

An Evaluation of the Franklin Park Zoo EcoTeens Program, 2008

June 15, 2008

By Sharon Plumb, Amy L. Powers, and PEER Associates, Inc.

Introduction

Franklin Park Zoo EcoTeens Program

The EcoTeens Program is a hands-on, science based enrichment program offered by the Franklin Park Zoo. The program is open to youth in Boston Public Schools grades 9 - 11, and is designed to teach students about natural history and conservation issues, and to provide them with opportunities to develop leadership skills. Youth participate in the out-of-school time program during weekly after-school sessions, as well as every other Saturday sessions. In the 2008 program, they could choose to participate in one session (January through March, or April through early June) or in both sessions. Participants received hands-on training in environmental issues, met zoo personnel, and worked together to develop public education programs. Participants who successfully completed the program are now eligible for summer employment at the zoo.

Evaluation Methods

In the fall of 2007, Franklin Park Zoo hired PEER Associates, Inc., an external evaluation firm, to conduct an evaluation of the EcoTeens program. Program and zoo staff, and funders, were identified as the primary stakeholders in the evaluation. The evaluation sought to understand several questions, including:

- In what ways does the EcoTeens program impact students' concern for the natural world?
- In what ways does the EcoTeens program impact students' knowledge of the natural world?
- In what ways does the EcoTeens program impact students' interest in and environmental stewardship in their own communities and the world at large?
- What are the EcoTeens program's best practices that should be considered in future programs of a similar nature?

In order to answer these questions, the external evaluators and the EcoTeens staff interviewed the youth participants as well as adults who knew the youth well and could speak to any change over time. In summary, the EcoTeens program evaluation consisted of the following data sources:

- Interviews with nine youth. (n=9)
- Interviews with six adults who knew the teens and could speak to how the program had impacted them. This pool included three parents, one

grandmother, one community outreach worker, and the Zoo New England Youth Programs Coordinator, who spoke on behalf of one of the students. (n=6).

It is important to note that for a few of the adult interviews, interviewees did not speak English as a first language, or did not have an intimate knowledge of the program's processes. While there was ample data to confidently report outcomes, participants were less forthcoming on recommendations for program improvement.

Detailed field notes were taken during interviews and analyzed for emergent themes. This report summarizes key findings from the data, which are found below. Conclusions and recommendations are found at the end of the report.

Summary of Key Evaluation Findings

The evaluation found that the EcoTeens program:

- ...increased youth interest in and knowledge of nature;
- ...boosted youth confidence and taught leadership skills;
- ...helped to raise youth awareness of environmental issues; and
- ...did not have a strong impact on youth taking environmental action in their own community.

The evaluation also shed light on successful program elements. In particular:

- Small groups, hands-on learning, and quality leaders were keys to success.

These findings are expanded upon more fully below. They are followed by a list of suggestions for improvement provided by youth and their associated adults. Following the findings are the conclusions and recommendations sections. The Appendix includes the complete evaluation plan, as well as youth and adult interview guides.

Evaluation Findings

EcoTeens increased student interest in and knowledge of nature

“[The best part of the program was] I got to go behind the scenes. In science class I knew more about gorillas. I am obsessed with them.” – EcoTeens Youth

“[These two teens] did not have an interest in natural history until they started with EcoTeens. Their interest and knowledge went from zero to 200%.” – EcoTeens Adult

“Getting into nature is a whole new world for city kids. [This teen] got so excited to go through Franklin Park and find frogs.” – EcoTeens Adult

Participants were universally enthusiastic that their experience in the EcoTeens program had increased their interest in and knowledge about nature in general, and in wildlife and associated habitats in particular. When asked about specific topics they had learned, the majority of the youth discussed that they learned about amphibians, issues surrounding their conservation, and the ecological value of vernal pools. One youth reported looking for vernal pools in her back yard, and another reported how exciting it was to walk through Franklin Park and look for amphibians. As one adult shared, getting city kids outdoors looking for wildlife is a “big deal” and can be very exciting.

Several youth, and the adults who knew them, shared that they were particularly excited to learn more about gorillas, giraffes, and exotic birds. Students also noted that the program helped them to better understand ecological concepts such as the web of life, extinction, and predator/prey relationships.

