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Interpreting Restoration Science Conveys Values and Promotes Stewardship

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Keywords
restoration science, exhibits, communication, stewardship, non-personal media

In Southern California, where the Irvine Ranch Conservancy works, our open spaces face significant threats, fire and people are the two biggest, and they many times are linked together. The human population pressures on our wildlands have necessitated a desire to restore and improve the habitat that is remaining and is now protected in order to further its resiliency. That necessitates getting public support for the projects that are occurring, many of which are highly visible for that same population. Getting people to understand the what and the why of restoration and hopefully provoke to participate in the how part is where the development of interpretive exhibits and programs to explain these projects originates from. While we want them to understand the science behind it, we also want them to see the connections to themselves and their experiences on the land, whether it's through a car window, on a hike, or with a shovel and watering can in their hands as they volunteer.

A difficult obstacle to overcome in the process of developing interpretive programming to explain restoration projects can be getting science staff to understand the need for wildland restoration interpretation. Secondarily, motivating them to get actively involved in the interpretive development process can be challenging. Gathering information, conducting research and communicating well with science staff is the key to a successful process. The first step is to review all documented project proposals and reports. Next, begin a conversation with the project manager, conducting interviews in person and in writing with the focus on what it is they hope the public would learn from their project. The question that was found to be most useful was, “What's the one thing you hope the public understands from seeing your project progress?” The answer helps frame the rest of the process. Translate the scientific language to a layperson's level of understanding, working with the science staff to ensure that the translation does not lose accuracy. Get hands-on experience by participating in public stewardship events led by the project manager. This helps to see the project through the eyes of a public participant and also builds credibility with the science staff. Not only do they appreciate the extra hands, but it shows you have a genuine interest in helping the public understand what they are trying to accomplish and that you care about their work as a fellow staff person. Develop the agreed upon mechanism for interpretive communication, whether that's first person programming or non-personal media. Continue to keep the project manager informed of your progress and seek their input along the way. Be inclusive of their vision and opinions, but also ensure best practices for interpretive communication techniques. Explain to the science staff the why behind any decisions made for the design elements, helping them to understand the interpretive communication process. Science staff appreciate a thorough explanation of how interpretation works for visitors and backing up your reasons with legitimate resources that allows them to further their understanding will deepen the level of respect between interpretive and scientific departments.

Fostering a relationship between interpretive and science staff has benefits for the organization and the public. Taking the initiative to start a conversation with scientists who are working with the public is a must. Helping them to understand that support for their projects comes from the visitors and other volunteers and that encouraging more support requires communicating effectively with them through interpretive experiences, will enable staff on both sides to work together and achieve the objectives of interpretation and restoration. Visitors must first understand what is happening and why it is happening in order for them to want to play an active role in the process.

References
Conservation Educators: Taking our Practice to the Next Level

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Keywords
Conservation Psychology, sustainment interpretation, conservation, professional, behavior change, research, models, action

The field of Conservation Psychology is beginning its second decade of existence, yet there have been few explicit links between the interpretation profession and its role in supporting this emerging field. Conservation Psychology focuses on human relationships with the natural world and, further, is driven toward promoting conservation behaviors (Saunders 2003). This mission-based foundation mirrors many of our own institutional goals within the worlds of zoos, preserves, parks, museums, and other conservation education facilities. While we have been aiming to inspire nature enthusiasts and wildlife advocates for generations, we know relatively little about what our audiences walk away thinking and doing in their own lives. As practitioners interfacing with tens of millions of visitors each year, we are called to proactively address our roles and methods as we try to inspire sustainable practices and support environmental literacy in the public (Balmford and Cowling 2006; Monroe 2003).

In this session, participants will discover the field of Conservation Psychology, reflect upon our roles on this overarching scheme, assess our strengths as practitioners, identify future opportunities for improvement, and address next steps in taking our roles as environmental interpreters to the next level. Undoubtedly, the latter elements of this session will move group discussions toward research and evaluation both of the efficacy of behaviors we try to promote and in the effectiveness of our craft. As we consider the needs for our profession, there will also be opportunity to formulate ideas and plans for future activities, such as collaborative partnerships, research training, professional committees and more.

One of the strengths of Conservation Psychology is that it allows for an interdisciplinary approach to facilitating connections with the natural world and, ideally, leads to more conservation actions. Other fields that fall under this umbrella have more specific foci, but in doing so, may be more isolated from taking research to practice. For example, Conservation Biology is a research field from which many of us derive interpretive elements regarding species survival, habitat destruction, and effective interventions. However, when biologists come to the table within Conservation Psychology, they have the opportunity to interface with practitioners and additional stakeholders, who can disseminate findings to the public through a wide range of programs. In doing so, practitioners, researchers, and other community organizations can form a reciprocal bond where they support each other in achieving goals more efficiently and effectively.

Our roles as interpreters and interpretive managers support and enhance our site missions. Sustainability, and especially conservation, is a widespread concept and issue needing global participation. As Balmford and Cowling (2006) suggest, “developing sophisticated approaches to communicating conservation findings is also likely to become an important part of assessing and improving the success of conservation interventions.”

What have we learned about promoting sustainable practices in the past few decades? Several personal variables as well as supportive contexts continue to emerge as themes in the research, and these led researchers to develop models for constructing environmental education programs. A primary indicator of an individual’s willingness to take part in conservation behaviors is her or his level of caring for that resource, and it seems that caring is best promoted through significant life experiences and environment-based education (Monroe 2003). Caring has manifested itself in several models to include the Theory of Planned Behavior, Environmental Citizenship, and the Social Psychology Model of Conservation Behavior (Ajzen 1985; Hungerford and Volk 1990; Clayton and Brook 2005). These models demonstrate that the most effective environmental education addresses knowledge, attitudes, skills, contexts, and beliefs of both the individual and their social environments. Furthermore, literature emphasizes the importance of clearly targeting specific, achievable behavioral goals in programming (Monroe, 2003).

As interpreters, we have access to a wide range of non-traditional audiences. Through experience and intentional effort, we have honed our crafts to best satisfy our missions and visitors’ interests. Our strengths lie in our authentic emotion, charisma and confidence (Stern et al. 2013). Interpreters also must keep in mind that making a difference by enhancing experiences, impacting attitudes, and influencing behavior is only possible with excellent interpretation, which is thematic, organized, relevant, and enjoyable (Ham 2013). In person-to-person interpretation, the characteristics of the interpreter and her/his delivery style likely influences program outcomes (Stern and Powell 2013). Extrapolating this to nonpersonal interpretation, the branding or voice of the site likely influences how receptive visitors are to the information.

Interpretive sites’ non-traditional program flexibility allows us to forge unfamiliar roads that Conservation Psychologists
feel will be the most effective learning opportunities for the public (Balmford and Cowling 2006). Many of us have further endeavored to deepen our impact by evaluating our programs and even our visitor outcomes. Recent research confirms that interpreters with desired outcomes of increasing visitor “levels of concern or change in behavior are more likely to achieve more positive post-program behavioral intentions” (Stern and Powell 2013). Yet, interpretive sites have a combined need to understand our role and impact beyond the immediate visitor response to more sustained and long-term behavior changes more than ever. To that point, the Association of Zoos and Aquariums’ research into Informal Science Education (ISE) Framework (2010) has called for more deliberate consideration of the needs for further professionalizing the zoo interpreter field. While Conservation Psychology can guide the design of future programs, we can further support our missions and our profession by taking on a deliberate role in the future of Conservation Psychology.

The outcomes of this session will serve not as a conclusion to discussion, but as a springboard for future activities within conservation interpretation. Participants will gain more of an understanding for Conservation Psychology as a whole, our role and potential roles within the field, how we can use findings to improve our program outcomes, and where we can go next with the professionalization of our craft. The content of these discussions will be made available to conference participants and colleagues in order to keep the momentum going. Ideally, participants in this session will bring their knowledge to table with a desire to develop an ongoing dialogue and collaborative entity that is invested in reaching our total potential in furthering interpretation’s role in Conservation Psychology.

References


From Squeamish to Comfortable: Interpreting and Respecting the Misunderstood

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Keywords
interpretive programs, overcoming hatred and fear, personal connections, tools for interpretation, open mind, interesting behaviors of species, humor, academic facts, historical context, story telling, dancing and movement, singing, using your imagination

Let me help you down from that chair and put your fears away to discover a way to look at that snake in a different light that just may empower you enough to go out in the woods with confidence. The creatures that elicit the most fear in people, like spiders, snakes, roaches and other strange insects have a story to tell, a story a lot like our own. Often their ingrained fears get in the way when attempting to educate the public on the value of these animals in our environment. Florida Master Naturalist Instructor Amanda Thompson will share her unique approach when teaching about some of our most misunderstood animals, how you can help your audience make an intimate connection to tarantulas, toads, odd looking fish and smelly dung beetles, and even dazzle them by how similarly these animals deal with some of life’s issues.

In the lives of people romance, child care, putting food on the table, and keeping a sturdy and safe home are some of the most enjoyable yet stressful issues of our lives, but often times we forget that we are not the only living things that have these stresses. Through humor, movement and dance, singing, imagination and some creative information you can make even the most skeptical or fearful person become more comfortable and at ease with animals like snakes, spiders, cockroaches and 800 pound fish. During this presentation you will discover six misunderstood or relatively unknown species, and although each is native to the State of Florida you will be able to take these adaptive interpretive techniques and apply them to species found in your community. Having research and props can really accentuate any presentation, talk, or interpretive hike but sometimes the best presentations can be given with nothing more than a creative and imaginative storyline. Thompson often has to give talks about small, hard to find and very secretive creatures. In order to help create a genuine connection, she uses visitors’ imaginations to allow them to see through the animal’s eyes, move and use their bodies, and act out the different behaviors of these mysterious species. Add in some cool and obscure facts, accentuate some of the behaviors revered by humans, and you have the ingredients for turning visitors from terrified to appreciative of what they may have in common with a snake or a spider. Ms. Thompson has seen it happen over and over … people who came to a program and learned about animals they’d always feared, now doing their own independent studies and interpretation of that group of animals.

It’s a powerful experience to help someone overcome their fears and hatred of something. Powerful for you, and even more powerful and freeing for the student who can experience the joy of walking in the woods, the confidence of moving a spider from their home or even learning to live alongside them, and potentially even the excitement of holding a snake. It doesn’t matter the age of participants, old ideas can change and new ideas can grow with new information and just the right form of positive encouragement. Ms. Thompson will share her tried and true approach, giving you the tools to adapt it to your own audience and community. All participants will have an eye opening good time during this fun hands-on program.
Sex, Lies, and Rattlesnakes

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Keywords
Crotalis viridis, prairie rattlesnake, mark and recapture, radio telemetry, venomous creatures, sex

Overall Session Goals:
• Provide an overview of Colorado Front Range prairie rattlesnake identification, biology and ecology
• Provide an exciting overview of the sex lives of prairie rattlesnakes
• Review and affirm or dispel a number of rattlesnake-associated myths, urban legends and truths

After participating as a volunteer snake tracker and handler for an intensive mark and recapture and radio-telemetry study of black-tailed prairie dog associated prairie rattlesnakes, there were plenty of stories to tell and lots of scientific information to share. Sex, Lies and Rattlesnakes is an attempt to distill and transform three years of field research into an engaging, fun and relevant interpretive talk for almost all ages (it is officially rated PG-13, but younger children have attended at the parent’s discretion).

A quick overview of the research project, as well as a review of the taxonomy and identification traits specific to prairie rattlers, will set the stage for an adventure into the intriguing world of sex, lies and rattlesnakes.

Sex is interesting, but rattlesnake sex is very interesting. One goal of the study was to shed light on the elusive sex lives of prairie rattlers. This section of the presentation will provide an interactive overview of sexual dimorphism in rattlesnakes as well as how males locate, compete for, court and mate with receptive female snakes. We will also discuss delayed fertilization, the ecology of pregnant (gravid) snakes, birth, and the challenges of being a neonate.

The last section of this interpretive talk will focus on lies. The truth about rattlesnakes is far more interesting than the lies that sully their reputation. Using an interactive quiz format, we will review about a dozen common rattlesnake myths or lies that are commonly repeated by lay people and even some (gulp!) professional naturalists. The myths and lies will be dispelled using current research and published data.

References

Sex, lies and rattlesnakes, in short, uses basic interpretive techniques such as questioning, universal concepts, interactivity and humor to transform a scientific study into the kind of presentation that hopes to change attitudes about a creature most are loathe to encounter.
Interpretation is for the Birds—And the Flowers and the Trees! Integrating Interpretive Techniques Into University and High School Field Classes

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Keywords
interpretive techniques, multiple learning modalities, self-discovery, serendipity

Complementing Enos Mills’ thoughts on National Parks, Field Biology (B320) has integrated interpretive techniques into the course for more than 40 years in the University of Michigan-Dearborn’s 300-acre Environmental Study Area. Those who have participated in this course, even decades ago, recount their experiences and report how this class changed the way they look at the world, then and now.

Students participate in multi-sensory exploration of flora, fauna, and ecological principles, experience regional relevance and revelation through self-discovery using multiple learning modalities and become comfortable with serendipitous events. Using these techniques typically associated with interpretation, students process new information cognitively and affectively, employing a variety of memory triggers. The effectiveness of affective learning at the college level inspired a similar class for home school high school students who meet weekly over the course of a year, emphasizing phenological changes and a seasonal timeline.

We will demonstrate, through class participation on an outdoor exploration, how incorporating multiple learning styles and sensory techniques can enhance and reinforce learning in both formal and nonformal settings.

References

Connecting Local Story and Landscape in Quetico Provincial Park

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Keywords
community-based interpretation, Quetico, sense of place

"The canoeist does not journey through a trackless wilderness. The canoeist journeys through the past. Your canoe travels the same route canoes have traveled before. You see the same islands others have seen. You pass the same shoreline others have passed. You walk the same portages others have walked. The cycle of your journey is the cycle of other journeys," (Peruniak, 2000, p.4). Shirley Peruniak, the Quetico Park Interpreter from 1975 - 1994, was renowned for interviewing hundreds of people who worked in, lived in, and traveled through Quetico (Nelson, 2010). She allowed Quetico’s present and past to become tangible and accessible to the public, through interpreting stories of the local community. However, since her retirement, interviewing members of the Quetico community have been discontinued. In many ways this research hopes to serve as a continuation of her work.

The purpose of this phenomenological study was to interpret the stories of the greater Atikokan community and provide content in the development of Quetico Provincial Park’s remote entry station kiosks. Interpreters in the field may also use this as an example of community-based interpretation, regardless of the intended media.

Quetico Provincial Park is a wilderness class park that is due south of the township of Atikokan, Ontario, Canada, and borders on the Boundary Waters Canoe Area of Minnesota, USA. Quetico Provincial Park Superintendent staff have identified the need for a comprehensive remodeling of four remote entry station kiosks, located at Cache Bay, Prairie Portage, Lac La Croix and Beaver House (Lukacic and Blier, 2013). The local residents were called upon to provide insights into the content of the kiosks.

Sense of place is a critical dimension of successful interpretation (Carter, 1997; Curthoys & Cuthbertson, 2002; Stewart & Kirby, 1998; Uzzell, 1996). Sense of place establishes what is significant, valued and unique in the environment or heritage of an area, and provokes action, appreciation, and stewardship (Binks, 1989; Sobel, 2004).

