man "pushing the limits."
- The impacts of changing nature don't always meet expectations.
- Status of current invasive species.
- Soooo much.
- Some Ash make it!
- Several examples of conflicts in nature.
- Result of extreme nature management by man.
- Prosthetic technology advances.
- Prosthetics and chimps remember Jane Goodall; indigenous species (cows are not); croks climb trees.
- Our environment has been over-manipulated and what is TRUE nature & balance?
- Other pests in our environment.
- More on the author - lots of science info.
- More info on invasive species.
- More about why invasive species take over.
- Many things about ecology.
- Many local invasive species and what's going on with them.
- Local activities and concerns.
- [Science partner]'s view of the book and life.
- It's still really hard to work as a group.
- Invasive species in Indiana and what is being done to contain.
- Invasive species in Indiana.
- Info on green spaces + different areas of Biology.
- I learned that I have more questions I want answered about "what is nature?"
- How to analyze a novel better, and personal ways to relate the topic to my life and setting.
- How the invasive species work.
- How nature impacts life.
- How close Asian carp are to entering the Great Lakes. Arrival of canker disease on Black Walnut is in our future.
- GMOs aren't evil.
- Geology discussion.
- Found a new author.
- Emerald Ash Borror - details - like where and how it entered the U.S.
- Differing opinions revealed ecology.
- Different nature/natural/nurture outlooks.
- Different invasive species in Indiana.
- Canker disease approaches Indiana - watch for it. Asian carp - approaching continental divide in Fort Wayne.
- About the rats.

- About some of the new prosthetics.
- About our (*illegible*).
- About Benjamin Meadow Road and other environmental issues.
- About balance in people learning how to use prostheses.
- 1000 cankers fungus starting to infest Black Walnut trees.

Survival (N=92):

- What I learned came from the book, not the discussion.
- We have not reached the breaking point in protecting our environment, but this program is bringing out the concerns individuals have.
- Thinking of different kinds of survival.
- There are people who care about what we are doing to America!
- The struggle of family farms today.
- The authors had (*illegible*).
- The author Sullivan's personal views on some wilderness topics.
- That wilderness areas still are looking good.
- That the author was a ship wreck guy.
- That some people feel more technology can save us from the ills created by too much technology.
- That plants really do make a difference if the environment but not quite the way I thought.
- That others were interested too!
- That farmers who have real concern about their water resources would waste their time at a demolition derby and not working on insuring their resources.
- That artificial photosynthesis is being pursued.
- Technology is and will continue to change our lives.
- Such a thing as combine derby.
- Some of the Oregon history and geology.
- Some new ideas about technology.
- Some history of OR!
- Some history and about science included in book.
- Some geography.
- Several things thank you.
- Several scientific facts.
- See answer above about photosynthesis.
- Scientific accomplishment.
- Ru-- periodic table web site available for more information.
- Real science connections to the book.
- Quite a lot.
- Process of photosynthesis, carbon sequestration.
- Photosynthesis, Calvin theory.
- Photosynthesis and how they are attempting this synthetically algae provides most of our oxygen.
- People's different views on Clive's writing.
- People would like to colonize more apparently.
- Our survival needs many smart people working to turn it around.
- Our ineffectual mess with making the voice of the people heard. The corruption of gov't.
- Nothing.
- Not much, just enjoyed the discussion.
- New points of view - new perspective.
- New author.
- More people in this area concerned about conservation than I thought.
- More about Sullivan's book - why he came to write it. That farmers soup up combines to use in demolition derbies. I did learn things from the books.

- More about how photosynthesis works.
- More about energy and plants.
- Mining in S. OR; Hiking along N. Umqua.
- Meet new people.
- Many citizens have concern of state and future of our survival.
- Loved the guns.
- Lots of plant info.
- Lots of details about photosynthesis.
- Lots about Clive Cussler and survival.
- Learned some about tracking.
- Learned about the author, Clive Cussler, who I had heard of but knew nothing about.
- Keeping extra items in your car, stay prepared!
- Interesting points of views.
- Interesting behind the scenes facts about NASA.
- Info about the author and his writing.
- Info on the author Clive Cussler.
- Import of photosynthesis and interesting aspects of same.
- I learned about the details of photosynthesis.
- I learn to like fiction more.
- I didn't know his books were like this. I want to read all of Clive Cussler's books to keep learning self-reliant skills.
- Hunley.
- How unprepared I am.
- How to prep my vehicle for problems – survival.
- How many people are truly concerned about the earth.
- How many of our concerns are shared.
- How little I knew.
- How crazy people got about their yard and settling troops.
- How CO2 works.
- Heard some new viewpoint.
- Good review on photosynthesis. Learned some terminology.
- Enjoyed hearing Glenn Watkins tell NASA stories.
- Engineering ideas.
- End of the book.
- Different aspects of process resources.
- Details about photosynthesis process.
- Defense guns, defend home.
- Defend my home.
- Current Status of Oregon wilderness!
- Combine Derby was something I've never heard of.
- Combine derbies. I knew lawn mower racing, but not combine demo derbies.
- Combine derbies.
- Changing survival themes.
- Carbon sequestration, tar sand, details of photosynthesis.
- Carbon sequestration.
- Basic defense.
- Background of some events (NASA), Franklin's expedition facts.
- Although I know a lot about survival in the scientific aspect, connecting that with basic and practical things, learning about technologies and sciences to help in a disaster was wonderful.
- All was new to me, I had a great time.