All of the adults interviewed reported that at some point throughout the winter or spring the youth had shared something that had interested them during the program, such as details about gorillas or giraffes. However, one parent was quick to note that her teen was “typical” and might not share with her many specifics about what was interesting to him, suggesting that the youth were perhaps *more* interested in the topics than they shared with the adults, or could articulate during the interviews.

Some youth took their interest further than the program itself. One adult reported that the youth participant she knew had done more research on gorillas, while another noted, “[My child] would come home and tell me about the animals they were seeing,” and sometimes [the youth] would go onto the internet to learn more about a particular species.

EcoTeens boosted youth confidence and taught leadership skills

"I learned how to interact with people more with the Migrating Bird Day."

- EcoTeens Youth

"I talk to people now that I wouldn't normally talk to. I can learn things from them and they can learn things from me."

- EcoTeens Youth

"EcoTeens has exposed [my son] to interacting with other kids. That is a big thing for him, and for others who are not involved with sports. Making presentations, working together, and solving problems as a group is a good thing. If they can continue to do more of that would be great."

- EcoTeens Adult

Nearly all of the youth and adults reported that one of the most valuable outcomes from the youth participation in the program was its impact on youth confidence. The combination of small group sizes, a non-threatening, non test-based learning environment, hands-on activities, and caring leaders who provided one-on-one instruction helped students to develop communication and leadership skills. Several youth, or their respective adults, noted that prior to the program they were shy or did not feel confident sharing ideas in groups. The program's format helped youth overcome these challenges. As one parent shared, "[My daughter] is more open and comfortable now," and "[The program] has given her the confidence to express herself." Another parent reported that her child was a "loner" at school, and it was exciting to see [the youth] interact with and enjoy peers so much. A third adult reported that a young man she knew had been "painfully shy" prior to his participation in zoo programs. He had a youth leadership role within The EcoTeens program, and both this adult and the youth himself reported that the program had given him the opportunity to learn how to talk in groups, make new friends, and speak out about things that he cared about. The youth and adults all agreed that this skill would benefit them in their careers, or has already benefited them in school and with their peers.

Adults and youth reported that working together to prepare and present activities for the public was particularly useful for developing their abilities to work in groups, and speak in public.

EcoTeens helped to raise youth awareness of environmental issues

“EcoTeens has deepened my interest in the conservation of frogs. I didn’t know that they were endangered before and getting wiped out, but now I do.” – EcoTeens Youth

“[My daughter] talked to me about the importance of preserving habitat. Since EcoTeens, she better understands natural resources and what we can do to help the environment.” – EcoTeens Adult

Youth shared that they have concerns about environmental issues, and reported that EcoTeens had played a role in deepening their awareness of certain environmental issues. They reported that they were particularly concerned with global warming, pollution, deforestation, and loss of wildlife species and habitat. About half reported that the program had increased their awareness of habitat loss, extinction, or other challenges faced by frogs and other species. Other respondents did not report that the program had a direct impact on their awareness of environmental issues. It was not clear from the interviews which of the other concerns were a direct result of their involvement with the EcoTeens program.

About a quarter of the adults concurred, and shared that the youth that they knew had developed a greater awareness of the loss of habitat, a greater understanding of pollution, or the importance of recycling. The remainder did not feel that they could confidently tell if the youth they knew had developed a greater awareness of environmental issues.

EcoTeens program did not have a strong impact on youth taking environmental action in their own community

“[Because of my time with Franklin Park Zoo] I don’t throw trash on the ground anymore.”

– EcoTeens Youth

“There is nothing going on in my part of the city, so I don’t need any skills to help in any way. This is the first program that has helped teach us about what is going on in our communities and how we can get involved.”

– EcoTeens Youth

While students reported they were more aware of global environmental issues, they had a more difficult time translating that awareness into on the ground action. Most adults and youth reported that there had been little or no real change in how much the participants took action on environmental issues in their own community.

A few youth shared that they do not know of things that are going on in their community that they could help out with, or that they do not think that there are issues in their community that would warrant their help.

However, there were some reported changes in personal behavior. Three youth did report that they had started to recycle more or encouraged family or community members to recycle. One youth noted that the program had made her more aware of

how important it was to buy green products, another shared that it is important not to handle frogs, and two other youth reported that because of what they learned in the program, they no longer littered. Two parents noted that their children had taken a recent interest in conserving electricity or recycling, and pondered whether this change was due to EcoTeens. Another adult reported that the participants she knew had taken part in a Walk for Hunger, and thought it was likely this was a result of the EcoTeens program.