Interpretation and communities mutually benefit each other through the enhancement of sense of place. The inclusion of community members as a resource for interpreters, in conjunction with other forms of research, results in a more meaningful interpretive product (Binks, 1989; Brochu, 2003; Curthoys, Cuthbertson, and Clark, 2007; Staiff & Bushell, 2002). Curthoys & Cuthbertson (2002) explored a landscape approach to interpretive planning and found that “Thus, while science adds a significant layer of meaning to the interpretive message, at best it can only provide limited insight into local distinctiveness. It is from local residents (including interpretive staff) that the subtleties, realities, and power of a place will be learned,” (p. 234). By working with local communities, interpreters are able to gain insights and depth they may have otherwise overlooked. Interpretation that includes the community benefits the visitor. It provides an authentic and fresh form of interpretation that is based in the character of local life, and which celebrates local distinctiveness (Binks, 1989; Curthoys, Cuthbertson, and Clark, 2012). Curthoys, Cuthbertson, and Clark, (2012) suggest that “local involvement in the identification and communication of locally significant landscape values is a hallmark of community interpretation,” (p. 175). Sense of place of the local people is often crucial in defining what is an appropriate and authentic interpretive message (Carter, 1997). Community-based interpretation also stimulates the interpreters creativity, resulting in a more creative product (Binks, 1989). The inclusion of stories counteracts an interpreters tendency to use one-dimensional resources, and adds lively, embodied local knowledge to a topic, as well as exposing new potential interpretive topics (Curthoys, 2006).

Community members were chosen to participate in the group interview, as well as for individual interviews. Group interviews add a breadth of knowledge about the phenomenon (Creswell, 2013). Curthoys, Cuthbertson and Clark (2012) found that when interviewing members of a community in a group, or what they refer to as a ‘community story circle’, the depth and diversity of stories may not have been achieved in other individual narrative methods. It was found that stories would trigger other stories, and details would be added through a collective memory. Finally, it was found that the participants engaged emotionally, such as with body language, tone, and volume. Individual interviews add depth, details, and complexity in people's accounts of experiences (Mason, 2002).

Purposeful sampling was used to select participants based on their informed understanding of the central phenomenon in the study. When selecting community members, it was also essential that they be thoroughly encultured in Quetico, and that they were currently having experiences in Quetico.

The interview questions themselves will attempt to draw upon knowledge from direct experiences in a narrative/story format. For example, questions will primarily ask participants to recall specific instances, rather than asking them what they ‘would do’ or what they have ‘generally done’. Wherever possible, the interview itself took place in an area contextually relevant to the community members’ sense of place. Mason (2002) explains that knowledge and evidence are contextual and interactive and thus the researcher should “…ensure that the interview itself is as contextual as possible in the sense that it draws upon or ‘conjures up’, as fully as possible, the social experiences or processes which
[the researcher] is most interested in exploring.” (p.64). For the individual interviews, the research location was open to the suggestion of the participant.

The resultant content revealed new potential themes, as well as rich, detailed, emotional stories. The subtleties and values will integrate well with other more traditional resources during the creation of the kiosks. Depth was also added to stories when there were shared experiences during group interviews. The richness of comparing experiences could also not have been achieved during individual interviews, and will add dimension to the kiosk interpretation. Community-based interpretation can provide a critical perspective and great insight to interpreters. Interviewing members of the community is encouraged as a primary resource, and as a way of harnessing and celebrating local distinctiveness.

References


Quetico Background Information. (2007). Ontario: Queen’s Printer.


Is That An Open-Ended Question?

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Keywords
questions, open-ended, close-ended, facilitation, discovery, exploration

Questions are one way that we, as interpreters and interpretive managers, communicate and interpret with our visitors-customers-clients-public, etc. For example, we ask the stand-by question, “Where are you from?” as an opener or to identify with visitors. Questions are part of what we do.

We know in interpretation that open-ended questions are more effective than close-ended questions. But, what does that mean? Why do we want to use open-ended questions, anyway? Right now, interpreters are being asked to facilitate their programs, discussions, and talks. To facilitate their interpretation. Open-ended questions are one method. They bring the participants into the program. People become involved and invested. Close-ended queries frequently shut down a conversation, a dialogue. You ask, “Did George Washington wear a wig?” And, right there the discussion plummets. Yes or no answers create doldrums in the interpretation. The participants cease thinking and are reminded of a bad history class. In a public meeting, the question comes, “Should we include natural history interpretation in our programming?” Or the bad biology class where the distracted teaching assistant asks, “Are spiders insects?” These are “yes” and “no” questions. Clearly close-ended. They do have a role and usefulness. They are useful when you need brevity and to move things along. A “yes/no” answer question can be valuable when you just need to make a point. Imaginably, you will get someone who will expand on one of those questions and they will take that close-ended question and run. That would be nice. More often, the exploration or program hits a dead spot – like a mobile phone does. It is up to you to come to the rescue. Describing one type of query can help in understanding the other. With open-ended questions, you might feel a little bit like a therapist. You are eliciting longer answers then you get with closed questions: “Why do you think the sculptor did this?” “Who travels with its belly on the ground?” Wait! The second question was something of a trick. It, too, is close-ended. The answer, like yes/no, is a single word. The talk becomes less like an exchange and more like a discourse. Perhaps, “Why do you think the Sinagua (Hisatsinom) moved on?” is more of an open-ended question. Or, “How does a dolphin’s blow hole work?” Open-ended questions usually aren’t answered with multiple choice answers. Participants can discover and explore by using expanded answers. They are no longer outside of the interpretation, watching, but are an integral part of what is going on.

Which is a more natural feeling to our craft: open-ended or close-ended? Developing open-ended questions isn’t always working with the obvious. There are tricks to creating questions that draw out thoughtful, expansive, participative, etc. answers and avoiding one word answers. Discover them.
How to Manipulate an Audience

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South Suburban Parks and Recreation - South Platte Park

Keywords
persuasion, influence, behavior, heuristics

Provoke. Reveal. Illuminate. Manipulate? The sales industry uses powerful psychological shortcuts to get consumers to exhibit specific behaviors – shortcuts that could be effective for helping alter visitor attitudes and behaviors. Are you above that kind of conniving to protect the resource you’ve been charged with? Pure interpretation, as taught by the National Park Service, teaches “The visitor is sovereign.” You as the interpreter facilitate logical and emotional connections, and expect the visitor to be ultimately responsible for then exhibiting proper behavior. What if you could sneak behind the logic and under their emotions towards a similar purpose, using biological shortcuts humans developed to succeed as social animals? Would you be willing to manipulate your visitor’s subconscious to deliver your message?

Our founding tenets, primary literature, and guiding principles suggest an environment where our role is to facilitate inquiry and not to be advocates with a ‘right answer’ or an expected outcome. And yet, when you look at your job duties or agency objectives, is there an expectation for you to sometimes act as a “compliance professional” to ensure the future of your resource? Where then do the “weapons of influence” described by Robert Cialdini fit into our world? Most successful sales efforts or persuasion techniques can be boiled down into these six weapons. For more detailed descriptions and examples, look for Cialdini’s book Influence: The Science of Persuasion. Our session will look at more detailed examples and interpretive application.

Reciprocity - People are more willing to comply with requests (for favors, services, information, concessions, etc.) from those who have provided favors first. Your may see those personalized address labels in a donation appeal as a waste, yet your social animal has been awakened. A disabled Vets organization saw success rates jump from 18% to 35% simply by enclosing the labels. Sounds simple, but the ‘debt’ you acquire is very powerful in affecting your actions. Application: Give a modest park memento, offer refreshments, take a family’s photo. Don’t ask a donor for $500 – instead, ask them to be the $50,000 sponsor, then make a concession and retreat to just $500.

Commitment/Consistency - People don’t like to back out of deals. They are more willing to take an action if they see it as consistent with something they said they would do – especially if they committed actively and publicly. Cialdini cites a restaurant owner struggling with no-shows, who changed from “Please call us if you change your plans,” to “Will you call us if you change your plans?” Instantly the no-show/no-call rate dropped from 30% to 10%. Application: It might be a CIG cliche for a measurable objective but asking your audience to raise their hands at the end of the program counts as an active, public commitment that can have powerful results. Jr. Ranger pledges, action surveys, and verbal commitments are all valid applications of this idea.

Authority - People are more willing to follow the directions of someone they view has authority or expertise. The simplest example: 3 times as many pedestrians will follow a man in a business suit into traffic crossing the street than that same man dressed casually. Application: Have a uniform, quote authorities, cite your sources, know your material, share your credentials.

Social Proof/Validation - People are more willing to take a suggested action if they see evidence that many others (especially those similar to themselves) are taking it. You’ll never see an empty tip jar even at the start of a shift, and laugh tracks are still used in sitcoms! How many solicitors mention what your neighbors signed up for? Application: Seed donation boxes (and use big bills!), post sponsor and volunteer profiles, clean up graffiti and social trails immediately, demonstrate the behavior you want to see!

Scarcity - People find objects, opportunities, and information more attractive the more that they are scarce, rare, or dwindling. Who bought more than one box of Twinkies before Hostess announced they were killing the product? Consumers preferred New Coke, but the product failed entirely only after they announced they were killing the product? Consumers preferred New Coke, but the product failed entirely only after they announced the original formula was going away! Application: Share how few like your artifact still exist, how rare it is to spot that animal, how few acres or nesting pairs remain. Only ever have “a few spots remaining” in a program, not “plenty of space available”.

Liking/Friendship - People prefer to say yes to those they know and like, or perceive are like them. Have you ever met a car salesman who didn’t live, grow up, have a friend, or visit whatever town you said you’re from? Need more evidence? Ever heard of Tupperware, PartyLite, ManCave, Scentsy, etc. ad nauseam! Application: Mingle with your audience to learn commonalities and refer back to them, smile and be friendly, be open and accessible.

The great thing about these techniques is they gain strength when used in tandem. Imagine the impact if you show up in uniform with good fact documentation (wield your authority), are friendly and approachable (to trigger liking), offer a snack and token journal (push the reciprocity button), then demonstrate a behavior (set social precedence) to reduce a legitimate threat to your resource (reveal scarcity), and end with a survey asking which suggested action if they see evidence that many others (especially those similar to themselves) are taking it. You’ll never see an empty tip jar even at the start of a shift, and laugh tracks are still used in sitcoms! How many solicitors mention what your neighbors signed up for? Application: Seed donation boxes (and use big bills!), post sponsor and volunteer profiles, clean up graffiti and social trails immediately, demonstrate the behavior you want to see!

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The great thing about these techniques is they gain strength when used in tandem. Imagine the impact if you show up in uniform with good fact documentation (wield your authority), are friendly and approachable (to trigger liking), offer a snack and token journal (push the reciprocity button), then demonstrate a behavior (set social precedence) to reduce a legitimate threat to your resource (reveal scarcity), and end with a survey asking which conservation behaviors they will start using (secure commitment). Say, wait a minute – did you say you are already doing all this?

Conservation behaviors they will start using (secure commitment).
find more and powerful ways to wield these 'weapons.' These techniques are no more 'manipulative' than consciously relating to our audience, seeking to provoke and reveal meanings, addressing a whole story to a whole person, and adapting to the needs of the audience – the basic principles of our field. The fact that they come from the sales world may make them seem less palatable, but if they are effective, why not add them to your tool box?

References


Becoming a Local in Two Weeks: Creating Engaged Seasonal Staff

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Education Outreach Coordinator
Roaring Fork Conservancy

Keywords
seasonal staff, interpreter, place-based, community, story, training

Abstract
New seasonal interpreters are expected to be knowledgeable guides and hosts after only a couple weeks of training and living in their new park or interpretive site. Explore ways to engage in the community and begin to learn your place in only a matter of weeks and be well on the way to becoming a local. Sarah Johnson, a once seasonal interpretive ranger who learned multiple places summer after summer, will share many practical ideas to help create engaged seasonal staff invested in their place. Sarah is currently facilitating place-based watershed education at Roaring Fork Conservancy as the Education and Outreach Coordinator in Basalt, Colorado.

Most large interpretive sites employ transplant seasonal staff from other parts of the country and the world. Many of these staff stick around for only one season, maybe two. There are the few who end up grounding themselves in these places and stay for decades. Yet, visitors to these sites expect their guides/interpreters to be knowledgeable of the place beyond the walls or park boundaries and have a strong awareness of the community they are visiting. I will share a few techniques on how to quickly learn and understand a new place and become a “seasoned local”.

Becoming a local in only two weeks is a lofty goal; sometimes motivated, enthusiastic, engaged individuals invested in their new home do this naturally without really naming it. These are the type of people we want to employ, invite to our teams, and teach and empower to interpret our natural and cultural heritage.

This premise of needing to be an engaged member of one’s community goes much further than one’s job or career. We know that when we build strong communities with connected, interested, and engaged citizens, our communities will be loved, cared for, and more likely protected. Interpreters share places with people. They share natural history with visitors. They share stories of our heritage with audiences. The quality of their interpretation is directly related to their personal connection with the place they are interpreting.

Newcomers to a place have to begin to map the place through their own experiences, observations, and listening. Each person’s understanding of the place will vary slightly, or potentially dramatically, and their connections made will be unique and authentic creating a genuine personal connection. This genuine connection will foster passion and care for the place and will help interpreters share their place with visitors.

Traditional methods of learning places include learning natural history, cultural history, one’s watershed address, life zones or ecosystems, and special species of note. I want to offer a few ideas to help newcomers (and seasoned employees) begin to map their place and truly become a local. Some of these techniques include: obtaining maps of the area, securing a library card, reading local bulletin boards, riding a bike and/or walking around the community, attending community events, reading the local paper, listening to local community radio, learning what unique foods local gardeners are growing and people are cooking, and learning the meaning behind place names, just to name a few. Using the “Place as Text” walkabout concept in staff trainings, professional development, and staff enrichment sessions may also help new staff learn their place and senior staff see their place with new eyes.

As it has been said, every place has its stories, and once one is in a place, he or she becomes part of its story and it becomes part of his or hers. Learning the stories and maps of a place helps to create connections and understanding of how the place works. When having to learn places quickly or become a local in two weeks in order to interpret it for visitors, the stronger the connections of the interpreter, the more meaningful and valuable experience for the visitor.

References
From Idea to Exhibit: “A Salmon Forest”

Amy Gulick
Media Creator
Amy Gulick: Images and Stories

Nikki Hinds
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Keywords
ecology, salmon, trees, rain forest, Alaska, exhibit development, environmental education, science, interpretation, collaboration, technology

In Alaska’s Tongass National Forest, a remarkable ecological connection exists between salmon and trees. In this rare coastal temperate rain forest ecosystem, scientists have discovered high concentrations of a nitrogen variant in trees near salmon streams. The nitrogen is of ocean origin -- brought by salmon, delivered by bears, and absorbed through the roots of trees. Translation: there are salmon IN the trees! How to distill this complex ecological concept for visitors to grasp quickly, experience an “aha!” moment, and leave wanting to know more?

At the Mendenhall Glacier Visitor Center in Alaska’s Tongass National Forest, an opportunity to create a new exhibit presented several challenges.

Challenge #1: How to create a professional quality exhibit in a federal facility facing declining budgets? In an era of shrinking budgets for federal public lands visitor centers, creative thinking is a valuable asset. By thinking differently and forming partnerships, the visitor center was able to create a $50,000 exhibit that receives hundreds of thousands of visitors a year.

Challenge #2: How to present a complex scientific concept to a general audience? There are those in the scientific community that resist the idea of simplifying complex topics and processes, and equate it with the “dumbing down” of science. Given the limitations of visitor centers in terms of the time and space that people have to experience exhibits, simplification becomes a necessity. This does not equate to a “dumbing down” of a topic, but rather distilling it to its very essence. The process of simplifying can actually be quite complex, and yet when done right the result is simple to execute. The use of outstanding visuals combined with an unexpected story reduces the need for the heavy use of written factual explanations that often are not effective for engaging people and helping them retain concepts.