- About the books- they sound like books I'd like to read. It was interesting debating survival techniques.
- About fracking.
- A lot =).

[Click here to return to the annotated survey.](#)

**7. How engaging was each of the following elements of today's event?
Any comments about why these elements were or were not engaging?**

Connection (N=13):

- Wanted Larson video to be longer.
- This was a very interesting/enjoyable evening! I was very engaged the videos were quite interesting and helped to bring everything together.
- They were presented in such a friendly manner.
- Slow to start and difficulty putting Marconi, Lodge and Crippler together. I got about 1/2 book but did see the connection. When I realized that finishing the book became more of a goal.
- Poor [science partner] - we over-dominated her a bit- we're a wild + crazy group so that happens =).
- Might be wise to let everyone finish the thought!
- Liked very much seeing the author and his comments.
- [Science partner] helped us focus on the way we use science in our own lives.
- Just are of general interest to me.
- I just felt the book provided too much info on wireless telegraphy to hold my interest.
- I enjoyed the videos and discussion.
- Everyone participated. [Science partner] was a great leader.
- Book focused too much on Marconi.

Knowledge (N=13):

- Very informative and thoughtful discussions made this an extremely engaging program.
- The chef was not introduced enough - his tattoo was not an effective hook.
- The book wasn't something I would typically read but I enjoyed the experience very much.
- Sean Brock- a stretch.
- Nice, [science partner] brought props.
- For me, the book dwelled a bit much on details for my taste. I was intrigued with human element. [Science partner] did a terrific job. Really enjoyed discussion.
- Excellent program.
- Excellent presenters & attendees.
- Everything was engaging.
- Enjoyed [science partner] discussion.
- Engaging: different clay banks styles use made by students. Map of fault-lines + trenches. Ice age web-site, map.
- [Science partner] brought excellent posters and map.
- [Science partner] shared his life with us- great meeting.

Nature (N=11):

- Very insightful. Lot of input.
- Some discussions and topics were far-fetched and scattered.
- She is a good presenter.
- [Science partner] very open, excited at being a teacher.

- Great topic with a lot of controversy.
- Great presenter.
- Engaging talk.
- Characters seemed to be extremists about issues I could not relate to!
- Being "preached at" by one of the audience members.
- Again was hoping for more discussion. Seemed a bit one sided.
- A little more discussion of the novel. It takes a while to read, need more time to discuss. I suggest maybe 10 min. Small group discussions.

Survival (N=30):

- Why spend time & money to destroy your work.
- Weak connection w/the demo derby.
- Topic was made interesting, partly due to [science partner] and [librarian]'s overall excitement
- The discussion leader did an excellent job introducing topics and guiding the discussion.
- Thank you for having it.
- Same people talked too much.
- Part of that's my fault. I brought a notebook, but I carry that around everywhere.
- Overall wonderful experience and great discussions.
- NONE.
- [Science partner] knew a lot.
- [Science partner] was very knowledgeable.
- It is ironic that we watched a demolition derby where fuel etc. was used contributing to global warming for entertainment purposes only after reading Arctic Drift!
- High interest/good presentation.
- Good job here.
- Good.
- Engaging, but I would rather have had something Arctic related for the final clip.
- Discussing climate change, energy use and developing alternatives to coal, oil, gas, and technologies we use - all interesting.
- Did not understand what combines had to do with survival.
- [Science partner] was very good at keeping the discussion rolling and staying on topic.
- [Science partner] is a great leader.
- [Science partner] did a wonderful job - was very prepared.
- [Science partner] was an excellent moderator who began topics, and led the discussion in the proper direction.
- Combine derby? Wow! Science interests me in general, didn't have time to read the book.
- Bill Sullivan is one of the most likable people in the world and I suppose his presentation showed how he pushed his own personal limits but I would have liked to have more emphasis on humans pushing the environmental limits so needlessly throughout their history; more generally AND LOCALLY.
- Bill Sullivan has opened Oregon to so many people. His books make valuable gifts. He is a very good speaker and engaging!
- Because they were interesting to me.
- Audience was boring.
- Audience questions need to be repeated by presenter so we know what his answer pertains to better.
- Attending this event was an excellent opportunity.
- Arctic Drift was a poor choice as it's fantasy. Many other more appropriate alternatives.