The program model and schedule of programming and activities did not include lessons related to littering or use of electricity. While there may have been discussions about why these behaviors are important for improving or caring for the environment, it is not clear that there is a direct correlation between the program and the changes described by participants or adults.

Small groups, hands-on learning, and quality leaders were key to success

“There aren’t any programs like this in the city. The only other one is at Tufts and it is a LOT of money and far away. EcoTeens is unique and a good thing.”

- EcoTeens Adult

“I am very pleased with what the zoo does and how [my son] has reacted. He feels safe. It is a good place for him to learn about other things. He can tend to be self centered, and this brings him out of himself.”

- EcoTeens Adult

Youth and adults were pleased with the program, and several shared details about what made The EcoTeens program particularly appealing. It was difficult, however, for the youth to tease apart and articulate specific details. Similarly, because adults had less immediate contact with the program, and had varying levels of conversation with the youth, they knew less about the mechanics of the program and were challenged to articulate what in particular made them feel that they program was successful for the youth.

A few key components of the program did surface several times, however. At the top of the list for adults was the quality of the staff. They felt that the staff was particularly good with students, friendly and relaxed yet knowledgeable about the content. They also mentioned that because the program was held during out-of-school time, and was designed to be fun, it created a non-threatening learning environment. The size of the program was also noted as being helpful, as students got to know and trust one another, and therefore felt more comfortable pushing their own boundaries and speaking up in the group.

Participant suggestions for improvement

“We play lots of games. We should cut them games down [and do] more educational things. Do more things around the zoo.”

- EcoTeens Youth

“Maybe they could develop an internship program, and use this as a stepping stone. It would also be nice to develop more of a career development angle.”

- EcoTeens Adult

Participants and adults had several suggestions for program improvement. Most of these were suggested by no more than one or two people. These included:

- *Include more contact hours:* Offer the Saturday component weekly, and the afternoon component two times per week. Offer the program year round.
- *Expand the program:* Design the program to include a progression of activities and learning opportunities. For example, as students get older, allow students to select a particular area of study. Design an internship or mentoring component.
- *Include more career exploration activities:* Invite people in (or take students to see) people, professions, and programs that may be of interest.
- *Develop more hand-on activities:* Rather than playing games, do more actual activities with the animals and in the zoo itself.
- *Include more field trips:* Take the youth to see other natural areas, or go to other programs (such as the Food Project) to learn what they are doing.
- *Include more service-learning:* Offer opportunities for students to do actual work, such as habitat restoration.

Conclusions

The EcoTeens program is a unique program that provided opportunities for youth to safely explore existing or develop new interests in wildlife and nature. In 2008 the EcoTeens program played a powerful role in helping participants develop a particular interest in and concern for wildlife, including amphibians, gorillas, and giraffes. Due to its program design, it has also had a strong impact boosting students' self-esteem and communication skills, areas of personal growth that the youth themselves identified as being particularly useful in their immediate lives and into the future.

The program has had some success in influencing participants' understanding of global environmental issues. However, it has had less of an impact on their understanding of what skills they need and what they can do in their own communities to effect change. While some participants mentioned they had stopped littering, or had encouraged family members to recycle, most were not able to make the leap from exposure to and

understanding of global environmental issues (such as climate change and pollution) to personal environmental behavior or community activism.

It is possible that the program may have delayed effects on participants. For many of the participants, it may be an experience that takes several years to settle in and have a deeper impact on their career choices, environmental behavior, or their community activism. At some point in their future, participants may be able to point to the EcoTeens program and say “That’s where I got my start,” but at this point it may be too early for them or the adults they know to consciously be able to say that.

It is also quite likely that staff may need to tweak the program design to more successfully influence a participant’s environmental behavior and community activism. The existing program model did have some service-learning components. For example, participants worked together to prepare a day of activities for zoo visitors. However, if the program staff wants the participants to leave ready and able to work on an environmental issue in the community, the program needs to be designed to better prepare youth to do so. This type of change would likely demand a rather intentional and large scale re-design of the program. Alternatively, this issue could be addressed by another program offered by Franklin Park Zoo, or as an EcoTeens extension program designed for EcoTeens alumni. Either way, it is likely that the youth will need fairly significant assistance identifying a community issue, finding potential organizations to work with, and developing the skills necessary to do such work. The program would likely need to provide more training and ongoing support, or partner with an outside organization to provide the level of training, ongoing support, and resources needed to complete successful service-learning projects and effect long-term behavior change in participants.