Challenge #3: How to create an effective exhibit than can be experienced quickly? Moving people effectively through a space is paramount to a positive visitor experience. The Mendenhall Glacier Visitor Center receives more than 450,000 visitors every year in a space originally designed to accommodate half that volume. In addition to the inside visitor center, there are many outside activities competing for visitors’ time – a glacier, nature trails, and seasonal bear and salmon viewing. “A Salmon Forest” exhibit was designed to be experienced in two minutes or less, with careful consideration given to entering the exhibit from multiple access points. Utilizing technology, powerful visual storytelling, and engaging graphics, the exhibit accomplishes its goal of giving people a memorable “aha!” experience.

Challenge #4: How to make the exhibit site-specific? The scientific phenomenon of salmon in the trees is prevalent throughout the 17 million-acre Tongass National Forest in nearly 5,000 salmon spawning streams. Visitors learn about this remarkable connection, and then have an opportunity to see what they just learned, making the newfound knowledge relevant to their present location at the visitor center. Utilizing a “Critter Cam,” which records video of a salmon spawning stream just outside the visitor center, people can experience the connection by viewing a monitor in the exhibit or walking outside and seeing the seasonal salmon and bear activity up close and personal.

Simple is not! The process of distilling a complex concept into an engaging exhibit that helps people discover and experience something new, and leaves them wanting to know more requires careful planning and collaboration.

References

The Value of Interpretation at Zoos and Aquariums

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Kevin Wright, CIG, CIT, CIHT
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Keywords
zoos, aquariums, purposeful interpretation, mission-based, overcoming controversy, success stories.

Conservation organizations face controversy, whether a national park restricting access to certain land areas, or zoos, wildlife parks, and aquariums housing animals others deem should be only in the wild. With the internet and especially social media allowing and encouraging the rapid spread of individual opinion, zoos, wildlife parks, and aquariums are challenged often to address misinformation and misrepresentation while spreading and supporting organizational missions. Only defending against negative public opinion prevents organizations from creating proactive plans to educate and encourage positive public opinion. Changing environmental values, economic imperatives, and ecological, political, and social contexts drive policies in zoos, wildlife parks, and aquariums (Mazur & Clark, 2001). These organizations strive for conservation credibility while championing exhibiting wild animals (as cited in Weiler & Smith, 2009); even while promoting conservation work, perceptions persist of these organizations as places of entertainment rather than institutions of scholarly, scientific, or conservation pursuits (as cited in Mazur & Clark, 2001). A strong conservation role is important to the future viability of institutions that rely on collections from nature, as the U.S. Fish and Wildlife Service emphasizes demonstration that the wild (Weiler & Smith, 2009).

Regardless of these controversies, zoos, wildlife parks, and aquariums are places where people can experience the wonders of the natural world and are exposed to important conservation issues impacting our planet. Interpretation plays an important role in providing mission-based messaging and support at any organization, not only enhancing experiences, but also influencing thoughts, emotions, and actions by using multimedia communication techniques (Weiler & Smith, 2009). Visitors are exposed to important conservation issues through appropriately messaged and meaningfully contextual exhibit design (as cited in Miller et al., 2004) and interpretive programming. Multiple layers of interpretation, rather than just one type of interpretive interaction, can also enhance perceived affective and behavioral outcomes in visitors (Weiler & Smith, 2009). Designing an entire interpretive experience takes careful consideration and a strong interorganizational community, among other things.

High quality interpretation (meaning it encompasses a theme, is organized, relevant, and enjoyable) leads to inspiring the next generation of conservationists and facilitates connections between people and the natural world. This session shares examples of interpretive projects at the Vancouver Aquarium, Phoenix Zoo, and Monterey Bay Aquarium that encourage these connections as well as drive support for the conservation organizations from which they originate. Additionally, session participants will engage in discussion on interpretive projects designed to proactively address controversial topics and facilitate connections to the natural world. One such example that increases educational benefits and visitor perceptions of zoos, wildlife parks, and aquariums is the use of public animal-training sessions and public training sessions with interpretation to increase educational and recreational benefits and visitor perceptions (Anderson, U.S., Kelling, A.S., Pressley-Keough, R., Bloomsmith, M.A., & Maple, T.L., 2003). This session relies heavily on supportive and creative discourse, so content is emergent. Presenters will offer an official networking list (with participant approval) to continue the conversation following the session.

In the midst of an economic environment that reduces importance and support of nonprofit nature-based organizations such as zoos, wildlife parks, and aquariums, the value of interpretation to help encourage connections between the visitors, the organization, and the natural world increases. Interpreters promote the mission of these organizations, offer correct information to reduce misinformation and negative public opinion, and strive to inspire a new generation of advocates. Creating a community of interpreters among zoos, wildlife parks, and aquariums offers opportunity to strengthen individual organizational messaging and help improve animal interpretation between organizations, bringing together an international audience in a singular passion for protecting our environment and supporting organizational missions.

References


Engaging and Broadening Audiences Through the Art and Science of Mobile Storytelling

Arthur Bart-Williams  
Founder/CEO  
Canogle

Denise Penrose  
Chief Content Officer  
Canogle

Will Hunt  
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Keywords  
Mobile technology, smartphone, interpretative content, content curation, place-based-content

Canogle uses smartphone technology to deliver engaging, place-based content to visitors of open space venues. We help land managers attract new audiences by developing interpretive tours that tap their deep knowledge of the lands they steward and the wildlife they protect.

We explore the benefits of placed-based audio tours over more traditional interpretive techniques, explain how the Canogle platform and Point app work, and review how we and our partnering organizations develop content that meets the needs of their target audiences. To financially support the development and ongoing hosting of the tours, we consider various business models that leverage an organizations' expertise, location, and relationships.

We review the Point tours currently available, preview some that are in the pipeline and present a video that shows visitors actual experiences with Point tours.
Connecting Children in the Digital Age to Nature

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Keywords
iPads, Nature, Digital Age, Children

Technology in the 21st century has become an essential part of our lives, creating what is being known as the digital age. This is an age where children grow up spending their entire lives constantly surrounded by technology. In this digital age due to their constant exposure and interaction with various forms of technology children have begun to develop brains that prefer to multi task, and access to information in a quick and random process. Their brains have become hypertext minds that leap from thought to thought, creating cognitive structures which seem parallel and not structural. These children have become digital natives, or native speakers of the digital language of computers, mobile devices, multi-media, and other similar technologies. In the classroom, some educators have chosen to incorporate various forms of technology in order to best educate and meet the learning styles of their students. The integration of digital technologies allows an educator to present information through a means that can better connect with the structural thought process of his or her students.

As various digital technologies become popular teaching tools in the indoor classroom environmental educators and interpreters are starting to experiment with integration of digital technologies into outdoor classrooms. It is a concern of some that the integration of digital technologies will have a negative impact on the learning experience of the children by creating distractions from nature. Others believe that digital technologies are an appropriate and effective way to connect children to the natural world as they can transfer information through a means that is easily grasped by a child’s hypertext mind. Currently, there is not a lot of research that highlights digital technologies in outdoor educational programs. At the Riveredge Nature Center in Saukville, Wisconsin, a study was conducted that integrated iPads into an introductory water quality based program for 5th grade students from Milwaukee. Based off of a constructivist approach to learning the devices where integrated into the program as tools to further the children’s learning, building upon their prior knowledge. Observational data on the children’s attitudes, behaviors, and comprehension of material was collected to understand how children interact with nature while using mobile devices in their outdoor environmental education programs. Data was collected during the spring of 2014 and analyzed during the summer of the same year. Preliminary results of the study strongly supported the idea of purposeful technology in outdoor educational programs, as well as closely connected the effectiveness of the tool to particular teaching styles. Responses depended on the presentation of the devices to the children. Many of the children were often observed ignoring the devices to play with the macro-invertebrates in their buckets once their initial excitement and curiosity in the devices had passed. Other children found that the devices contained information that answered their questions about what they had found. These students were focused and on task with the activity. Due to occasional lapses in class management other children became distracted by the devices, choosing to take pictures of each other instead of focusing on their assignment. During this presentation the full results of the study will be shared and we will explore various ways that digital technologies can be introduced into both environmental education and interpretive programs in a way that is purposeful and supports further learning. Through exploration, research, and conservation the hope is to bridge the gap between digital technologies, which are an integral part of today’s society, with nature creating an effective way to educate.

References
Wildlife Stories On The Go!

Susan Staple, CIP
Interpretation Coordinator - Banff National Park
Parks Canada

Keywords
participatory exhibit, outdoor media, interactive, wildlife crossings structures, overpass, underpass, highway, Banff National Park, interactive learning experience, effective interpretation, wayside exhibit, place-based

The session will begin with setting the stage for the interpretive challenge: describing Banff National Park, its visitor make-up, and the challenges wildlife encounter when trying to cross a very busy highway. The introduction will help the audience understand the complexity of the situation and the challenges faced regarding how to effectively communicate this important wildlife crossings story, for which we are considered global leaders, to an audience who may not realize they are in a national park.

Participants will learn how we determined the best interpretive techniques to use for sharing this wildlife story with 3.1 million visitors in less than three minutes. Various learning styles were considered as were the visitor types and the average time visitors spend at this highway pull-off. The goals and objectives of the participatory interpretive exhibit will be shared along with various project components which include: - the interpretive panels and associated storylines and visual elements - the wildlife silhouettes - the scalable wildlife crossing structures (an overpass and an underpass) - the landscaping and viewscapes A discussion focusing on the current status of the project, lessons learned to date, and measuring visitor satisfaction will be included.

At the conclusion of the session, participants will appreciate the importance of knowing your audience before tackling such a complex project, and the need for considering and incorporating relevant learning styles. The presenter will share her perspectives on how to ensure we are continually challenging ourselves to be innovative in our profession.

References

Interpretation on the Run

Nikki Hinds
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US Forest Service/ Mendenhall Glacier Visitor Center

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Keywords
roving interpretation, informal interpretation, short interactions, non-captive audiences

While many interpretive sites are very different in nature, they also have many similarities. For example, the Mendenhall Glacier Visitor Center in Juneau, AK is very different from the Monterey Bay Aquarium in Monterey, CA from how people arrive to the site to how long people on average stay at the site. We will explore these differences, but more importantly, we'll look closely at one thing that both sites have in common -- thousands of visitors with not enough time. Who has heard, 'I have one hour. What should I do?' Whether you call it roving interpretation, informal interpretation, fast interpretation, or any other type of interpretation, there are techniques and lessons learned on how to make the most out of short interactions with visitors and take a quick, 'Welcome. How are you doing today?' conversation to the next step. The presentation will be broken out into 3 sections: Examples of 'quick interpretation', how to provide training for improved roving interpretation, and a brainstorming session.

Both the Mendenhall Glacier and Monterey Bay Aquarium have implemented many different techniques to try to reach as broad an audience as possible. During the presentation, we'll take a closer look at how to effectively use props to encourage these short interactions, body language, the benefits of 'touch tables', a few 'pick up lines', and techniques in 'ambush' interpretation. A variety of techniques are required to most effectively reach a large, diverse audience. However, we often miss one important aspect to this, which is training. In interpretive training, we often focus heavily on how to create a great formal interpretive program. In my experience, roving interpretation is often completely missed or skimmed over. We need to provide our staff with the tools and skills necessary to take these techniques, and make them work. Finally, the Mendenhall Glacier and Monterey Bay Aquarium don't have all the answers. Sites around the world are coming up with creative ways to spark interest and curiosity. As a group, we'll share other ways that interpreters are creatively engaging with their visitors.

References
Hot Topics in Interpretation
Roundtable

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Keywords
hot topics, critical issues, problem solving

We all face hot topics and critical issues in our profession and often times, we seek the support and suggestions of our fellow interpreter’s to help brainstorm ideas and get us though difficult situations.

Stop by this roundtable discussion to hear about some of the current trends in the field and add in your own thoughts, experience’s and suggestions.

This session will be very informal and interactive with small and large group discussions. Bring your ideas and a notepad since you will likely gather some great suggestions to take back with you!
Nurturing the Inner Scientist: Urban Early Childhood Education Science Literacy Programs with Wilmington State Parks

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Keywords
science, literacy, urban, early childhood education, music, play, physics, rocks, experiments

Wilmington State Park’s Urban Early Childhood Education Science Literacy programs are designed for pre-K and Kindergarten students primarily delivered at urban Head Start Programs and Title I schools. In 2011, Wilmington State Parks had a small number of nature programs designed for preschools. In 2012 a refocusing took place with the preschool programs to deepen science content with age and stage appropriate strategic elements. Additionally, pre and post visit information and activities were developed. Because our urban population and our ECE centers have a high population of Spanish speaking children and families, we translated the pre and post visit children's activities into Spanish. Finally, we added age appropriate books that tie directly or correlate to the science content of the programs. We also identified books that teachers can use as resources for science in their preschool classroom.

The NIW 2014 presentation begins when participants get to use the different dimensional learning objects and activities associated with our programs such as: Physics of Play, Sounds Around Us, Animals in the Neighborhood, Seeds on the Move, Talking Teeth. Also included at each station are the corresponding teacher overviews designed to give teachers a clear understanding of the goals and objectives of our programs, methodology of teaching and how to use the books to prepare the students for the content of the scheduled program. There are samples of student take home activities that engage the family in the science process. Then, there are the non-fiction and fiction books that are part of the program, sent in advance for teachers to read to students prior to our arrival.

Participants will explore elements of the science and literacy programming using specific program elements in directed activities. Exploration will focus on the gross motor skills, fine motor skills and music, all elements that we incorporate into the program series. During "Physics of Play", children have an opportunity to play with a parachute and ball. They get to experience, experiment, think, and manipulate these two objects.

Inevitably joy ensues, and with directed steps they can begin to understand the forces of push and pull. "River and Rock" is the first step in a three part series on the Earth Cycle. In this program students are given an opportunity to ‘build’ sedimentary rocks, scientific vocabulary is built and fundamental earth systems concepts are introduced. "Sounds Around Us" gives students a chance to identify city sounds and park sounds, recognizing how their ear hears those sounds, learning about the ear drum and vibrations. Naturalists provide an opportunity for students to make their own sounds in a fun and structured way.

Conclusion
Our most recently developed program in the ECE literacy series is River and Rocks. It is one of three programs in the Earth Cycle series. We would like to be able to complete the series by piloting the igneous and metamorphic programs titled, “Fire and Rock” and “Change and Rock”. As with any educational initiative, working to find funding to deliver these programs to Head Start and Title I Schools for free and implement the literacy component fully is our greatest challenge.
All in the Family: Family and Youth Volunteers

Sheryl A. Kippen
Cultural History Program Coordinator
Boulder County Parks and Open Space

Philip Waltz, CIT
Nature Center and Outdoor Recreation Coordinator
South Suburban Parks and Recreation

Karin Hostetter, CIT; CIG; CIH
Writer and Trainer
Interpret This

Angela Caudill
Manager of Volunteer Services
Children's Museum of Denver

Wesley Jones
Coordinator of Volunteers for Health Sciences
Denver Museum of Nature and Science

Natrisha "Natty" Chhabildas Bayer
Coordinator of Volunteers for Education Programs
Denver Museum of Nature and Science

Keywords
Volunteers, youth, teen, family, parents, recruitment, in take, school, service learning, generational differences

Presenters will introduce themselves, discuss briefly their current/ past experience with youth volunteers as well as the institutions they are from and what types of institutions those are: nature center, open air museums, gallery-style museum, hands-on museum (i.e. children's museum), etc.

Presenters will discuss youth volunteerism in their institutions: what are some unique programs they have? How do they recruit youth volunteers; what is their intake process? How are parents involved and what about age restrictions, safety trainings, and the like? How have they worked with students having service learning and/or community service projects? What challenges and surprises occur when working with youth volunteers? What are the best ways to recognize and reward these volunteers' efforts? Input from the audience will be encouraged for a mutual learning experience.