[Click here to return to the annotated survey.](#)

8. How could we improve events like today's?

Connection (N=21):

- Was well done and fun.
- Rearrange furniture for better viewing.
- Provide ahead of time some questions that may be covered in book club discussions.
- Learned the main thing for survival is water.
- Just keep having them!
- It would be nice if we could sign up for branch specific emails or new letters to know what's happening at our local library.
- It was great for everything.
- I had a great time!
- I don't have the background or education to comment.
- Have instructor call on people with something to say.
- Have a little more room for the events.
- Everything was perfect.
- Dunno - wish we could reach more people, I think they would enjoy us.
- Continue.
- Can't think of anything specific.
- Better promotion... more people should be able to know about this.
- All was good - as usual.
- Nothing / Not sure / No improvement needed. (4)

Knowledge (N=30):

- Turn up the heat.
- This is more of a comment related to the venue...our little library needs better accommodations and space for these events.
- The book was too long.
- Some of the books are challenging to read. I enjoy the discussions & exchange of ideas.
- Shorter books.
- Shorter book not in a series.
- Offer more. More advertising.
- Not sure. I'm still processing!
- Not sure - I loved the format.
- No improvement necessary: simple continue the program.
- No improvement necessary.
- No.
- More time for discussion of the actual book - other than that, wonderful presenter, good food.
- Library with more space.
- It's great as it is now!
- I thought it was really well-done, although the Jean Auel book wasn't very well-received, + some of the videos didn't seem to fit.
- Extend it by an additional 30 minutes.
- Each of the 4 events improved, so continue w/ more events.
- DNK.
- Did not see all the videos.
- Control direction of discussion better.
- Continue with more events like today's.
- Better written book.
- Have more of events. (7)

Nature (N=22):

- Wonderful as is.
- Thought your speaker was great.
- The series was very well done. Always good discussions.
- The book topic is important.
- Same as above.
- Pull together similar books, written articles/scientific reports to offer for additional education.
- Nothing it was great.
- N/A.
- More pre-recorded aides and perhaps a brief outline to use for discussion.
- More discussion time...
- Keep doing what you are doing.
- It was just right. Not preaching. Very interesting and dialog was great. I expected the conflict of opinions to be hard but I was pleasantly surprised.
- It was great.
- It was excellent.
- I'm not informed enough to add anything here.
- Don't use the videos which don't add anything significant.
- Can't imagine how I would improve it.
- As it was, was fine!
- Great just as it is.
- Have more of these events. (3)

Survival (N=55):

- You could continue to encourage others to attend.
- Use microphone.
- To have more.
- Time management.
- This was my first event like this and I was truly impressed.
- Talk more about the book.
- Talk about both books and how they relate to the series' topic.
- Stay on topic more.
- Some way to draw in younger people.
- Snacks :).
- Pick books with more universal appeal.
- Nothing comes to mind except more events like this!
- Not sure. It was well done.
- No. It was an excellent group, with a great deal of discussion and people with varied knowledge and experiences.
- More videos.
- More time for discussion (dissenting views were just beginning to be brought up).
- More time and follow up events w/this presenter.
- More science program - less discussion.
- More [science partner], less book.
- Maybe listing on a white board all the book and video that were related to the topic.
- Maybe coffee? It went very well.
- Make this.
- Looking forward to next meeting.
- Limit discussions - time limit.
- Leave more time between topics during discussion.
- Just not my cup of tea w/that book.

- It was great.
- It was fine to me.
- I'd prefer a different author.
- I would be interested in starting earlier to allow for more discussion there.
- I think it went well and was nicely done.
- I enjoy discussion the LITERARY ELEMENTS just as much as the subject matter.
- I don't think it could be improved...excellent job.
- Have more often, great job!
- Have more events like this.
- Have more - maybe even a little longer than 1 hr.
- Hard to think of way to improve.
- Greater diversity in ages, race, ethnicity of audience. This did occur in earlier program.
- Great as is.
- Get more people.
- Excellent snacks!
- Excellent as is, just too bad not more people attended.
- Encourage responses from all - limit individuals dominating the conversation.
- Can't think of anything.
- Better coordinate the presentation to book themes.
- Better book and video choices. These were the weakest part.
- At the next meeting, follow the audience's environmental (*illegible*) and offer water in a pitcher with washable glasses.
- Sound otherwise just perfect.
- Not sure / Not really / No suggestions / No comment / N/A. (7)

[Click here to return to the annotated survey.](#)

APPENDIX D
Pushing the Limits
Annotated Site Visit Observation Protocol

Information about Observed Events

		N
Date	March	1
	April	2
	May	5
	June	2
Topics	Connection	1
	Knowledge	3
	Nature	3
	Survival	3
Event Number	First	–
	Second	2
	Third	3
	Fourth	5

N=10 library events

Information about Attendees at Observed Events

Number of Attendees (N)	Mean	7
	Range	3-13
Gender Distribution (Mean % Per Event)	Male	35%
	Female	65%
Age distribution (Mean % Per Event)	<20	–
	20-34	8%
	35-49	6%
	50-64	34%
	65+	52%

N=10 library events

Answer according to your observations for the majority of the event:

- **Number of attendees actively engaged (asking/answering questions, contributing comments)**
- **Number of attendees passively engaged (listening, nodding, looking at book/person talking)**
- **Number of attendees disengaged (staring into space, checking phone/watch)**

	Mean Percentage Per Event
Actively engaged	74%
Passively engaged	25%
Disengaged	1%

N=10 library events

Number of attendees who expressed confusion about any topic(s) of discussion through a question or comment.