Recommendations

Participants and adults had several suggestions for program improvement, and the evaluators’ analysis provides insight into additional opportunities for program improvement. As with any program, it is likely that financial and staff resources are limited and any recommendations will need to be carefully thought through and prioritized. The recommendations below are geared toward helping the EcoTeens program achieve its existing programmatic goals, but could be utilized to design auxiliary programs.

Design a service-learning component

One of the program’s primary goals is to inspire students to take action in their own community. Leveraging this kind of behavioral change is an enormous challenge, and one that often requires deep and ongoing intervention. In order to affect this type of change, the program would need to either shift current practices or add another module that specifically teaches students how to do this. In either case, potential strategies toward achieving this goal include:

- ***Develop in-house opportunities for youth engagement:*** Participants have developed a relationship with the The EcoTeens program and zoo staff. They know and trust the staff. Help them to more concretely link their day to day behaviors to broader scale global effects on wildlife and the environment. Offer training and support for them to take what they have learned on site and turn it into a community project. Perhaps after successful completion of the EcoTeens program, participants are offered an option to participate in a level two program, where staff works closely with them to do community outreach.
- ***Identify potential community partners that students could work with,*** such as the Alternatives for Community and the Environment (ACES) program or more local, issue oriented organizations (e.g. the Food Project, Urban Ecology Institute, etc.). Partner with these organizations to deliver a service-learning component of that intentionally engages youth with a discreet community project.
- ***Help students make a connection with these organizations.*** Youth are busy, and may not have the courage or skills to make a connection with these organizations on their own accord. Offer to play a role in helping the students find a partner that they can work with on a community issue, outside of the EcoTeens program.
- ***Offer some type of incentive to students to take the initiative to pursue a community project.*** For example, call the project an internship, and offer a stipend or school credit. Upon successful completion, offer to write them a letter of recommendation for a job. These types of incentives may spark students to initiate a project.
- ***Work with the city to identify possible projects:*** The City of Boston and various neighborhood associations likely have environmental projects that are in need of attention. Compile a list of possible projects that could benefit from youth involvement, and a list of people who could help youth to successfully lead or join in with such a project.

Develop opportunities and skills for identifying and observing local flora and fauna

Youth often work under the misconception that exciting wildlife and interesting habitat exists only in faraway reaches of the globe or at a zoo. Develop or utilize existing opportunities that can help youth to understand what flora and fauna exists locally, and how they can play a role in restoring habitat, tracking and identifying species, or educating others.

- ***Teach youth to keep a nature journal:*** They could track observations and then share what they see in local newspapers or through a zoo publication.
- ***Train youth to identify local flora and fauna:*** Incorporate active wildlife observation activities into the existing program. Sample activities might include putting up birdfeeders, visiting local nature preserves, and teaching youth to identify local plants.

- ***Use existing citizen science programs:*** There are numerous citizen science programs that are interested in collecting data. Incorporate some of these programs into the EcoTeens program, or offer it as an extension. For example, the Cornell School of Ornithology offers interesting bird monitoring programs in which youth could easily participate. Furthermore, there may be local organizations to partner with, such as a local watershed association that needs to do water sampling or stream assessments.

Enhance the career development opportunities the program provides

The existing program works with youth who are on the cusp of developing ideas for their future careers and education. Capitalize on the opportunity to expose them to different areas of interest.

- ***Invite in local experts:*** Work with the youth to identify what kind of people, professions, and programs they might like to learn more about. Introduce them to career paths, college programs, job training programs, and professionals.
- ***Take youth on field trips:*** Consider taking youth to different local areas, where they can see different natural areas and meet various conservation professionals. Consider visiting a local college or university where they could talk with current students about careers or paths of study that are of interest to the youth.

Extend the program's effects by connecting with parents.