Youth volunteerism varies from one institution to another. Discover elements that are in common and unique ones that audience members may wish to adapt for their institution. A summary of this session's findings will be available after the conference on the NAI server location and/or by email. Email address from audience members will be collected for future communication and collaboration.
Living History Archeology: Rediscovering the Past Through Living It Today

John C.F. Luzader
Principal
Living Museums of the West

Keywords
experimental archeology, living history, practicum

Our past is replete with daily life mysteries that provoke the question, “How was that done?”. Much of past technologies and life styles are lost to us today. Though the tools and materials of bygone cultures might be known and identified through archaeological remains and illustrations, the manner of their use and how each is constructed may be incomprehensible to us today. Utilizing “living history” techniques and resources allows a researched method in rediscovering how past cultures conducted their daily lives and performed specific labors. Living history practicums promote the re-understanding of past life styles through living laboratories.

Throughout the world there are past cultures, prehistoric and historic locales whose inhabitants did not leave a detailed account on how every aspect of their life was conducted. Many archaeological remains and written accounts leave clues and evidence to the existence of habitation and life, but the inside information of how certain items were constructed, used, maintained, or how they wore out is often lacking. Too often the cultures that utilized a locale left no documented hints to aid in our desire to know more about them. In utilizing living experimentation we can initiate re-creative techniques to gain better knowledge of the lives of past peoples. By implementing the archaeological format of culture studies of studying like people under like situations with access to like knowledge, tools, social conditions, and materials a living classroom can be created to formulate educated summations of a peoples’ life styles. From the sculpting of Moai statues on Easter Island and in experimenting in their reconstruction and movement from a quarry locale, utilizing the technological materials available and archaeological evidence, living history programs are regularly investigation the how and why these monoliths were created. The same has been done in Egypt and Inca sites in South America. American Tribal and cultural centers, such as the Akta Lakota Museum and Cultural Center in Chamberlain, SD, are regularly using material evidence and oral histories to relearn traditional life ways, religious aspects, and language of American native peoples. Living history sites such as Williamsburg, Jamestown, Sthmur Museum of the Prairie Pioneer, and Bent’s Fort NHS, to name but a few, regularly utilized costumed historic interpreters to not only entertain and educate the visitor, but also to study and refine the evaluations and assumptions of each locales’ history. This allows for a continued change and growth of knowledge and representation. Museums and living history sites like the Mary Rose Museum in England not only implement costumed personnel, but also examine the wear and tear on the costumes and equipment they use, going as far as to record and photograph various food stains on the replicated clothing the interpreters wear. Often, living history becomes a school of experimental archeology where having personnel live on site, working and living in a recreated environment answers questions that the archaeological remains left unanswered. Such was the case when an iron age village was rebuilt in England. The archaeological remains revealed that each underground home had a small divot at the bottom of the opening to the home. No evidentiary explanation could be found for these divots, but in having a living group on site, with appropriate livestock, it was found that in the winter months the domestic fowl on site would sit at the base of the home openings and would sun and dust themselves creating nearly identical divots in the ramp way. In Lejre, Denmark archaeological remains of various house remains did not provide adequate information as to their construction. In using period techniques, and in going so far as to burn down a house reconstruction and comparing it to a known prehistoric burn site, the styles and design of habitation construction was established and assisted their interpreters to provide an ongoing living museum to the site. Laesoe Salt Works, also in Denmark, took archeological remains of salt making sites found on the island and combined them with known ancient European salt making techniques and established a reconstructed 12th. Century salt making seething house where not only is salt making demonstrated, but regular classes and instructional seminars are maintained to pass the knowledge to other salt making sites throughout Europe. Additionally, the salt produced has become a funding resource for the museum, and is the most expensive and one of the most sought after seasoning salts in the world. Living history archeology can also be used as an explanation as to how certain jobs were done when no specific written directions were left. During the bicentennial of the Lewis and Clark expedition a salt works was constructed near Warrenton, Oregon, near the site of where the Corps of Discovery manufactured salt for their 1805 return journey. Taking known salt making techniques and the materials available to the men of the expedition, as well as the recorded amount of salt made by the expedition, a salt making program was initiated in 2001 on the beach. Making salt on a 24 hour a day basis for a number of weekend programs from 2001 through 2013 the living history interpreters manufactured a like amount of salt as the original expedition, with a 1/8 pound a day variance. This provided not only the public with an entertaining and educational experience but also allowed students of the Corps of Discovery and other like time period salt work interpreters the knowledge of what tools and techniques were probably used at like temporary seaside salt works.

There are some aspects of our past that are speculative and will more than likely remain so, but by utilizing experimental archeology we can gain a better insight as to how and why some parts of past came to pass. Beyond being just entertainment and theme sites, living history events and programs offer working...
laboratories as to how our past came about and how those
developments, tools, techniques, food ways and lifestyles influenced
who we are today.

References
Gardiner, Julie, *Before the Mast: Life and Death Aboard the Mary
Rose* (The Archeology of the Mary Rose) 2013.
Lewis, Meriwether, William Clark, *The Journals of Lewis and
Clark*
Peterson, Bodil and Lars Erik Narmo, *Experimental Archeology*,
2011
Engage your Audience: Using Songs and Costumes in Interpretation

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Keywords
music; costumes; interpretive songs; interpretive lyrics; stories; creativity; inspiring; engaging

Whether you are a curious beginner or a seasoned interpretive song writer this workshop is for you! It will give you ideas and techniques to create programs that are fun and inspiring for all ages and will provide you with an environment to create with your colleagues at the conference. Whether it is natural or cultural history, interpretation reveals something to the participant. At its best, interpretation opens the door to a new world and helps visitors to see things in a new light. Weaving a story is a great way to help your audience relate to what you are interpreting. Songs are stories with music and are a great way to connect your audience with your topic. Music is fun and engaging for all ages and helps bring interpretive programs to life. It is a tool that all interpreters can use to engage their audience no matter where you are and you don’t even need a fancy musical instrument. Costumes are a really great way to enhance a song or can be used on their own. There will be an opportunity to share your level of experience with music and costumes and we will have a short brainstorm of how they can be used at your site to enhance existing programs or to create new ones. Participants can bring a musical instrument if they wish but it is not a requirement.

I will share examples of songs and costumes that my colleagues and I have created and how we use them in our interpretive programming. Audience participation is KEY. So, prepare to be engaged as I not only share songs but also, how to get the audience involved. I will share songs that can be done as part of a large event but also how they can be used in a guided walk, smaller program, as part of a puppet show or anywhere you interpret! Some examples are: The ladybug song, The Snake Song, What Makes an Insect Song and The Bee Dance. All these songs have accompanying costumes. I will share a few songs that I have written for puppet shows that are short and don’t require any musical instruments or that use just a simple shaker. - I will share the process I go through to create songs and costumes. This will be relevant for everyone whether you are a beginner or experienced. I will provide a variety of simple costume examples and ideas that are easy to make and don’t require a large budget. I will share how you can make some simple musical instruments for you and your audience to use. I will also share how to create lyrics that are informative and educational as well as fun and inspiring.

Participants will have the opportunity to share ideas that they have come up with about using songs and costumes in their interpretive programs and their sites. Sharing could range from some lyrics, to a chorus, to an idea, to a full song with participation from others in the workshop, to a sketch of a costume idea, to a thought about how costumes and music could enhance your interpretive programming. Music and costumes are simple and easy to use and help inspire and engage your audience and create a lasting impression with them. They are a fun way to reveal your topic to participants and also increase understanding and awareness. Any interpreter, regardless of their background can use songs and costumes to create engaging interpretive programs. Each participant will take away at least one idea for a song and a costume that they could use in their interpretive programming at their site.
Interpretation: HashtagLikeShare

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Keywords
viral videos, memes, viral content, interpretation, provocation

Videos, photos, news stories, and more are shared readily and quickly across social media and digital communication platforms. Viewers of viral videos, specifically, are more likely to watch and share videos that are spread through social networking sites, blogs, and emails (Broxton, Interian, Vaver, & Wattenhofer, 2013). The terms “viral” and “meme” are adapted from biological terms associated with rapid transmission, which, when applied to content spreading and being replicated across media platforms, makes sense (Burgess, 2008). Often, viral content is popular for a relatively short amount of time, frequently fading from media streams within a week or two (Broxton, Interian, Vaver, & Wattenhofer, 2013). Content that does go viral are generally emotionally complex, stimulating both positive and negative feelings, but also include an element of surprise (Brown, 2014; Libert, 2014). Overall, the dynamics of viral content can be explained as involving the spread of replicable ideas among communities connected through social networks (Burgess, 2008). Interpreters also strive for the spreading of replicable ideas among communities, hoping to use our mission-based communication processes to facilitate connections to the resource.

Experienced interpreters are familiar with Freeman Tilden’s six principles of interpretation. An oft-heard and used phrase is “The chief aim of interpretation is not instruction but provocation” (Tilden, 1957), where provocation is the stimulation of thoughts and questions in the minds of the visitor. While we, as interpreters, cannot control what a visitor thinks or questions, we can design our interpretive content to be relevant and easy to process (Ham, 2013). As with most viral content, the person sharing the video or meme is generally not doing so to educate others. Conversely, interpreters want visitors to experience sites and gain new knowledge. If the interpretive content includes a strong theme and is organized, relevant, and enjoyable, visitor experiences are enhanced, attitudes are impacted, and more positive behaviors are exhibited (Ham, 2013). Combining the intentional elements of successful interpretation with the knowledge of how viral content is shared because of prompting emotional responses and including an element of surprise, interpreters can hone our skills to encourage not only provocation, but also sharing. Through this session, we will discuss the features of current viral media success. The use of these examples demonstrates how not only successful interpretation is shareable (and desired!), but also substandard service or interpretive experience. A single negative association with a site or interpretive program in an otherwise positive experience may be the focus of that visitor’s memory. Viral content is a great example to show staff of any department the impact something like bad service, bad interpretation, bad experiences, and the more desired successful interpretation and positive experiences can spread without any effort from the site or institution.

Successful interpretation stimulates thoughts, which in turn stimulate emotions (Ham, 2013). Intentionally thematic, organized, relevant, and enjoyable interpretive products provoke visitors to think and create personal themes, leading to more connections to the resource. Viral content and successful interpretive products encourage visitors to make emotional connections that carry a message (good, bad, or awkwardly awesome), and are worthy of sharing because what is thought provoking is talk provoking.

References


Serving Diverse Audiences and Supporting National STEM Standards Through Interpretive Curriculum-Based Programs at Everglades National Park

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Keywords
environmental education, curriculum, interpretation, Everglades National Park, national park, STEM, state standards, science, residential programs, national standards, stewardship, education, partnerships, diversity, evaluation, long-term evaluation

Currently Everglades National Park provides interpretive curriculum-based educational opportunities that serve thousands of highly diverse students in the South Florida region. These educational programs provide students with opportunities to experience Everglades National Park first-hand and the curricula are linked to state and national standards. To deliver the programs, rangers and teachers work together as educational partners, using interpretive techniques to ensure that every student has an interactive, informative, and fun experience. Programs include single-day field experiences at the Royal Palm and Shark Valley areas of the park for 4th, 5th, and 6th grade students, as well as residential camping programs for 5th & 6th graders at the Hidden Lake and Loop Road Environmental Education Centers. Despite the reputation of these programs being high quality, it was unknown to what degree the programs were achieving their goals. In particular, what is both the immediate and long-term impact of these programs?

To examine both the immediate and long-term influence of the Everglades National Park (NP) programs, we developed the evaluation through a participatory process following steps laid out in the Sustainable Evaluation Framework (Powell, Stern, & Ardoin, 2006). To investigate the immediate influence of these programs we surveyed 929 4th, 5th, and 6th grade students from 33 schools 3-5 days prior to participating in one of the educational programs and then again 2 days after attending the program. This study examined a range of outcomes including: objective learning, subjective learning, interest in learning, comfort experiencing nature, environmental stewardship, park stewardship, appreciation for Everglades NP, and intentions to perform home stewardship behaviors.

To corroborate the student results, we also surveyed 47 teachers 10 days after the program regarding their perceptions of the program’s influence on student outcomes and meeting State and National curriculum standards. Finally, to investigate the long-term influences of attending Everglades camping programs, we surveyed a small sample of alumni (n=16).

Results
Everglades National Park’s day and camping programs serve a very diverse student audience (51% Hispanic, 20% Black, 13% two or more races, 11% White, 1% American Indian or Alaskan Native, 1% Asian, 3% Other). Many of the students (43.8%) in the study were visiting Everglades NP for the first time. Immediately after attending the park’s day and camping programs, students had statistically significant gains in ALL program outcomes. Students indicated their knowledge of facts and concepts related to the natural resources of Everglades National Park had increased. Students also had enhanced interest in learning about Everglades National Park, increased comfort being outdoors, and an increased appreciation, care, and attachment to Everglades National Park. Students reported having significantly more positive Environmental Stewardship attitudes and stronger intentions to perform actions that would support the sustainability of South Florida and Everglades National Park.

Ten days after attending the Everglades Education Program, teachers also reported very positive student outcomes:

1) Over 90% of teachers rated the influence of the Everglades Education Program on student academic performance as very high.

2) Teachers strongly believed that the Everglades Education Program was valuable for helping their students meet selected state and national STEM standards and core benchmarks.

3) Teachers indicated that the Everglades Education Program increased their students’ environmental stewardship and appreciation of Everglades National Park and the natural environment.

When investigating the long-term influence of the Everglades National Park residential camping program, former campers (alumni) reported that the program impacted their environmental knowledge and their recreation and leisure activities. Some alumni also reported a direct or indirect impact on their educational activities and career. Camping program alumni expressed a strong desire to transfer their knowledge and experience to others, such as friends and family.

According to students and teachers, the Everglades Education Program had a positive influence on all outcomes of interest. Teachers also strongly believed that the Everglades education programs help their students meet the Florida Next Generation Sunshine State Standards for science and social studies and National STEM benchmarks and Disciplinary Core benchmarks. The presentation will focus on how Everglades National Park plans and conducts their programs to achieve these outcomes. Examples of programmatic elements include requiring teachers to participate in training prior to attendance, expecting teachers...
to provide both pre and post program lessons in the classroom, and requiring teachers to co-teach the programs in the park. Specific interpretive techniques will also be discussed that are useful for reaching diverse audiences and producing highly engaged students.

**References**

Strategies and Techniques for Mobile Interpretation of Landscapes and Museums

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Keywords  
mobile interpretation, mobile technology, digital interpretation, site-based interpretation, visitor-directed tours

Mobile tools have rapidly transformed how and when we engage audiences in the interpretation of landscapes and museums, from historic homes to urban architecture to parks and natural areas. An increasing number of Americans use smartphones and devices as a primary means of accessing information, connecting to one another, and engaging the world around them. At the same time, the emergence of smart phones as sensing devices, including especially their location awareness, have transformed landscapes into living museums, into informal learning environments. This presentation explores the theory and best practices associated with curating landscapes.

This workshop explores the theory and practice of developing and implementing mobile interpretive strategies for preservationists, curators, and educators. Using experiences drawn from the Curatescape + Omeka mobile publishing framework, workshop leaders will discuss techniques and strategies for mobile interpretation, as well as strategies for building audiences and public outreach. Effective curatorial interpretive practice begins with effective storytelling, developing layers of meaning that can be unpacked and explored in non-linear ways. Not only must curators avoid the mistake of show & tell, but also of presenting too much information or information formatted for other environments. Digital stories must be tailored both to the technologies of presentation as well as the contexts in which the information is engaged. Critically important to building digital stories is building audiences through community development, community storytelling, and targeted “calls to action.” Such outreach also becomes part of the interpretive strategy, as well as a way of developing broader and deeper interpretive stories.