Mean (N Per Event)	Mean (% Per Event)	Median (N Per Event)	Range (N Per Event)
1	13%	0	0-3

N=10 library events

If >0, were the facilitators able to help them understand?

Never	Sometimes	Often	Did not try	N/A
-	1	2	-	1

N=4 library events (at which an attendee expressed confusion at any point)

Did any one or more attendees try to dominate the discussion at any point?

	Number of Events
Yes	4
No	6

N=10 library events

If so, were the facilitators able to involve others in the discussion?

	Number of Events
Yes	2
No	1
Other	1

N=4 library events (at which an attendee tried to dominate discussion)

Other (n=1): facilitators did not need to intervene because those dominating the discussion were contributing valuable information to the conversation

Estimated % of facilitators' comments/questions that...

	Mean (0-4)	0% (0)	1-24% (1)	25-49% (2)	50-74% (3)	75-100% (4)
Were science-related	2.90	–	2	1	3	4
Referenced the book/videos	2.50	–	3	–	6	1

N=10 library events

Estimated % of attendees' comments/questions that...

	Mean (0-4)	0% (0)	1-24% (1)	25-49% (2)	50-74% (3)	75-100% (4)
Were science-related	2.60	–	2	3	2	3
Referenced the book/videos	2.10	1	3	1	4	1

N=10 library events

Rate the attendees' overall level of interest in and enjoyment of the...

	Mean (0-4)	None (0)	Low (1)	Moderate (2)	High (3)	Very high (4)
Book	1.80	–	4	4	2	–
Author video	2.75	–	1	1	5	1
Human interest video	3.00	–	–	2	4	2

N=8-10 library events

Note: Two libraries did not show the author and human interest videos at their events

Rate the attendees' overall level of interest in and enjoyment of discussion related to the...

	Mean (0-4)	None (0)	Low (1)	Moderate (2)	High (3)	Very high (4)
Book	2.60	–	2	2	4	2
Author video	2.00	1	2	2	2	1
Human interest video	2.88	–	–	2	5	1

N=8-10 library events

Note: Two libraries did not show the author and human interest videos at their events

Rate the attendees' level of interest in and enjoyment of the event as a whole:

Mean (0-4)	None (0)	Low (1)	Moderate (2)	High (3)	Very high (4)
3.20	–	–	1	6	3

N=10 library events

Which description most accurately characterizes the discussion at this event?

	N
Attendees had few discussions regardless of prompting/guidance from facilitators	–
Attendees had discussions with regular prompting/guidance from facilitators	6
Attendees had discussions with little to no prompting/guidance from facilitators	3
Other; describe:	2

N=10 library events

Note: N exceeds 10 because for one library, both “regular” and “little to no” prompting/guidance were applicable

Other (N=2):

- Science partner dominated the discussion.
- Librarian dominated the discussion.

Rate the quality of each facilitator’s efforts to prompt/guide discussion:

	Mean (1-5)	Poor (1)	Fair (2)	Good (3)	Very good (4)	Excellent (5)	N/A
Science partner	3.80	1	2	–	2	5	–
Librarian	3.00	2	–	1	2	1	4

N=10 library events

Estimated division of talking time (e.g., 50-25-25) between attendees and facilitators:

	Mean Percentage Per Event
Attendees	49%
Science Partner	37%
Librarian	14%

N=10 library events

Were any of the following additional activities/resources present?

	N
Refreshments	9
Visual aid(s)	4
Paper handout(s)	2
Demonstrations	–
Other (please specify)	5

N=10 library events

Note: responses exceed N because libraries could have more than one additional activity/resource

Other (n=5):

- Used a flip chart during the project discussion, but the type was so small, I couldn't read it.
- Group of books on the table. A group related to this book and a group related to the book for next month (*When the Killing's Done*).
- Puzzle-piece discussion format, survival skills quiz, copies of similar texts to those in the discussion.
- Article on a Civil War submarine.
- Raffle prizes (books).