During the interview process it was found that parents were not especially informed about their child's participation in or effects of the program. Several parents reported that their kids do not, at this stage in their lives, tend to share a lot of detail about their days, in particular details about the activities that they took part in during the EcoTeens program. The program could help to deepen the effects on youth over time by encouraging parents to reinforce experiences and concepts by taking an interest in their activities. Explicitly including parents in program communications and processes could help toward this end.

- Send parents periodic updates on the program's doings and/or examples of student work so that they have conversation starters with their children.
- Invite parents to participate in a culminating activity in which youth present what they have done throughout the program and/or celebrate their time with the zoo.
- Invite parents to the special zoo activities that students' currently host.
- Invite parents and youth to come together to brainstorm and make plans for ways that they can participate in activities that are geared towards environmental improvement in their own communities.

Appendix A: Youth Interview Guide

Franklin Park Zoo
ECOTeens Youth Interview Guide
Spring 2008

Introduction to interviews/focus group:

- We're working with PEER Associates to help improve the ECOTeens program.
- As participants, you have a great perspective on what we have done well, and what we can do better!
- Please be honest – you won't hurt our feelings and your ideas are much appreciated.
- Main purpose is to get your perspective about how the ECOTeens program is impacting your knowledge and concern for the environment, and engagement in their community, and what we can do better!
- This is NOT a performance assessment of you!
- Your participation is voluntary, and you can stop at any time without any negative consequences.
- Data from these interviews will be written up in a report by PEER Associates, Inc. They will give us a report by June.
- Request permission to take notes.
- Questions or concerns?

1. What is your name? How old are you and where do you live? Where do you go to school?
2. Why did you take part in ECOTeens? What were you hoping to learn? (Prompts: did you have an interest in ecology or conservation before ECOTeens? Or were you concerned about a particular environmental issue? Had you done any other programs that were similar to ECOTeens?)
3. Did the program meet your expectations? Can you share any examples of skills or knowledge that you gained that match with what you were hoping to gain? Or examples of anything disappointing?
4. What was the most interesting thing you have learned during ECOTeens? Has ECOTeens piqued or deepened your interest in anything in particular (e.g. habitat, conservation, environment, global or local environmental issues)? If yes, what topics or issues? In what ways have you pursued that interest? (Did you do a project on it for ECOTeens? Have you researched it on the internet, or in books, or by going to the zoo or park? Do you talk about it with your friends? Have you chosen to pursue the topic at school? Have they explored this interest in any other way?)
5. Did you gain any new skills at ECOTeens? In what ways have you applied those new skills? In what ways will those skills help you/not help you out the future? (Prompts: new skills such as conserving habitat, speaking in public, putting together a presentation, advocacy, giving presentations, etc.)
6. What worries you most about the environment? How do you see yourself working to make a positive change in that area? In what ways?
7. Have you experienced any changes in your awareness or interest of environmental issues close to home? What concerns you most in your own community? Have you taken an active role in your community about that issue? In what ways?
8. What do you need to know, or what additional skills do you need to have to be able to help make a change in your own community? Do you have suggestions about the kinds of activities that could be included to teach those skills? Are there other programs we could partner with to teach you those skills and support your role as a leader in the community?
9. Do you think that ECOTeens has impacted what you want to do with your future? What examples can you think of, if so? For instance, has it influenced whether or not you want to go to college, what majors you might like to pursue, or organizations you might like to work with?
10. Can you suggest any other changes to the programming? What specific recommendations would you make to the program managers (schedule, types of activities, duration, age of youth, etc.)?
11. Do you have any other thoughts you'd like to share with me?
Thank you so much for your time!

Appendix B: Adult Interview Guide

Franklin Park Zoo
ECOTeens Adult Interview Guide
Spring 2008

Introduction to interviews/focus group:

- I am an outside evaluator with PEER Associates, hired by the Franklin Park Zoo (FPZ) to help improve the ECOTeens program.
- Main purpose is to get your perspective about how the ECOTeens program is impacting participant's knowledge of and concern for the environment, and engagement in their community.
- This is NOT a performance assessment.
- Your responses are confidential in that names are never used. Quotes are used. Only evaluation staff will see raw data.
- Your participation is voluntary, and you can stop at any time without any negative consequences.
- Data from these interviews will be transcribed, analyzed, and written up in a report that we'll give to FPZ by June.
- Request permission to record, take notes, transcribe.
- Questions or concerns?