If building digital storytelling communities is critical to long-term project success, so too is developing a "sustainable interpretive strategy. Included in the workshop will be discussion of approaches to building projects through institutional collaboration, student training, and community engagement. In particular, we emphasize the need for employing tools that are simple, standards based, and easy to maintain--such as Curatescape + Omeka. Regardless of the particular tools used, the presentation will recommend modest strategies for building long-term sustainable partnerships.
The Wayside Olympics: Techniques for Creating Effective Signage

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Keywords
Signage, wayside exhibits, trails, design, inscriptions, messages, meaning, interpretive devices, outdoor media, Fraction of Selection

Abstract
Signs, wayside exhibits, and self-guided trails have been popular devices used by interpreters since the early days of the profession. The design and inscriptions of these important communication tools are frequently of low quality or do not address the needs and interests of our visitors. This presentation offers pragmatic and time-tested criteria that will assist interpreters, planners, and site supervisors to consistently create attractive, relevant, outdoor exhibits that guide visitors in their search for meaningful experiences.

Introduction
Signs and wayside exhibits are interpretive devices that can give meaning to the experience of the moment. At natural and cultural sites, the most significant and piquant experiences are found outside the interpretive building. Outdoor panels can directly and immediately address what can be seen or experienced on site.

Humans, by nature, seek relevance and meaning in places, objects, and events. These events and resources are icons: windows into thoughts, values, and beliefs with multifaceted meanings to different people.

Well-planned trails and interpretive panels can assist visitors in their search for connections that reinforce their personal values, cause them to contemplate their beliefs, or that make them feel included in things greater than their own lives. In the words of Liberty Hyde Bailey, the father of American Nature Study, "We must begin with the fact for sure, but the lesson is not the fact but the significance of the fact." Meanings are more important to people than mere facts. Good interpretation helps visitors find personal connections between tangible places, objects and events and their own lives and values.

Effective media should grab the interest of visitors and promise them personally rewarding insights into concepts and ideas. The media that we design can open windows of revelation to our visitors who find their own personal meanings in the resources and events that we have introduced to them.

There are reliable strategies available to planners to assist them in the creative design of effective interpretive sign panels. The success of an interpretive panel can be viewed as a formula, proposed by Wilbur Schramm in 1971, as “The Fraction of Selection”:

\[
\text{Low Fraction of Selection} = \frac{\text{Little Expectation of Reward}}{\text{Great Effort Required.}}
\]

\[
\text{High Fraction of Selection} = \frac{\text{High Expectation of Reward}}{\text{Little Effort Required.}}
\]

Successful signs increase the expectation of reward and decrease the effort required. The Fraction of Selection is a result of visual design and message inscription. We offer seven fundamental ways for improving messages.

Seven Ways to an Effective Message
1. Say it visually. Use photos and drawings to help tell the story.
2. Graphics should do more than duplicate what can be seen. They should reveal hidden meanings and ideas.
3. Use a message pyramid. Develop a descending order of message importance. This can be expressed as the 3-30-3 rule. Visitors can receive a message in three seconds, thirty seconds, or three minutes.
4. Keep the message short. Use short sentences and paragraphs. Use a readability scale such as the Flesch test to help eliminate wordy phrases and paragraphs.
5. Create imagery with concrete nouns and active verbs. Limit adjectives and adverbs.
6. Relate to the visitor’s experience. Use personal pronouns, personal language, and familiar terms. Illustrate with metaphors, analogies, quotes, and real examples.
7. Provide for multi-sensory involvement. Use digital audio repeaters and participatory devices. These may include tactiles, models, relief maps, flip panels, and interactives.

Design is the organization of the visual elements of a sign face. Every good sign has a focal point, movement, balance, unity, and proportion. Design can be largely intuitive, but a pleasing visual image follows these principles.

Design Checklist:
- Keep the sign face simple and uncluttered.
- Maintain open space, especially on margins.

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• Have a strong center of interest or focal point.

• Develop a visual sequence from the focal point. Do this through graphics and varying message levels.

• Connect all signs to each other and to their environment.

• Create short and readable messages.

• Choose readable typefaces.

• Use a minimum of CAPITAL letters.

• Use symbols and graphics, not just words.

Interpretive signs compete for the visitor’s attention with warm sunshine, cold rains, and colorful birds. They are static objects in a dynamic environment. To be effective, an interpretive sign must communicate quickly and dramatically. The message must relate to the visitor’s interests and to what they can see and experience at the site.

Conclusion
By following a few simple steps outlined in Signs, Trails, and Wayside Exhibits: Connecting People and Places (see References), naturalists, planners, and site supervisors can help visitors access and find meaning in the stories and resources of an interpretive site.

References

To order online, visit http://www.uwsp.edu/cnr-ap/schmeckle/Pages/shop/handbooks.aspx
Can We Train Tourism Providers of Different Educational Levels to Offer Interpretive Programs?

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Keywords
Interpretive training, cognitive development, Bloom’s Taxonomy

Different Educational and Cognitive Levels Leads to Different Functions
Thanks to Piaget and Maslow, the notion that people mature hardly rings new. In psychology scales exist for cognitive, emotional, moral, and spiritual development among others. Every maturation process launches at birth and continues throughout life.

This cognitive development, which correlates with education, often gets lost in training design. Bloom’s Taxonomy (see figure), for example, describes mental functions ranging from simple remembering to high-end knowledge creation.

Aside from mental development, education also correlates with experience with multiple perspectives, factual knowledge, communication skills, literacy, use of theory, travel experience, and values. All these support heritage interpretation.

Since cognitive demands vary dramatically from local rural guides to interpretive planners for complex sites, we must understand that not all educational and cognitive levels can handle all tasks required of interpretation. (Obviously we generalize as a local guide could also be an enlightened interpretive guru.) For example some higher-order tasks include synthesis of much data to produce and write interpretive messages, abstract thinking, application of communication theory, program evaluation, and suspension of perspectives to assume those of visitors from other cultures.

Thus different interpretive providers do different things (see table):

- Local guides authentically enact heritage meanings as part of the heritage itself.
- Frontline interpreters offer interpretive programs.
- National guides manage visitors and itineraries of multiple programs, sites, and days.
- Professional interpreters design programs consistent with management objectives.
- Interpretive planners facilitate social processes to generate meaning and create a plan.
- Interpretive managers ensure quality and implement plans.
- Instructors prepare all kinds of providers and thus not only enjoy interpretation experience but also vocational training skills.

Because different providers have different functions, that means quality interpretive programs must take advantage of this complementarity. When certain functions are omitted or certain providers receive training inappropriate to either their educational level or function — such as local guides “trained” as professional interpreters — poor quality results.

Interpretive Products Integrate Different Interpretation Providers
A complete interpretive product is a team effort. There are two principal pathways: non-managers bringing visitors to a site and managers offer interpretation on-site. Typically the first involves tours, packages, and itineraries. In this case, ideally a tourism provider designs heritage products with an interpretive component. The manager often hires a national or host guide who manages multiple products along an itinerary and may work with a freelance frontline interpreter possibly with local guides showing off hometown heritage.

In the second case, site managers guide overall management direction and ensure program quality while working with their interpretive planners to structure the planning process as well as with interpreters, also possibly involving seasonal and local guides as well. In both cases, able instructors apply adult education principles and vocational training techniques to help all providers construct knowledge and skills necessary to form complementary roles.

These roles often are not interchangeable. A lower educated local guide cannot do the work of professional classes while the latter cannot form part of the heritage attraction. A manager is often not an interpreter, but must be an experienced consumer of
interpretation in order to use it, ensure quality, and support development of interpretive personnel and programming.

Instructors often do not have experience as managers or even frontline interpreters but do have enough knowledge about interpretation and training to be effective trainers.

**Training Programs that Focus on Different Levels Can Better Integrate Complementary Functions**

Interpretation training programs should a) meet needs of differently educated providers and b) integrate into the trainings how different functions contribute to the overall program.

**Meeting Needs of Differently Educated Providers**

Lower educated folks will not fair well in trainings designed for college graduates and professional interpreters. Thus an interpretive guide training program or even an interpretive planning course must consider the audience's average educational level and consider which functions really relate to its context. To better adapt training, trainers should apply Knowles’s (1984) principles of adult education:

- Adults need to be involved in the planning and evaluation of their instruction. An adult will more readily engage their education program if he or she had a hand in its design and use. In most training programs we know, students received a one-size-fits-all curriculum.

- Experience provides the basis for learning activities. Learning derives principally from making mistakes, corrections, and changing behavior. Again, most training tends to be off-site, one-off, and focused on knowledge objectives, rather than intensive, on-site authentic doing-learning.

- Adults are most interested in learning subjects that have immediate relevance and impact to their job or personal life. Where not obliged by government agencies, interpreters who elect training do so because of its personal relevance.

- Adult learning is problem-centered rather than content-oriented. Many trainings focus on a set of contents, rather than on problems trainees must overcome in their workplace.

**Trainings Should Include How Different Functions Work Together**

Given a complete interpretive program involves complementary action of different functions, trainings should include how those relationships work, beyond the common relationship of professional interpreters managing seasonal or volunteer interpreters. For example, national guides must consider culturally sensitive ways to integrate local guides into the overall product. Managers should understand that interpretive planners facilitate social planning processes, not simply make plans for which the community feels little or no ownership. Tourism managers must know how to supervise frontline interpreters who have more interpretive experience than does the manager.

**Ensure Opportunities for All Providers**

Different interpretation providers can have different educational levels and still fulfill vital functions in offering an overall interpretive program capable of meeting heritage site management objectives. In order to integrate the work of these providers we need to ensure that opportunities exist and that are suited for these different levels. As we should not interpret for a general public, we should not train for a general interpreter.

**References**


Interpretation from the Top Down:
Utilizing Themes to Guide Strategic Planning and Site Development

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Keywords
strategic planning, exterior and interior designs, education, facilitation and team meeting management

Recently the Metropolitan Park District of the Toledo Area (Metroparks) has undertaken a fresh approach to interpretive planning and site design. Forming a team of individuals across the organization has successfully merged interpretation with marketing, construction, land management, customer service and programming. Moving away from silos and traditional organizational roles, Metroparks has taken a shared leadership approach to interpretive planning that produces effective interpretive exhibits, facilities and programs, making an entire agency shine. Don’t be fooled, the process takes dedication and hard work, but the rewarding final products are worth the effort.

Metroparks began this new interpretive planning approach in May of 2013 with a three day workshop led by John Ververka and initiated by our administration. The workshop helped to illuminate the fact that interpretation is a district initiative, not just a programming department objective, and that themes can be utilized to drive substantially more than just programs. With our agency’s new interpretive planning approach, themes and subthemes are generated to plan and develop each individual park in the district and link its relationship to the overall agency mission. This not only sets the foundation for any programs that take place, but also ensures that all site and exhibit development is grounded in both the strategic planning process and mission of our organization. A six person, cross-function team representing various departments and hand-picked by our Deputy Director was assigned to lead district-wide interpretative planning efforts. Programming, land management, customer service, marketing, and planning and construction are all part of this team, as well as one member who serves as the team facilitator. Each individual brings unique talents as well as the support of their respective departments to the group. Creating buy-in has been crucial to the success of the interpretative planning process. To maximize buy-in and to create the best final product, the team’s facilitator also brings in stakeholders for each park or site as needed based on the team’s immediate agenda. Stakeholders are invited to participate in the planning process for all meetings where their parks or sites will be discussed. This team works diligently, meeting weekly for 3 hours, similar to a standing committee, but also spending additional time doing homework and exchanging e-mails. While the investment of time is great, the product is greater. Some case examples just within the past year include the design of the new Heritage Center at Providence Metropark, the renovations of the Oak Openings Center for Learning at Secor Metropark, and the new Wild Wheels moving exhibit as part of the district-wide Roving Interpreter Volunteer Program.

An interpretive plan, design and product that reflects an agency’s investment from the top down is one that is most likely to be successful and a model for interpretation. Using a team approach to generate themes and subthemes that define the direction of all final products brings the best results. Critical to the team’s success is a dedicated facilitator, a diverse cross-section of passionate team members, willing participation from stakeholders, and a commitment agency-wide to time and support. This is why the final product of effective interpretive planning and design truly ‘takes a village’.

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Metroparks began this new interpretive planning approach in May of 2013 with a three day workshop led by John Ververka and initiated by our administration. The workshop helped to illuminate the fact that interpretation is a district initiative, not just a programming department objective, and that themes can be utilized to drive substantially more than just programs. With our agency’s new interpretive planning approach, themes and subthemes are generated to plan and develop each individual park in the district and link its relationship to the overall agency mission. This not only sets the foundation for any programs that take place, but also ensures that all site and exhibit development is grounded in both the strategic planning process and mission of our organization. A six person, cross-function team representing various departments and hand-picked by our Deputy Director was assigned to lead district-wide interpretative planning efforts. Programming, land management, customer service, marketing, and planning and construction are all part of this team, as well as one member who serves as the team facilitator. Each individual brings unique talents as well as the support of their respective departments to the group. Creating buy-in has been crucial to the success of the interpretative planning process. To maximize buy-in and to create the best final product, the team’s facilitator also brings in stakeholders for each park or site as needed based on the team’s immediate agenda. Stakeholders are invited to participate in the planning process for all meetings where their parks or sites will be discussed. This team works diligently, meeting weekly for 3 hours, similar to a standing committee, but also spending additional time doing homework and exchanging e-mails. While the investment of time is great, the product is greater. Some case examples just within the past year include the design of the new Heritage Center at Providence Metropark, the renovations of the Oak Openings Center for Learning at Secor Metropark, and the new Wild Wheels moving exhibit as part of the district-wide Roving Interpreter Volunteer Program.

An interpretive plan, design and product that reflects an agency’s investment from the top down is one that is most likely to be successful and a model for interpretation. Using a team approach to generate themes and subthemes that define the direction of all final products brings the best results. Critical to the team’s success is a dedicated facilitator, a diverse cross-section of passionate team members, willing participation from stakeholders, and a commitment agency-wide to time and support. This is why the final product of effective interpretive planning and design truly ‘takes a village’.

Interpretation from the Top Down:
Utilizing Themes to Guide Strategic Planning and Site Development

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Keywords
strategic planning, exterior and interior designs, education, facilitation and team meeting management

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Juggling Social Media Interpretation

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Keywords
social media, Facebook, Twitter, Instagram, YouTube, Flickr,
diversity, connections

Introduction
Reaching today’s diverse, mobile-savvy society challenges us to expand our interpretive messages into social media. Adding this new way of connecting people with parks to our repertoire is doable with planning and shared participation.

Being Social
Connecting people with parks and fostering stewardship is always the goal. Social media promotes building those connections with park visitors, people who can’t travel to the park, and people completely unfamiliar with the park.

Many social media options exist, but the National Park Service has approved using five platforms: Facebook, Instagram, Twitter, YouTube, and Flickr. These platforms cover a wide range of audiences and ways to communicate interpretively.

Facebook allows you to share in-depth interpretive stories, photograph collections, videos, and links to relevant information. Remember that good, content-rich posts require a significant time investment. Still, Facebook has a very diverse audience base. According to Pew’s Fall 2013 study, over 70% of almost every demographic of social media user is on Facebook.

Instagram is quickly becoming the favorite social media platform for young adults (18–29), with 23% stating it’s their primary platform. Photos and short video clips can be shared from the field or office, complete with an interpretive message. Instagram requires a mobile device for posting, and poses challenges if your park does not have a wide range of images or lacks the time to consistently collect images.

Twitter streams short bits (140 characters or less) of information directly to followers. Twitter’s biggest challenge is crafting solid interpretive messages in that constraint.

