iSWOOP

interpreters and scientists
working on our parks

People think they've seen it—canyons, mountains, trees, birds, bats. But the science is changing and that's exciting.

—Helen Fields

Explaining iSWOOP

iSWOOP feeds on the energy generated when scientists, informal science educators and park rangers (also known as interpreters) combine efforts, work together in the field, and interpreters then bring visitors into dynamic conversations about scientists' visuals.

iSWOOP:

- Increases interpreters' science background knowledge
- Increases interpreters' skills in explaining hi-tech and complex images
- Engages visitors in park-based research

Why it matters

- National Parks hosts over 270 million visitors a year. Most parks also host researchers with active permits. Too often the two groups never hear from each other.
- iSWOOP increases engagement and knowledge of cutting edge science on our public lands.
- The ISE field can offer approaches that foster place-based STEM learning.

Moving forward

Conceptualizing an expansion to other parks

- Recruiting scientists and parks
- Taking on new topics
- Expanding research on visitor learning

Managing challenges for interpreters

- Using scientific data as the centerpiece of programs
- Explaining complex technologies
- Providing scaffolding without telling the best parts
- Crafting interactive programs without losing the thread of a compelling story

Why it matters

iSWOOP programs offer the public practice with cross-cutting concepts, for example:

Patterns prompt questions about relationships like the size of the bat colony relative to the precipitation in the Chihuahuan Desert.

Structure and function. The shape of a bat's wing affects its flight speed and maneuverability.

Building a partnership with the National Park Service

iSWOOP pilots a model with transformative potential for national parks.

NPS is moving to 2-way communication; interpreters need to update their skillset to effect these changes.

NPS acknowledges that the most effective operations are shifting to the following approaches that work.

Approach--Dated	Approach--Current&Future
• Programming is interpreter-driven. • Emphasis is on static presentation. • Goal is to teach children facts about a site. • Purpose is to provide factual information.	• Audience expertise is valued. • Content is co-created with audiences. • Learning is flexible, informal, and self-directed. • Purpose is engagement with multiple ways to access content.

(adapted from Appendix A Approaches and Trends in the National Park Service, in Interpretive Skills/Vision Paper, 2014).

Why it matters

Park rangers are keen to interpret science for visitors; enthusiastic about learning more science and how to communicate it; and if successful, evoke the public's interest in conserving national parks, which benefits wildlife, researchers, and preserves our heritage.

Evaluators' questions

The evaluation work by Char Associates examines the extent to which:

- Interpreters increase their knowledge and ability to interpret hi-tech images
- Interpreters include questioning and observation in programs
- The public exhibits interest as well as evidence of STEM learning
- Scientists collaborate with interpreters
- NPS leaders identify features of iSWOOP that are promising for other parks

Who is involved

Carlsbad Caverns

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