NARRATIVE: In 1-2 paragraphs, describe what happened at this event, enough to give the reader a better sense of how it felt to be there. The narrative should stand on its own; don't worry if you repeat information you've already provided above. The narrative should include:

- **Brief synopsis of structure/flow of event (e.g., order of activities, time spent on each).**
- **Brief description of demonstrations or visual aids, if any.**
- **Comment on how librarians, science partners, and audience members participated in the discussion in terms of facilitating, discussing, questioning, commenting, etc.**
- **Brief description of physical space, including size and feel of room, seating, etc.**
- **Comment on your view of event's success at engaging the audience, especially in discussion of scientific topics, and making them want to pursue further information on these topics.**

Connection Events

Connection #1

The actual event started before I even realized it as I thought we were still waiting for the Science Partner. When I arrived, I introduced myself to the librarian who had let the first event. I was already seated when the librarian leading this event came in and started.

Everyone was very engaged. They didn't all enjoy the book. Some did research before reading, and most thought it would have been helpful to have received some research materials along with the book.

The handout described a 15 minute video clip, but I don't think it was much more than 5 minutes and the narrator was a woman, not the author. So I think that they showed something else.

Most of the discussion was about the book and videos. I didn't hear too much science talk except near the beginning. But they did get sort of off topic discussing a PBS special involving forensics, so that was science related. There was also one question after the Human interest video.

The final section of the evening was devoted to a discussion about a project that the group had selected at the first event. This is when the science partner got up to lead the discussion, though the librarian helped out. The project is to design a book drop that will keep donated books out of the weather. This discussion of the design of the book drop lasted just over 20 minutes. At the wrap-up when they were discussing how to contact the library if they had any new ideas, the librarian said "use your wireless". Everyone enjoyed the joke.

I was told at the beginning that there would be 13 attendees, and that two had called to cancel. But there were only 9, plus the Science Partner, who was seated in the circle along with the attendees. Four of the attendees were the librarian, husband, and parents, who live in a different town. One left early, just before the project discussion.

The space is the center of the library proper, the book stacks. There was enough room for the attendees, but two more would not have fit, unless they abandoned the circle of chairs. The videos were projected on the wall high above, and some had to move their chairs in order to see it.

Knowledge Events

Knowledge #2

The fourth Pushing The Limits discussion at the [library] covered a wide variety of topics pertaining to the book and the two supplemental videos. The six attendees and the librarian sat around the perimeter of a U-shaped table in a carpeted corner section of the library, while the science partner stood in front of the group for the duration of the event. Centered around the broad theme of "Knowledge," the 90-minute event included a 5-minute introduction, a 15-minute discussion regarding the book (Jean Auel's "The Land of Painted Caves"), a 20-minute viewing and discussion of the short author video, a 25-minute portion surrounding a short human interest video on heirloom foods chef Sean Brock, a 20-minute synthesis and a 5-minute conclusion (times are approximate). Although segmented by the video viewings, the discussion increased in depth and complexity over the course of the event as the science partner and attendees integrated the information gleaned from the videos, which were viewed on a projector screen. The conversation flowed from one topic to the next with regular prompting and guidance from the science partner, and both he and the attendees referenced previous material on numerous occasions. (The librarian essentially ceded control to the science partner, adding to the discussion just a few times aside from introducing the event and requesting feedback at the end.) Throughout the event, the science partner infused the discussion with relevant scientific principles and/or theories as attendees contributed personal experiences and anecdotes.

The event was successful in using a broad theme to link discussions about seemingly disparate topics: language, transportation, food, human behavior, technology and information. A late

conversation about the influence of Google on knowledge was particularly lively, a testament to the science partner's list of random statements such as "Get some sun, but not too much," "Use Ctrl+Alt+Del to restart your computer" and "People from other countries shouldn't be allowed to work here." Attendees seemed interested in pursuing deeper answers regarding several scientific topics, particularly what knowledge is learned versus what is instinctive.

Knowledge #3

The event took place in a community room downstairs in the [library]. There was a table of refreshments immediately upon entry, with fruit, veggies, nuts, coffee, and water. In front of a big screen, 2 rows of chairs were set up in a semi-circle. The facilitator sat in the front row on one side, with her back to a few participants directly behind her. This didn't affect the conversation; the people behind her were involved in the discussion. The librarian sat a bit outside of/behind the group, and contributed very little to the discussion. The room was loud at first, with the A/C on. It went off eventually.

The librarian welcomed the group and introduced the facilitator (and thanked her for driving all the way there from [a university]: 2 hours in traffic!). The facilitator was a resident [of the town] herself, and was happy to be involved with the library and the community in this way. The librarian had planned to introduce me, the observer, but forgot to. She introduced me at the end, instead.

The facilitator and librarian told me that about half of the group included regular participants in the monthly book series at the library. Their familiarity with one another was obvious and enhanced the discussion. There was only one man in the group. I was told there were more men in the prior month's Limits event.