YouTube and Flickr are more traditional media-driven sites—sharing videos and photographs, respectively. Lack of media is the big challenge with these sites, as well as not having the same type of social interaction as the other three platforms.

Strategic Beginnings
Before setting up a social media site, it is important to develop your strategy first. A good strategy answers the following questions:

- Who are we trying to reach?
- What content/experiences will we share?
- What platforms are we going to use?
- How are we going to use each platform?
- How often do we post and check each platform?
- Is management on board?
- When do we release posts?
- Who do we need to be involved?
- What quality control measures do we have in place?
- How do we spread the word about our sites?
- What are our commenting policies?
- How do we respond to visitor comments?
- Do we have photo releases on file for photographs with visitors in them?

By answering these questions, you will have a good idea of what content you will need to provide, and the time commitment involved with supplying that content.

Juggling To Provide Good Experiences
Delivering interpretive content on social media platforms, like delivering an interpretive program, means providing a quality experience. Instead of relying upon the usual voice and ranger presence, this experience requires solid interpretive writing and inspiring images. Select one platform (we chose Twitter) and focus on it until you have a good handle on writing style and quality of the material, and set aside time to develop the quantity of posts needed. Only after you are comfortable with one platform do we recommend adding a second. Why add more platforms? Because most people still use just one platform.

Chances are, developing the variety of content needed to reach your goals will be a vast undertaking. You will likely need a social media team. Therefore, once you have your strategy down and are comfortable with your chosen platform, it is important to recruit coworkers—in other words, be social with your social media! Provide training on the social media platform(s) being used, what subjects you want covered, interpretive writing, and submission guidelines and policies. People love hearing about all aspects of a park, not just the classic interpreted stories. Reach out beyond interpreters to other divisions. Depending on the size of your park, it may be important to assign subjects to ensure coworkers aren’t duplicating any effort. We have also found it useful to assign goals of the number of posts and media expected from coworkers.

Part of juggling social media will be curating the influx of coworker posts, so consider using a social media site like the one
we developed for the Outer Banks Group: https://sites.google.com/a/nps.gov/obg-social-template/. This template, available for all NPS parks to use, provides a single place for coworkers to submit posts, receive comments on their submissions, and review all submissions.

Schedule time throughout each week to work on social media. This work includes crafting posts, editing coworkers’ posts, scheduling posts, soliciting new posts from coworkers, reviewing follower comments, and searching for new followers and shareable posts. Taking advantage of scheduling posts for release at a future date helps you provide a consistent amount of content and stay on top of demand.

Just like interpretive talks, social media posts need an audience for them to be effective. Take the time to explore different social media platforms and actively like or favorite people’s posts that relate to your park. This fosters goodwill and garners new followers. Also, be social and share quality posts that you feel your followers would enjoy. Understanding good, visitor-generated social media helps lighten your content-creation load and harnesses the power of these platforms.

**Conclusion**

Leveraging social media can broaden the reach of your interpretive programming to greater numbers and more diverse groups. Connecting with these new audiences while juggling other work duties is challenging. By taking the time to develop a good strategy and recruiting others to help out, you can overcome these challenges.

**References**

Assignment Tanzania: Building Community Capacity Through Interpretation

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Keywords
Tanzania, Pawaga-Idodi Wildlife Management Area, community-based management, Greater Ruaha Landscape

As professionals, most of us maintain a concept of the ideal conditions needed to complete an interpretive plan and the products that derive from it. These might include adequate funding, strong management support and involvement, access to expert resource specialists with backgrounds in interpretation, and enough time to do the job fully and effectively. However, at its core, interpretation is about communication between people and creating a dialog about the meanings and stewardship of natural and cultural resources. And that can and does happen even when conditions don’t meet our ideals. We can be effective and accomplish important work when we push our own limits and stay open and flexible to the opportunities that come. This case study reflects my experience in putting this advice into practice.

Case Study: An Interpretive Plan for the Pawaga-Idodi Wildlife Management Area Over the course of 2010-2011 I was selected as team leader for a project focused on the Pawagi-Idodi Wildlife Management Area (WMA) in central Tanzania. The assignment was to develop an interpretive plan for the WMA and then use it to develop and fabricate exhibits for a very small visitor center. Sounds straightforward but the project was anything but! The WMAs are a system of community-based protected areas designated by the National Department of Wildlife. Each has an “authorized association,” a council of community representatives. In the case of Pawaga-Idodi the council represents 21 communities. Each WMA is also assisted by a designated non-governmental organization and in this case it is the Wildlife Conservation Society. Many players! Pawaga-Idodi was selected for this project as part of a USAID-funded Food Crisis Initiative in response to the global economic recession. The initiative helped develop tourism and resource protection infrastructure and employment for rural communities with WMAs while supporting their commitment to wildlife conservation. Because the WMA borders the Ruaha National Park, it also helps fortify the buffer zone between the park and settled lands. As Project Leader, I wasn’t asked who needed to be involved creating the plan. Rather I was asked how many members of the community we could employ in the development of the plan and products.

We ended up with a team of 18 young adults, 13 that made up the “content” team and 5 that became our “creative” team. None of our participants had any formal interpretive training. Most were the first of their generation to attend school and complete a secondary education. With the exception of one participant who had a business as the local sign painter, our artists were selected because they were the ones that liked to doodle in class. What an amazing group of young people they turned out to be. The actual exhibits needed to be something that the local communities could afford and sustain. So as my team member in charge of graphic design, Beth Perault, described it, we were very “organic” in our design and construction of the exhibit panels. Wood and paint purchased locally. And then there was the timeframe…. This project took place over the course of two 14-day sessions, one in November followed by one in July after locals had time to review and discuss the plan. As for logistics, to run a computer required us to fire up a generator and connect directly to it with an extension cord. Needless to say, most of our work was done the old-fashioned way with felt pens and flip chart paper, note books and pencils. Finally, this work took place using both English and Swahili. During the first session, we worked with a WCS staff that did all of the translation between our team and the participants. As their confidence grew, during the second session, participants opted to work in English with us and then switch to Swahili to work among themselves. Yet for all of its challenges, for all of the departures from an ideal planning situation, this project was one of the most fulfilling in my career. We focused on the essence of the message and shared the reality of the life the participants and their families led. We used our participants to work with the elders and other members of the communities, opening doors to stories and feedback we could have never obtained directly. We helped provide our participants with skills and practice that would better their chances of getting jobs as guides. We employed the process and tools of interpretive planning in ways that built connections and relationships well beyond the scope of our project. And we did all this in support of efforts to protect and steward the Greater Ruaha Landscape, one of the largest, most intact on the African continent (even larger than the Serengeti!).

I’d like to close by sharing with you the themes that our team chose to represent the Pawaga-Idodi Wildlife Management Area:

Primary Interpretive Theme: The Pawaga-Idodi WMA represents this generation’s choice to shift from short-term exploitation to long-term investment in wildlife conservation, with the hope of creating community benefits and better life for generations to come.

Subtheme for Biological Resources: The WMA helps protect and conserve the Ruaha Ecosystem, one of the largest, most intact ecosystems in Africa, with a diversity and abundance of wildlife that constitutes a world wildlife treasure.

Subtheme for Cultural Resources: Wildlife and people have coexisted for hundreds of thousands of years in the Ruaha ecosystem. Now the 21 villages and many tribes of the WMA are struggling to maintain traditions while choosing to adapt to a changing world.
Subtheme for Management: Community-based land management is the foundation of the WMA, which requires active participation, cooperation, and a commitment to sharing both responsibility and benefits.

Subtheme for Visitor Orientation and Safety: The communities and tribes of the WMA have joined together to offer “karibu” to visitors and invite them to share their unique histories and traditions. To truly understand this place, you must experience the culture(s) of the people.
Interpretive Media: Balancing Exhibit Technology Options with Costs, Maintenance, and Staff Time

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Keywords
Media, Technology, Site Constraints

Many people often have the same questions when choosing interpretive media. Together, we will review the usual suspects and help point you in the right direction for your site. Then as a group, we will brainstorm creative solutions for nearly any interpretive situation.

This 15-minute session is designed to help participants evaluate their site for the most appropriate interpretive media and technology for their programming and exhibits. Participants will learn how to develop criteria so they can effectively balance the demand for and realities of technology such as cost, maintenance, and staff time. A graphic flow-chart will provide a simple and engaging way for participants to walk their way through this sometimes convoluted process.

Whether projects have large or small budgets, are in cities or remote locations, or are at staffed or unstaffed sites, creative solutions for interpretive media are possible.
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Keywords  
environmental education, birds, youth, East Bay Regional Park District

Why study birds? They’re beautiful, fascinating and colorful. Birds are universal and easily accessible to everyone. From a child’s earliest experiences outdoors, birds are among the first mysterious animals they encounter. Carrying on their lives close to ours, birds allow us to observe, discover and enjoy them as we explore physical similarities and differences in our bodies as well as learn the importance of habitats. Birds allow us to understand how we can have both positive and negative influences on them and our shared environment. They provide a gateway into further exploration of the natural world. Birds connect children to history with links to our heritage. Symbols are important to children and birds can be iconic images tying us to our national pride and our unique state species: bald eagles represent our nation and each state has its own State bird. In our presentation we’ll discuss and practice age-appropriate activities for introducing children to their own local birds.

Learning about Birds: Young children can enjoy bird watching when you help them focus on these exciting flying, hopping creatures with simple tools and games. A pair of “tube” binoculars (made from empty toilet paper rolls) help preschoolers to focus on birds and screen out distractions, helping them build critical observation skills. Concentrating on bird behavior, rather than identification, helps young children discover that birds do many of the same things that they do in their daily lives: feeding, bathing, hopping, flying, and hiding. Close observation can help young children see the many parts of a bird’s body which lays the groundwork for later differentiating between bird species. Older children can use inexpensive binoculars to get a closer view of birds. By simply watching, children open up a new world: the details of a bird’s body as well as its activities. This process helps children develop the skills necessary for future scientific study as they learn identification skills. By starting with the common birds that share their everyday lives, children can discover the nature all around them. Flight, perhaps the most exciting element of birds, can be discussed and turned into play learning with models made to test which wing styles are good for long and short flights. Migration can be introduced with fun games featuring some of the challenges bird face along their route, an exploration of mapping, and the importance of the different habitats birds need for nesting, roosting, feeding, and wintering.

Helping Kids Take Action: Beginning with observation and play opens a child’s world to the ways they can get involved in conservation and environmental stewardship. There are many actions kids can take to help birds, from making bird feeders and nest boxes to participating in Citizen Science projects and reporting bird species seen to scientists. They can even undertake more complex habitat restoration projects that can benefit bird species.

References


Climate Change Agents at The Florida Aquarium

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Keywords
climate change, education, employee engagement, staff training, environmental education, stewardship, behavior change

Many organizations struggle to communicate climate change effectively to their visitors. The Florida Aquarium is no different, and over the years we have had success with getting climate change messages into exhibit graphics, teacher workshops, classes, and activity stations. Recently, a group of educators formed the Climate Change Agents, to determine what our organizational goal should be regarding climate change education. We discovered that there were many people within our organization that did not have a good understanding of climate change, and how people can help. The agents decided to formulate a plan to develop our climate change goal, educate our fellow team members, and ultimately improve the way we educate our visitors.

Our first step as Florida Aquarium Climate Change agents was to determine the goal or goals for our program. We had led several grant funded climate change education initiatives for students, teachers and adult learning, but needed to identify the next steps. A series of meetings led to the development of several goals. We would develop a climate change position statement for The Florida Aquarium that all team members would need to buy into. We would train staff and volunteers to be knowledgeable about climate change and to be able to interact with visitors appropriately. We would identify 3 climate change messages to start incorporating into the visitor experience. The agents started by each bringing our ideas about the three main climate change messages. We were then able to combine common threads into three distinct messages, or themes. The position statement was crafted from these top three messages. In order to conduct training for team members, we wanted to identify what their values were, and to find out what they knew about climate change. We conducted two different surveys, one asking them to rank their values, and one asking content questions about climate change knowledge. The results of these two surveys are being used to develop our internal climate change training, so that it is useful to all departments. The members of the education department served as "guinea pigs", taking the surveys first and attending the first climate change training, which focused on content as well as interpretation skills. We also decided to identify non-negotiable environmental stewardship behaviors that are already existing among team members, and ones that should be instated.

Through this process, the climate change agents were able to tackle a serious issue and highlight one major aspect of The Florida Aquarium’s mission statement, "to inspire stewardship for the natural environment". How can we continue to inspire stewardship in our guests if we haven't properly inspired our own team members? We now have a position statement, three succinct climate change messages for our visitors and team members, and a fantastic training program to get everyone on the same page. We will be continuing these trainings for other departments at our facility, and rolling out great habit-changing solutions to our team so that they can inspire visitors to do the same!
Commemorating Technological Disaster: Possibilities and Pitfalls

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Keywords
Commemoration; Technological Disaster; Interpretive Media; Multiple Audiences

As humans, we mark events of the past: birthdays, religious observances, memorials, tragedies, seasonal festivals, and more. Whether historic remembrances are celebrated or commemorated depends on the nature of the event. Sometimes these occasions are based in ritual, with a known and accepted pattern and form. However, world-changing events happen all the time. These usually unexpected happenings compel people to ponder new ways to remember the incident in an appropriate and effective way. As interpreters, we are likely to be faced with helping to decide how to commemorate historical events related to our sites at some point in our careers. How do we choose appropriate methods, audiences, and media, particularly within our often slim budgets, for these occasions?

As Outreach Coordinator for the Prince William Sound Regional Citizens’ Advisory Council (RCAC), one of my primary duties in the past year was to help our staff and board make choices about how to appropriately commemorate the 25th anniversary of the Exxon Valdez oil spill, previous to and up to the day of the historic event:

- “Project Jukebox” Exxon Valdez oil spill oral history archive project, in partnership with the University of Alaska Fairbanks and Alaska library associations;
- A traveling exhibit, developed to accompany Project Jukebox for use with area museums and libraries;
- A series of staff-led presentations hosted with partners in the member communities of Seward, Homer, Kodiak, Cordova, and Valdez, covered by local NPR stations and newspapers;
- A presentation held at Anchorage’s central library on March 24, 2014, introduced by the wife of one of Alaska’s senators and covered by state-wide television stations;
- Full-color, full-page advertising printed on March 24, 2014 in all of the region’s newspapers, focusing on changes made to oil transportation within the region over the past 25 years; and
- Sponsorship of a local tourism conference whose theme focused on the effects of the Good Friday oil spill (25th anniversary) and Good Friday earthquake (50th anniversary).

Each of these choices and media carried possibilities and pitfalls. In this presentation, I will compare and contrast our eventual decisions in context. From this, we can discuss how the effectiveness, the cost, and the differing needs of each of the communities we serve drove each choice, in hopes that other sites can learn from our efforts.

References


How to Make Friends: Successfully Working with Support Organizations

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Keywords
Friends groups, support organizations, voluntary community-based organizations, cooperating associations, public-private partnerships, fund-raising, volunteers

Abstract
Community support organizations such as friends groups can support natural and cultural sites through fund-raising and “friend-raising.” But to fully benefit a site, a friends group in turn also needs to be supported by its host organization. To accomplish shared goals, these volunteer groups and their host sites need to cultivate two-way commitment, mutual trust and respect, and open communication.

Stagnant or shrinking budgets at natural and cultural sites have created a need for community-based support organizations. Nonprofit “Friends of the Park” groups are perhaps best known for their fund-raising activities to benefit the sites they support. They are typically membership-based organizations, generating revenue in annual member dues and other donations. Friends groups also have executed major capital campaigns and created endowments (Cherng & Heaney, 2005).