1. Introductions, including adult's relationship to the youth (teacher, parent, program leader, guidance counselor, volunteer). In what ways have you been involved with ECOTeens? How long have you known about or been involved with the program?
2. In what ways have you seen youth's interest in science or the natural world change, if at all? (*Prompt: To what extent have you heard them talking about what they learn in ECOTeens? In what ways have they taken an initiative to learn more about the topics that they are learning? Do you see them researching what they learn using the internet, or in books, or by going to the zoo or park? Do you hear them talking about it with their friends? Have they chosen to use any type of independent study or research time at school to explore what they learn at ECOTeens? Have they expressed their interest in any other way?*)
3. Are there particular topics (types of animals, habitats) that you have seen youth take a recent interest in? Are you aware of any connection between that interest and what they have been doing in ECOTeens?
4. We're interested in finding out if the program has an impact on youth's concern for the environment. Do you have any stories to share about how student(s) have responded to the environmental issues that they are learning about in ECOTeens? In what ways has the program changed/not changed the degree to which they are concerned about habitat loss, endangered species, or conservation? How have they expressed that concern? If they are not showing more concern, do you have any ideas about why not? (*Prompt: are they learning more about those issues? Have they looked into, joined or led groups that are also concerned about that topic?*)
5. Have you seen a change in youth's interest in or knowledge of their community? Have you seen a change in their interest in or knowledge of environmental issues close to home? What topics of concern have they latched on to? In what ways have they demonstrated that interest or knowledge?
6. We'd like to know how FPZ could improve its programming to better teach, train, and support youth to be leaders in their own community. In what ways could ECOTeens improve its programming so that students have a better grasp of ecological concepts? Are there certain leadership skills that ECOTeens should teach? Do you have suggestions about the kinds of activities that could be included to teach those skills? Are there other programs they could partner with to teach youth those skills and support their role as leaders in the community?
7. Are there any other changes to the programming that you suggest? What specific recommendations would you make to the program managers (schedule, types of activities, duration, age of youth, etc.)?
8. Do you have any other thoughts you'd like to share with me?

Thank you so much for your time!

Appendix C: Evaluation Plan

Franklin Park Zoo 2007-08

PEER Associates
9/26/2007

Category	Evaluation Questions and/or Descriptions	Evaluation Strategy/Activity	Personnel Accountable	When
Interviews	<p><i>* In what ways does the EcoTeen program impact students' concern for the natural world?</i></p> <p><i>* In what ways does the EcoTeen program impact students' knowledge of the natural world?</i></p> <p><i>* In what ways does the EcoTeen program impact students' interest in and environmental stewardship in their own communities and the world at large?</i></p> <p><i>* What are the EcoTeen's best practices that should be considered in future programs of a similar nature?</i></p>	a) Create youth and adult interview guides	SP Lead, PEER support, FPZ input	Sep-07
		b) SP: Conduct phone interviews with adults who have primary contact with youth (Program staff, school science educators, ESL, possibly parents) (+/-8 interviews via phone, detailed interview notes, no transcriptions) FPZ: Conduct post- interviews and/or focus groups with youth (+/-15 youth, detailed interview notes, no transcriptions)	FPZ set up interviews, SP conduct adult interviews, FPZ staff conduct youth interviews	Oct - 07 (youth) May - 08 (adult)
		c) Compile and analyze results	SP , PEER Support	Summer 2008
		d) Present analysis in the form of Utilization Preview, Executive Summary, and Expanded Appendix	SP, PEER support	Jun-08
Weekly Trackers, Survey Examples	<i>* Same as above</i>	e) Provide examples of surveys and weekly trackers for FPZ to use; not to be analyzed by PEER	SP and FPZ staff	Sep-07
Program Staff Support	<i>* What are realistic expectations and plans for generating useful evaluation results within existing resource constraints?</i>	f) Develop evaluation overview, contracting, staffing	AP, SP, PEER Support	Ongoing
	<i>* Meetings, email, conversations with staff to maximize value from evaluation activities.</i>	g) General, on-going support for utilization of evaluation results and program documentation	AP, SP	Ongoing
	<i>* Integrating plans with budgets, accounting.</i>	h) Administrative and financial management support	AAP	Ongoing