The facilitator began by speaking about the book and posing a question about the book to the group. Her speaking style was a bit verbose, and her questions didn't always sound like a question at the end. She did a good job of waiting, respecting the silence, before speaking again. Eventually, participants got used to this, and did answer/respond. She rarely answered their questions directly or confirmed or corrected the information they shared. She mostly sat back and allowed the discussion around her.

They viewed the author video clip at 7:00 and the chef clip at 7:40. Discussion was a little slower before the first clip, and livelier after the clip and for the rest of the session.

For the first half of the time, discussion was around topics that were not necessarily directly related to the book. The facilitator asked questions about the book and what the author may have been thinking, and not about science. Topics of conversation had to do with anthropology (one of the participants majored in Anthropology in college) and related news events (e.g., when the frozen man was discovered; debate about whether he was being chased/how he was injured/why he was alone on the mountain).

There was more conversation about the book after the author clip, and for the remainder of the session. Some participants had read more than others and at some point they gave one another

permission to tell them how it ended, as they were unlikely to finish the book themselves. Several commented on the length, and repetition throughout the book, but most enjoyed it once they gave it a try.

Knowledge #4

The public library is a hub in the town and shares the same premises as the elementary, middle, and high schools. The library, built 10 years ago, is a lovely building, with wonderful design on the inside. There are rafters and beams, providing a very open and sunny feel to the main library room.

The *Pushing the Limits* session was held in the adjoining meeting room from 4 to 5:30 on a Thursday. Refreshments were available when people entered – fresh fruit, punch, cookies. Seven people – four men and three women -- attended the entire event, sitting in a small semi-circle. They had all attended previous sessions and also commented that 4 of the people who regularly attended were away on vacation. (I had arrived at the library a couple hours earlier and introduced myself. At that point, she let me know she expected fewer than usual attendees.) Toward the end of the event, two more men came in to the room and stood at the back and did not contribute to the discussion. (It was learned later that one was the town's newspaper writer/editor.)

The librarian introduced herself to the group, though she was already well-known to the attendees. She introduced the guest scientist, who was filling in for the scientist who had facilitated two of the earlier sessions. The guest is a social scientist, an anthropologist specializing in archaeology. She works as an Archaeology Project Director for an engineering company, working on cultural resource projects that include excavation and historical analysis. The librarian dominated the discussion throughout most of the event, and occasionally turned to the scientist for a comment or two. A few times, the scientist either corrected the librarian or gave an alternate hypothesis or explanation for a phenomenon.

Three of the seven attendees (all women) participated most often. Two men in the group sat the entire time without saying anything, though their body language indicated engagement. Only two women had read the entire book and one woman read most of it. One of the three had read the entire book series. There were comments about too much repetition in this book from previous ones in the series. As far as why others didn't read the book, some mentioned the book's length being daunting, while others said they had been out of town. Therefore, the librarian gave a lengthy synopsis. She turned to the scientist a few times for reassurance that she had the information correct about characteristics of the Cro-Magnons versus the Neanderthals. The scientist mentioned that despite the fact that the Neanderthals' brains were bigger and stronger, they died out. A possible reason was that the social structures were different between the two groups. Another was that climate change contributed, in that it was too cold for the Neanderthals to survive.

The librarian tried to show the video on the DVD but there were technical problems (the tracking was out of sync) that did not get resolved, so the group was unable to watch any of the *Pushing the Limits* clips. After spending several minutes for the first segment and then a second try for

the human interest segment, the librarian said there were gremlins at work, since the player had operated perfectly well earlier in the day. This was unfortunate since the group did not feel able to discuss the book, given the lack of reading by most of them.

One participant asked what was the ‘science’ in the book. The librarian responded that it was about knowledge. She talked about how learning about herbs and plants could have an effect on humans. A fairly lively discussion ensued for about 4 minutes about resistance to change, limited access to the outside world, and technology. The librarian mentioned her resistance to Kindles and her finally embracing the technology. She said this line of discussion was a good segue to the next book about Marconi. Most of the remaining discussion was about sustainable agriculture and heirloom food. Because the DVD did not work, the librarian gave a detailed explanation of the video clip. She then related the experience of her son, who is a successful chef and who views the kitchen as a lab and views the chef’s role as experimenter. Finally, the librarian asked the scientist to describe to the group what the most unusual things she had found in her archaeology field work. The scientist had brought some photos of various caves (e.g., in France and Africa) and talked about what had been found.

After the discussion group, several people came up to me to say that they usually had more people (e.g., 26 people the first time, 12 people the second) and that the discussions had been very lively. They said the scientist who came to the other events was fabulous and had suggested they discuss a fifth book after the “official” *Pushing the Limits* series was over, which they all enthusiastically agreed to do.