Beyond raising money, friends groups and volunteers also can increase community support for a natural or cultural site. In a survey of friends groups at National Park Service units in the Midwest, community education and outreach were the most important activities after fund-raising (Baker, Dhungel, Davenport, Leahy & Bridges, 2010). Friends groups also serve as liaisons between the protected area, the administrative agency, the local community, and visitors. Volunteers or friends members can become advocates for the park. “Friends have access to key members of the community and the boards are often composed of movers and shakers who can make things happen” (Cherng & Heaney, 2005, p. 10).

The rise of support organizations also comes from a grassroots movement emphasizing collaborative decision-making and citizen participation in managing protected areas. Agencies have found that engaging community members is essential to broader management goals (Baker et al., 2010).

However, developing a successful support organization or expanding the capacity of an already existing group requires the host site’s support and a good working relationship between the two entities. In a friends group handbook, the National Park Service (2009) cautions that while the support of a friends group can be invaluable, the relationship requires significant work. “Park leadership and staff must be willing to invest the time necessary to help initiate a Friends Group, nurture the relationship, and develop a mature partnership” (U.S. National Park Service, 2009, p. 12). Cultivating a mutual relationship may require the agency to employ new resources and skill sets (Baker et al., 2010).

Like any nonprofit organization, friends groups face challenges internally—as well as in their partnership with their host site. When voluntary nonprofit community-based organizations (CBOs) in the Midwest that support NPS sites were surveyed about factors contributing to or constraining success, the most commonly listed challenges were funding or fund-raising; membership recruitment and retention; restrictive NPS policies; and lack of park support for the organization (e.g., space, staffing, and leadership). On a positive note, 91 percent of the organizations surveyed reporting having very good or excellent relationships with the NPS (Baker et al., 2010). These survey results show that friends groups are confronting the realities of attracting donors and engaging members while also facing lack of support from the administrators of the site they are trying to improve.

Research on friends groups has resulted in some factors that are key to success. Commitment is important in partnerships between host agencies and friends groups. Jones (2002), who conducted a study of friends groups that formed to support urban parks in two boroughs in England, concluded that “this form of innovative community involvement is unlikely to be successful without substantial two-way commitment on the part of both the local council and the community” (p. 305). The Center for Park Management, which interviewed friends groups and NPS staff, also found that both partners should commit to the relationship for the long haul. The partnership should be institutionalized so it is sustained beyond staff changes on both sides (Cherng & Heaney, 2005). Park superintendents can make or break the partnership. They can set the tone for the relationship and bridge the gap between the support organization and park staff, who may not understand the friends group’s role (Vaughn, 2013).

Strong communication between the host agency and support groups also is important. While both organizations may be working toward the same goals, they likely follow entirely different processes, especially when the host agency is government-run (Lu & Schuett, 2012). Clear and constant communication leads to understanding, and regular meetings keep both parties moving forward (Cherng & Heaney, 2005).

The Center for Park Management also found that successful partnerships have the same mission and goals and build trust incrementally through increasingly bigger projects. Both partners...
should contribute to the relationship, create a culture of sharing and collaboration, and mutually respect each other (Cherng & Heaney, 2005).

Members of friends groups and other support organizations are often the most passionate about a site, and they personally want to advance and improve it. Many support organizations have remarkable accomplishments to their credit, but the road to a thriving partnership can be fraught with speed bumps and setbacks. Like any personal relationship, partnerships are two-way, requiring the host site to in return also support their friends. Respect, clear communication, and shared goals put both partners on a path to lasting success.

References


Interpreting Mammal Skulls: Moving Beyond Identification

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Keywords
skulls, mammalian osteology, natural history interpretation

Abstract
Skulls present an amazing interpretive opportunity, no matter if they are found on the trail, in a visitor center, or being brought on an outreach. The public's fascination with skulls allows you, the interpreter, to capture your audience and encourage scientific inquiry. By moving beyond identification to the interpretation of a skull, you increase the engagement of your audience. During this presentation you will learn the basics of skull interpretation; dentition patterns, muscle dominance and attachment, eye location, and mandible shape will all be used to interpret a skull and the life of the animal to which it belonged.

Interpreters are often quick to identify the name of the object that is of interest to our audience. That is a Killdeer. That is big bluestem. That is a Raccoon skull. Once an object has been given a name, some of the original mystery about that object is gone. Also gone is the opportunity for scientific inquiry. Mammal skulls present an amazing opportunity to encourage discovery.

It is not necessary to be an expert in mammalian osteology or physiology to interpret a skull for your audience. How a mammal obtains its metabolic energy, determines a large portion of a mammal's natural history. Knowing if a mammal is a carnivore, omnivore, or herbivore allows you to place that animal in the context of its environment. By knowing some basic patterns about dentition, muscle dominance, eye location and mandible shape, it is possible to help others discover key aspects about the natural history of a mammal.

Eye Location
The location of the eye orbits on a skull provides information about how that mammal interacts with its environment. Eye orbits that are facing forward provide the animal with stereoscopic vision allowing the animal a greater sense of depth perception. This is crucial if you are a mammal that depends on the catching other animals as your source of energy. Carnivores have eye orbits facing forward. On the other hand, herbivores have eye orbits that face to the side. For herbivores depth perception is less important that being able to watch for potential predators.

Dentition
Carnivores need teeth that are able to grab, tear and slice. Their dentition is dominated by large canines. In addition they need molars and premolars that will be used to slice flesh. The upper and lower teeth of a carnivore come together acting like a pair scissors. The pattern found in an herbivore is very different. An herbivore needs teeth that will allow it to grind up excessive amounts of plant material. The molars and premolars of herbivores land on top of each other rather than sliding past each other as in carnivores. While canines are absent or reduced in herbivores, the incisors of some herbivores are large and dominate the dentition.

Muscle Dominance
A mammal jaw is closed by two different muscles, the temporalis and the masseter. Each muscle focuses its force in a different location of the closing jaw. The temporalis muscle focuses the closing force on the canine and incisors. For carnivores this is the dominate jaw muscle. It is what allows them to catch and kill effectively with their canine teeth. The masseter focuses the closing force on the molars and premolars. For herbivores this is the dominate jaw muscle. It allows for the constant and steady grinding of plant material.

While it is not possible to see the muscles on a clean skull, it is possible to see where those muscles attached. The temporalis muscle attaches to the side of the skull and the sagittal crest, and then runs behind the zygomatic arch. A carnivore skull will tend to have a pronounced sagittal crest and a wide spreading zygomatic arch to accommodate the temporalis muscle. These traits are reduced in herbivores. For herbivores the zygomatic arch is thick and substantial, so the masseter muscle can attach, yet the breadth of the arch is narrow reflecting the smaller temporalis muscle, and the greater importance of chewing with molars.

Mandible Shape
The mandibular condyle is the part of the jaw that attaches to the skull to form the joint. The location of the condyle relative to the plane of the tooth row gives a clue to the diet of the mammal in question. If the condyle is in line with the tooth row, the hinging of that joint generates forces similar to a pair of scissors. This is important for carnivores slicing flesh from their prey. A condyle placed well above the tooth row causes the entire tooth row to connect with the entire row of teeth found on the skull similar to a pair of slip jaw pliers. Herbivores have a mandibular condyle that is well above the tooth row, maximizing their ability for all of their teeth to grind plant material.
Omnivores
Distinctions have been drawn between the skull patterns found in carnivores and herbivores. Many mammals do not fall into one of those two groups but rather fall somewhere in a continuum between the two. It is important to remember that most animals will not pass up a free lunch. While some omnivores will have a skull pattern that is a blending of herbivore and carnivore traits, many other omnivores with have skull traits that are more reflective of their evolutionary past than their current diet.

Conclusion
By learning some of the basic patterns found in mammal skulls, it is possible to interpret a skull for your audience. Even without knowing what type of animal the skull belonged to it is possible to piece together key elements of that mammal's natural history. More importantly knowing these patterns will allow you to ask your audience questions that will engage them in the mystery of a given skull and lead them on the path of scientific inquiry.

References

Volunteers on Patrol: Providing On-Demand Information and Education Out on the Trails

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Keywords
volunteers, patrol, enforcement, peer enforcement, mountain bikes, equestrians, multi-use

Boulder County Parks and Open Space began using volunteers to patrol our trails and parks in 1996. Initially called the Park Host program, this group comprised a handful of volunteers who biked and hiked the trails to answer questions, encourage responsible trail use, and address infractions of park regulations when appropriate.

Over the years, the types of activities visitors participate in and how visitors use the trails has continuously evolved, prompting changes in the structure of the volunteer program. To better serve our increasingly diverse population of visitors, we began recruiting volunteers with different interests to patrol our trails.

We have successfully addressed the challenges that come with an ever-expanding program, including volunteer training and retention, dealing with changing volunteer responsibilities, and ensuring continued diversity. Today, our current Park Patroller volunteers are part of a multi-dimensional program that consists of the Citizen Ranger Corps (CRC), Angler Hosts, and Boulder Mountain Bike Patrol (BMBP) programs. In 2013, a total of 118 volunteers contributed 2,700 hours of time out in the parks.

Boulder County staff has learned that “peer-to-peer” contacts are more positive and effective in educating visitors on proper trail etiquette than a ranger wearing a law enforcement uniform. Therefore, by establishing a Park Host program and training a group of volunteers to patrol the parks on foot, on bikes, on horseback, and with fishing poles, we could provide these productive peer-to-peer interactions.

At the time of the formation of the program, tensions were high between mountain bicyclists and other trail users, especially at one of our multi-use properties. In response, our department took measures to reduce visitor conflict, including regulations restricting mountain bikes to certain days of the week and establishing one-way travel on the trail. This decision was very unpopular with some members of the mountain bike community, which resulted in our volunteer mountain bike patrollers leaving the Park Host program. These volunteers feared this policy might be expanded to other trails, further restricting mountain bike use.

Fortunately, the Boulder Mountain Bike Patrol, a volunteer organization associated with the Boulder Mountain Bike Alliance, approached us to partner with them in forming a multi-agency volunteer bike patrol. This would allow mountain bikers to patrol on three agency’s properties without having to attend three separate trainings. In 2007, the first group of volunteers, trained to patrol on United States Forest Service, City of Boulder Open Space and Mountain Parks, and Boulder County Parks and Open Space hit the trails. These three agencies, in cooperation with the volunteer officers of the Boulder Mountain Bike Patrol, organize an annual full-day training for all of the 75 volunteers. It has been wildly successful and, as a result, they have volunteered thousands of hours and patrolled hundreds of miles of trail.

The next goal was to increase the number of equestrians patrolling our trails. While the percentage of equestrians as trail users is very low compared to the rest of our visitors, it was important to have equestrian ambassadors on the trails to educate other visitors unfamiliar with the animals about how to interact with horses and yield appropriately. We already had a group of highly trained equestrians in the county that we could put to good use: the Boulder County Sheriff’s Office Mounted Search and Rescue. These volunteers were always looking for additional ways to serve the community, so we approached them about volunteering to patrol our properties. In the first year of the program, we more than tripled the amount of equestrian volunteer patrollers over the previous year!

Our next challenge involved spreading the word about our fishing regulations. Our traditional method of having volunteers patrolling trails and talking to visitors did not work with anglers. So, for our new Angler Host program, we decided to station our volunteers at the trailheads of our popular fishing parks. Each volunteer would staff a trailhead display, which they helped design, to explain our fishing regulations as visitors entered the park. We also developed Kids Gone Fishing programs, similar to Colorado Parks and Wildlife Kids Fishing Clinics, which allowed these volunteers to teach first-timers about how to be a responsible angler.

Finally, we decided that we needed a new approach in order to grow our original program of park patrollers, and developed the Citizen Ranger Corps program. These volunteers go through an eight-week (one day a month) training program, focusing on all aspects of the Parks and Open Space program. These volunteers patrol the trails, educate users, and collect visitor information. These volunteers also participate in focused patrols in areas where we need extra eyes and ears. In return, they have the opportunity to participate in advanced training sessions, workshops and field trips offered throughout the year. They also help assist with public outreach events, such as festivals, special events, trailhead displays, and Junior Ranger programs.
We have found a multi-layered system of volunteer programs is the most effective and rewarding way of managing visitors in our park system. We continuously evaluate and evolve these programs to ensure they remain relevant to the park visitors on Boulder County Parks and Open Space. The characteristics and needs of our “average” visitor changes as the demographics of the county change, and new recreational fads require us to work with these new interests instead of react to them. Deploying a diverse team of trail users as volunteers is a great way to remain relevant in our community. We also have found that offering volunteers continuing opportunities to learn new things and interact with our staff is the key to retention in these programs. We are lucky to be supported by a department that encourages innovation in every aspect of natural resource management. We don’t expect that these programs will remain the same in another 10-15 years and we look forward to seeing what is on the horizon!
Managing the Chaos

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Keywords
volunteer coordination, management, volunteers, behind the scenes

The City of Fort Collins Natural Areas Department struggled to manage the daily logistics of a large education program. With hundreds of educational programs and over 1600 volunteers, "chaos" was the name of the game. The struggle finally ended with the development of a custom-built database and the implementation of new organizational tools. These tools were developed in-house by a local company with the help of experienced Volunteers and Volunteer Coordinators. Through this presentation you will learn about tools that might help you control the chaos in your own organization. You will also have the opportunity to network and share ideas with other volunteer managers.

Like many educational organizations, the City of Fort Collins Natural Areas Department (NAD) struggled to keep up with the constant demand for more opportunities. Citizens wanted more educational programs and more volunteer opportunities. The NAD had a small education staff and was using 5 different databases to track necessary information. These databases were antiquated and cumbersome, not to mention frustrating for customers to use. In an effort to increase the capacity while, at the same time, increasing customer service, the NAD invested in a custom-built database called Nature Tracker. Nature Tracker was the culmination of an exhaustive three-year search for an off-the-shelf solution. With no easy answers, the NAD decided to create its own database. Nature Tracker is an all-inclusive database that allows citizens to search and sign up for educational programs. The system also allows volunteers to look for opportunities that fit their interests and qualifications, sign up to volunteer, manage their profile information and communicate with other volunteers. Part of the vision for Nature Tracker included the ability to share it with similar organizations. Any organization can purchase Nature Tracker at a fraction of its original development cost. Square-I Technologies, the developer, can customize NatureTracker for your organization. Once a group of partners is established, everyone can take advantage of the grant-back program which allows all users to benefit from improvements that other partners invest in. Nature Tracker is just one of many solutions that the NAD has implemented in the 20 years since it began. As an agency that relies heavily on volunteers to act as front-line interpreters, the NAD has had to think outside the box to stay innovative and successful. Creativity, flexibility and persistence have helped to keep the NAD on the cutting edge of interpretation.

No matter the size of your agency, you do not have to live in a constant state of chaos. By implementing a few tools you can spend less time at your desk and more time doing what you love!
The Seven “H’s” of Heritage Interpretation

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Keywords
history, living history, poetry, ethics, heritage

I am a storyteller, focusing mainly on events from the history of the American West from the Territorial period to the latter twentieth century. I tell many of these stories in the vernacular of cowboy poetry requiring me to use vocabularies specific to ranching, mining, and railroading; to adopt an exaggerated persona; and to employ a variety of accents and vocal mannerisms. Diligent research and respect can make the difference in the audience’s perception: am I conveying an essential truth, or am I ridiculing others? Humility is mandatory. I’m not infallible, and I’m standing on the shoulders of giants.