Nature Events

Nature #5

We met in the downstairs auditorium of the [library]. It was a large room, but made to seem smaller by seating the small audience in a semicircle around the presenter. [The presenter] began with an introduction of himself and of the premise of the book, using Power Point slides. After a brief introduction, he prompted discussion and allowed the remainder of the time to be guided by the audience discussion, with occasional direction to keep discussion on the topic of the book. The first half of the discussion was based loosely around the book. The next half was mostly discussion of topics related to the book, but without reference to the book itself. The last 15 minutes or so of discussion was directed toward science literacy in the community and how to improve it. This was prompted by members of the audience who were interested in the topic.

The event was interesting and engaging. As an observer, I found it difficult to remain a non-participant. [The presenter] did a fabulous job of facilitating discussion. He had prepared questions to guide the discussion, but it flowed very well with minimal prompting. The consensus from those who had read the book was that it was not a favorite. The topic of the book did seem to interest people, though, and made for lively discussion. The librarian participated in the discussion as well. The topic was clearly interesting to attendees. One member of the audience recommended another book for further reading. Several audience members took note of the recommendation. Those in attendance expressed interest in future events, and discussed how

to gain the interest of others. The Librarian commented that a similar event was going to be brought into the public schools next year.

Nature #6

The [library] seems an active “heart of the town” meeting place. I arrived early and toured the library. Our session was in a large sunny room on the lower level. The group that had met for the prior 3 sessions was typically ~20 folks or more. Each week the participants had been seniors, though sometimes they had a grandchild in tow. At the beginning of the session there were some jokes about this being the first sunny and warm day in a while and that those missing were exploring “nature” in their garden.

Evidently, the room was scheduled for a *Friends of the Library* dinner at 6 pm that evening, so tables were set and our group met in 2 long classroom rows with the facilitator up front and the movie screen behind her. Refreshments were offered – fruit juice, seltzer and cookies. The Librarian welcomed everyone and made the announcements and introductions for the first 5/10 minutes. She stayed until they showed the first video and then returned at the end. As noted above she was the Children’s Librarian and standing-in for the person who usually hosted. There were not any demonstrations or visual aids, other than the 2 videos.

In the next 45 minutes the participant discussion was broad and mostly related to the book. The science expert facilitated the discussion by posing questions and the attendees responded to each other’s comments as well as to the facilitator’s questions/additions. The participants seemed very comfortable in a discussion about a book that was introducing new information. The only confusion/clarifying discussion was about how much of the book was “real” since it was fiction. The facilitator had researched the historical accuracy of the book and gave back ground information for about 10 minutes. The video about the author was then shown and there was a brief conversation about him before returning to broader issues. The participants became engaged and interested in where one draws the line between one era of species and the arrival of another and issues of extinction. There was some discussion of our human species being young and saving the present ecosystem so we can survive. The science expert is a meteorologist and there was a discussion of weather and el Niño at about 5 pm. The second video was shown at 5:15 and again the discussion specific to the video was brief. The facilitator used the remainder of the time to more generally discuss the 4 sessions and the themes of science that had been presented. She also noted a session she’d be presenting in a few weeks at the library on the hurricane of ’38.

Finally, I would add there was a good amount of humor and joking during the session. The science expert is a professor at the nearby college and she was lively and dynamic. Since she was the expert for all 4 sessions, both she and to some degree the participants made associations with earlier sessions and topics that they had discussed.

Nature #7

After a few minutes of intro, the science partner started a discussion of the book (25 minutes) and then showed the author video (5 minutes), followed by further discussion for 15-20 minutes.

Next was the human interest video (18 minutes) and further discussion (15 minutes). The science partner and librarian did a wrap-up and some final thoughts, and then invited participants to help themselves to a light dinner (assorted sandwiches, chips, cookies) and to complete the GRG patron survey. During the wrap-up, some attendees expressed that they enjoyed the format of the series but would prefer different, more cheerful books.

This science partner led two of this library's discussions, #3 and #4 (observed). She works for the EPA, so was especially well-suited to the Nature topic; she was knowledgeable and enthusiastic about the issues. She was well prepared and did an excellent job of facilitation, drawing out audience members and never dominating the discussion. The science partner continually made connections among her own scientific knowledge, the book content and real-life local issues. The librarian sat with the audience, but spoke at a few key points to assist in drawing people out and to help keep things moving along.

Audience members were extremely engaged; every one of them spoke at least once, and several more often. The discussion was quite science oriented, and many participants drew connections to real-life local issues (e.g., invasive species including poison ivy, ticks, lampreys, cormorants, etc.; there was also some discussion of climate change). About half of the audience belongs to a pre-existing book group, so these attendees already knew each other and were used to discussing books together. The librarian thinks they may have modeled lively discussion/engagement for the non-book-group folks who attended. Most of the audience members seemed to be repeat attenders.

The library is a tiny historic building with only two small rooms; there is a lot of wood, and all the exterior walls were lined with big, tall windows. Space for audience members was tight, but the surroundings were pleasant. Overall, this was an exemplary event.

Survival Events

Survival #8

The librarian introduced himself and his science partner, set goals and takeaways for the evening, and provided an overview of the event (5 min). His science partner then gave a summary of the books to be discussed (5 min). The librarian then handed out a Survival Skills Test for attendees to complete independently, the science partner went over the answers, and the librarian facilitated discussion of alternate "correct" answers on the quiz (20min). The librarian introduced and showed an Author Interview video clip before handing out slips of paper to each attendee. Each had a brief comment about the video, its relation to science in general, and an extension question to spur discussion among the group (50min). The librarian introduced and played two clips that the group would compare and contrast, the Human Interest Clip, which showed survival on a day to day micro level, and one that described survival on a macro level, with the possibility of what would be required for humans to colonize and survive on Mars. This spawned a wonderful discussion (30min for videos and discussion). Finally, the librarian handed out the Goodman Research Group survey for participants to complete, and a list of "Unanswered Questions" for the group to take home and think over or share with others. He encouraged them

to return to the library to check out the books discussed tonight, along with other science and survival books (10min).

The event was held in a conference room to the side of the library's entrance, so that we were away from the rest of the library. There were refreshments set up, a projector for the video clips, and two long tables set up against one another in the center of the room, so that the attendees sat around one square table in the center of the room, facing the screen.

The room felt cozy for the scope of this event, and it seemed as though the attendees were comfortable in the space and confident engaging in discussions and disagreements with one another.

The librarian was very adept at spawning conversations based on the books and video clips, and he was able to summarize people's comments and ask follow-up questions, so that the conversation stayed focused on the topics at hand. There was one participant who could have monopolized the conversation, and two who were at odds with one another's viewpoints, but he skillfully guided the conversation and used humor to ensure that everyone's comments and viewpoints were heard and validated. He is a master facilitator! The science partner chimed in on the discussion beyond this evening. She was an asset to the group. It was clear to me that the environment was one where attendees felt comfortable exploring the science behind the books and videos, even if their viewpoints were not wholly accepted. It was a lively discussion where everyone shared their ideas and listened to the ideas of others. I truly enjoyed it and wish that I could have chimed in myself!

Survival #9

The event was held at the [library]. The initial discussion took place in the back at a table and then everyone moved toward the front of the library in front of the screen for the video and human interest story. The librarian started the discussion by asking specific questions about the book. 2 attendees seemed most interested. Then the science partner started talking about her knowledge of the topic. Things went in a variety of directions from there. Everyone seemed engaged in active listening with some specific questions asked. The librarian had little luck bringing the discussion back to the book and didn't say much from there. One of the attendees who seemed very engaged in the beginning when talking about the book stopped talking after a while as the discussion took off. There were 2 times when the librarian and then an attendee attempted to make the connection between 'real life' and the book. Discussion included such topics as global warming, technology, hybrid cars, erosion, litter, recycling, etc. Discussion took no real direction or lead. Science partner discussed her teaching and her knowledge of the mentioned topics without really encouraging questions or discussion. In addition, she was very opinionated.

Film and interest story discussion went much better with librarian asking discussion questions that prompted discussion with everyone. The group seemed to know each other well and was very familiar with the author of the book. It was hard to tell if they really enjoyed the event but there was mention at the end of everyone coming back the following week. All seemed agreeable to this.

Survival #10

The library building seemed new. The meeting room was large, with a circle of chairs in the middle and a lot of empty space around the circle. There was a ceiling-mounted LCD projector and a dropdown screen; the sound was excellent. There were only 3 attendees, one the science partner's husband; all 3 men had attended all 4 events, and everyone seemed to know each other fairly well. The science partner and librarian mentioned that attendance was usually better.

The science partner started with a summary of Clive Cussler's Arctic Drift and asked the attendees to give their reactions to the book. 1 attendee had not read the book so he did not give his reaction, but the other 2 did. The science partner then threw out some questions that generated a fair amount of discussion, primarily about the book rather than any scientific themes. This seemed due largely to the fact that one attendee was very voluble about how much he disliked the "fantastical" nature of the science in the book and its poor literary quality. Next was the author video, which generated little interest or discussion. Next was the human interest video with the Shrums, followed by quite a bit more discussion, much of it on the definition of technology and its relationship to science.

Of the 3 attendees, 2 had significant scientific background and talked quite a bit. The 3rd, a former English teacher, had not read the book and had to be drawn out by the science partner; he was a bit contentious and expressed that he'd hoped for less book discussion and more discussion of scientific themes. This attendee only really participated in the discussion that followed the human interest video about technology and its implications. The other men had quite a lot to say throughout; the facilitator's role was more to rein them in and redirect them than to get them talking to begin with. The facilitator did quite a lot of talking and expressed her own opinions frequently. Meanwhile, the librarian participated as an attendee and had little to say, even when prompted by the facilitator. At the end, the science partner made some closing remarks about the Pushing the Limits series as a whole, gave out an article on a civil war submarine and had the attendees fill out the GRG patron surveys.

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