Authenticity and integrity are indispensable if one is to speak for, or to speak the actual words of, people who lived in times and circumstances often very different from one’s own. Heritage interpreters and historical re-enactors must develop an empathetic rather than a sympathetic world view relative to their subjects. Interpreters must become informed about the various conflicting points of view that influenced the events they interpret or the characters they portray. Historic personages and “ordinary people” are products of the choices they made or make in their lives. The strongest of these choices result in their championing or rejecting conventional and/or controversial ideas of their day. No matter which side of an issue your character was or is on, it is necessary to be familiar with arguments for other points of view. Sympathy is the role of the audience. Human beings are naturally sympathetic to their own individual feelings and predicaments, but they are more consciously engaged in self-justification or propagandizing, and are capable of being motivated by shame and even self-loathing. The principles of good drama apply here: sympathy is bland; struggle and conflict are exciting and engaging. Laughing with is simpatico; laughing at is alienating. Interpretive integrity demands we strive for understanding, leaving judgment to the audience. Another problem confronting heritage interpreters is “gatekeeping”. That is, some people are reluctant to provide information to “outsiders” or to accept them as qualified to interpret “their” history. They may mistrust the motives or question the competency or legitimacy of the researcher. They are emotionally invested in the events in question, perhaps even defining their own identity by their ethnic, familial, or regional association to a particular time, place, or historical event. They may seem defensive, and be suspicious of versions of the story that do not accord with their feelings. Author Zane Grey encountered this while writing his novel To the Last Man, about Arizona’s Pleasant Valley range war of the latter 1880’s. His initial attempts at interviewing local residents met with silence or hostility. Only after spending several seasons living in the region and interacting with the resident families did he gradually induce some individuals to speak to him. Their recollections were often conflicting, and as is to be expected, reflected the biases of the two major factions that had engaged in the hostilities. I have encountered similar instances of such gatekeeping. On one occasion, as I was preparing to perform my program, I was confronted by a member of one of the local ranching families who demanded, “What gives you the right to call yourself the voice of the Verde Valley?” I explained to him that he had misunderstood the title of my program, Voices of the Verde, and that I was in fact giving voice to the written words of some of the valley’s early settlers. Following another program, I was told that an elderly lady had taken offense at what she considered to be my slanderous treatment of her father’s reputation. I contacted her to apologize for any unintended offense I may have given. She angrily told me I had gotten my facts wrong, and that I had no business doing such a program since I “didn’t know what I was talking about.” When I asked her to name the specific facts, it turned out I had not gotten them wrong. She had misheard and conflated them. I told her that I had taken my facts from an interview given by her own uncle, quoting them from a transcript of the interview which lay open before me as we spoke. “My uncle had Alzheimer’s when he gave that interview,” she said. “I know because I was his caretaker at the time!” Both of these offended parties forgave my “transgressions” and invited me to contact them if I had any future questions regarding my researches into local history. What seemed to matter most to them was my acknowledgement that they were more directly connected to these events in local history than am I.

Listeners often conflate facts and stories. They combine or hybridize elements from different stories, resulting in inaccurate associations and misperceptions. I perform several stories in the course of a single program, so I’m not surprised by this (see George Miller’s “magic number” 7 + or – 2) and try to prevent it by making myself available for questions at the end of every performance. However, most such conflations tend to come after a period of time has passed and I receive these mainly in the form of email queries. An adult education coordinator colleague once contacted me after one of his students gave a confused opinion and cited my program as the source for his scrambled information. As interpreters, personal integrity obliges us to address such inquiries in the interest of promoting correct information and clear communication. I have changed the way in which I deliver certain pieces of information after being informed of these kinds of misunderstandings. In dealing with humorous stories which are based on historic records or anecdotes I allow myself more artistic license in adding color and atmosphere to the details (poetic rhyme schemes provide additional challenges) but I always remain true to the facts as best as they are known. When history and heritage are my topics, I focus on seven “H’s”:
humanity, humility, heroism, hubris, hardship, humor, and above all I strive to honor those whose stories I tell.

References


Two Way Communication + Technology = Enhanced Guest Engagement

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Keywords  
"Climate Change", technology, “guest engagement”, “zoo interpretation”, "dialogic interpretation", "visitor engagement"

Creating and developing these interpretive experiences goes beyond the delivery of facts (Brochu and Merriman 2002). Interpreters must explore techniques that will provide enjoyment and relevance to their daily lives. CZS staff attended the National Association for Interpretation’s 2013 National Workshop in Reno, Nevada where seminars were held highlighting the role of dialogic interpretation and technology can have in the future for interpretation. Staff decided to incorporate technology and two-way communication techniques into 2014’s interpretive experiences. Our goal was to find out if we can enhance guest experience by switching to dialogic interpretive encounters and increase the amount of time guests stay engaged during mission-based zoo chats while incorporating technology. We also added the Mile in My Paws experience. Mile in My Paws is a technological experience facilitated by interpretive staff at Brookfield Zoo where guests assume the role of a polar bear hunting for seals while experiencing the effects of diminishing sea ice. Interpretive staff utilized a tablet to control the game and provide supplementary information regarding polar bears, sea ice, climate change, and conservation. Technology and interpretation were combined as a way to engage guests in conversations that would deepen their understanding of climate change and inspire action on behalf of animals and nature. We also wanted to determine the practicality and feasibility of using the A Mile In My Paws as a guest engagement tool during the peak season.

Methods For our assessment we examined two different chats, which occurred multiple times throughout the week during the summer season. We video recorded a total of 48 chats using a Microsoft Surface Tablet, 24 Bee chats and 24 Bird of Prey (BOP) chats. 12 of each style chat were presented. We selected two specific keepers to be a part of our study for the BOP chats and three specific team members for our Bee Chats to provide consistency in comparisons and controls for research. For each chat, we identified a conservation action we wanted guests to do as a result of attending the experience. The Bee Chat had seed balls. Guests were invited at the end of each chat to take a seed ball home. Additionally, guests were invited to scan a QR code to download the Bee Smart App which allows users to find plants that are best for their hometown. The BOP chats focused on the problematic effect rodenticides have on birds of prey when Rodents are ingested. Two web sites were created, one address for the dialogic chats and one for the thematic chats. The addresses were given out to interested attendees and linked them to a web page providing information about nontoxic rodent control. Participating staff attended a facilitated dialogue training. The training introduced the teams to facilitated dialogue techniques and allowed the group to practice using open and closed questions strategies. Additionally, a separate training was designed for team members who would be facilitating climate change interpretation as part of the Mile in my Paws experience.

Preliminary Findings As of the submission of this paper for the source book, we are still in the process of analyzing data. Reflecting on our project observations, we feel location had a much greater impact on guest engagement in the experience than the interpretive technique. A follow-up study would look at the affordances and constraints of each technique based upon location and the impact that has on interpreters. The bird of prey chat was given in along one of the main roads connecting the east and west ends of the zoo. Foot traffic and the Motor Safari (zoo tram tour) running along the road combined with lack of shade and seating makes this a transient area. Regardless of technique utilized crowd size varied, guests joined and left the chat throughout and the interpreter felt the need to start over frequently to address and orient new participants. The bee chat was conducted in a small clearing of the main path of the zoo’s Great Bear Wilderness exhibit. Like the bird of prey chat area there is no shade but there are benches in the Naturalist Outpost clearing. Although the bee chat had fewer guests attending as compared to the bird of prey chat, over 90% of guests attending the bee chat stayed for its entirety. The interpreter did not need to restart or orient new guests to the experience as often as was done in the bird of prey chat. A Mile In My Paws proved to be a very popular engagement tool. We found that crowd size in conjunction with location had an effect on the interpretive technique used when facilitating the experience. Our preliminary findings show thematic chats are more practical when large crowds are present, dialogic interpretation is best used when there are small crowds and a combination of thematic and dialogic techniques served best for moderate sized crowds. In addition, game mechanics needed to be altered to find a balance between the participant goal of reaching the seal being too easy or too hard. The program manager (Andre) became familiar with onsite trouble shooting issues and was able to identify what could be solved onsite versus the program developers. Guest experience evaluations will be conducted in 2015. The Microsoft surface tablets provided immediate access to information needed by interpreters which lead to increased confidence when conducting some programming. However, there were some unforeseen challenges. When temperatures were above 80 degrees Fahrenheit the surface tablets would often overheat and shutdown during filming. Glare from the sun also hindered...
interpreters' ability to use them in providing additional content such as photos and videos to guests when outdoors. Despite the challenges experienced, we feel the Surface tablets when used under the right conditions served our purposes well.
Art You Glad They Came?

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Keywords
Curriculum, art, waterfowl, wetlands, conservation, education, activities, giveaways, science, ecology, nature

The Nonformal Education Guide for the U.S. Fish and Wildlife Service's Junior Duck Stamp Program offers guidance and fun activities for engaging youth in exploring nature, in learning about waterfowl and wildlife conservation, and in participating in a conservation service project. This presentation will show you how to harness this unique interdisciplinary program as an outreach tool. Plus, you will walk away with a set of fully developed activities to add to your interpretive toolkit!

What is the Junior Duck Stamp Program & Curriculum?
The Federal Junior Duck Stamp Conservation and Design Program provides a science-based arts curriculum emphasizing conservation of waterfowl (ducks, geese, and swans) and wetlands. It is designed to spark youth interest in habitat conservation through a variety of complementary academic disciplines: science, art, math, and technology. The program encourages students to explore, investigate, and express what they’ve learned through science and the arts, and then share their thoughts and feelings with other members of their communities.

According to the 4-H SERIES Project, "During the past 30 years, science educators have identified a sequence known as the learning cycle that has proven to be an effective means for learning concepts and processes of science. The learning cycle also has been found effective for developing reasoning abilities and for reducing scientific misconceptions.” The activities in this curriculum were developed based on this learning cycle instructional model. Each activity in the guide emphasizes exploration, concept introduction and concept application followed by time for reflection.

How Can I use this Program at my Site?
Interest in waterfowl can cross cultural, ethnic, social and geographic boundaries and studying these familiar birds can help introduce or reconnect visitors to your site or the outdoors in general. Since visitors living in rural, suburban or urban areas can observe waterfowl in their neighborhoods, they can often bring the experience with you home with them and make connections to local and relevant issues involving waterbirds, wetlands and conservation.

The Junior Duck Stamp curriculum will encourage your visitors to connect to your site in a new and meaningful way. Any participant in your program from grades K-12 can extend their adventure by participating in the Junior Duck Stamp Art Contest which can spark a great deal of enthusiasm for learning. Plus this is a great guide for winter interpretation, since the Junior Duck Stamp Art Contest begins each spring right after waterfowl are most plentiful in the lower 48.

What about the hands on activities?
The Junior Duck Stamp Youth Guide features a built-in method of involving youth in partnership roles during their waterfowl and wetland investigations — keeping a field or nature journal that we’re calling a Nature Notebook. NAI Workshop attendees who attend the mini-workshop presentation will get a sneak peak at the notebook. They will also get to do an activity straight from the Nonformal Educator Guide so they can experience the curriculum just how their visitors would. Interpreters and educators attending the mini-workshop will also receive curriculum guides (up to 50 available on CD) and have the opportunity to participate in a discussion with their peers on ideas for using the guide at their sites.

The Federal Junior Duck Stamp curriculum guides can be valuable items in the toolbox of any interpreter or educator. The ready-to-use, well researched and field tested activities provide a quick resource when building a program about wetlands, conservation or waterfowl at your site. In addition, the program encourages people to continue their experience at home by exploring wildlife in their neighborhood and participating in the Junior Duck Stamp Art Contest. NAI conference attendees and professionals who join this mini-workshop will have a unique opportunity to experience an activity from the Nonformal Educators Guide and take away this valuable resource for use at their own site. As an added bonus, they can choose to support the program directly by purchasing their own Federal Junior Duck Stamp and will get a chance to engage in innovative discussion on ways to utilize this valuable interpretive resource.

References
Plate Spinning, Cat Herding, and Scat Shoveling: Supervisor Survival Strategies

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Keywords
supervision, staff management, professional development, leadership, delegation, mentorship, coaching, time management, performance reviews, negotiation, budget management, partnerships, work life balance,

Transitioning from front-line interpreter to “behind the scenes” manager can be a daunting task without prior experience, proper preparation and skill development. Many of the skills that make a manager successful are quite different from those that make for successful programming. But, don't despair; there are many resources and strategies available to both prospective and established supervisors. We'll take an overview look at some of the key skill areas necessary for a supervisor to succeed and also identify ways to gain experience, feedback and support in those areas. By the end of this presentation you will have some new tools, strategies and support structure to master the three ring circus of supervision. So get your plates, your prod's and your shovel and let's get to work!

We've broken the core competencies into three distinct categories: Plate Spinning, Cat Herding, and Scat Shoveling:

Plate Spinning: It's Monday morning at the park. Two of your staff have called in sick, leaving you short staffed for the morning's program. Your boss has left a message that your budget projections for next year are due by noon. An unexpected group has arrived with three busloads of visitors. The freezer is out in the main bathrooms. You look around and realize everyone's looking to you for a solution. Multi-tasking, problem solving, setting priorities, and delegation are keys to surviving as a supervisor. Thankfully, there are many resources for developing your skills in these areas. We'll discuss a few resources and challenge the group to use their own skills to troubleshoot a scenario that could challenge the best of the best!

Cat Herding: People, People, and more People. Supervision, management and leadership are, at the core, all about people skills. If you think supervision means that you'll be a REALLY awesome boss interpreter who gets to balance a budget, pay a few bills and make a lot of cool decisions, then this might not be a good career path for you. Managers will tell you that the bulk of their time is spent working on staffing, interpersonal issues and negotiations. People management can range from extremely frustrating (as in the example above of staff who “aren't speaking”) to fun things like helping staff's ideas come to life, to extremely rewarding opportunities like mentoring staff as they grow in their careers. It can even include supervising your supervisor! How do you handle the prickly conversations effectively? How do you go about hiring someone without getting sued? How do you move a project forward with staff who don't want to move, at all? We'll spend more time discussing these challenges and working through some real-world examples and solutions as a team. We'll also spend a bit of time exploring work/life balance strategies for keeping yourself healthy and happy even when you're dealing with staff challenges at work.

Scat Shoveling: Sometimes it just hits the fan. As the manager of an interpretive facility, it's only a matter of time before something goes wrong and, when it does, folks will be looking to you to have a solution. Managing customer service issues, crisis, emergency response, stress, budget shortfalls, confidential personnel issues and more are priceless skills a manager might need to bring to bear at a moment's notice. In this section, it's your chance to bring your horror stories. What's your best example of a time when it all came horribly off the rails at your operation? How did you get through it and what did you learn? What would you do if it happened again? Could you have prepared yourself better to handle a situation like this? We suspect this section may be part knowledge development and part group therapy and it's our intent to use the power of the group to help one another develop strategies for handling those Really Bad Days. It will also set the precedence for you to develop a peer group of your own to help work through challenges like the ones discussed in this section. We learn from our experiences, as well as others.

After digging into some of the challenges a supervisor might face, never fear, we don't intend to leave the group in the depths of despair. We'll wrap up our session with an introduction to some of the new resources that NAI is working on providing for new, old, and prospective supervisors alike. NAI's training coordinator will be joining us to discuss an exciting new initiative that the organization is working on and to seek input from this session's participants on the types of resources that they might find helpful. Before we send you out into the world, we'll give you some examples of management and leadership development programs that may help you along your path. We'll also leave participants with a list of ongoing resources to keep the kinds of conversations going that have started in this short workshop!
References

Leadership:


Supervision:


Nelson, Bob and Economy, Peter *Managing for Dummies*. Hungry Minds, 1999

Strategic Thinking/Planning:


Time Management:

Covey, Stephen R. *First Things First*, Simon and Schuster, 1994


Managing Change:


Problem Solving:


Delegation:


Written Communication:


Angell, David and Brent Heslop, *The Elements of E-Mail Style*. Reading, MN. Addison-Wesley Publishing Company 1994

Boston: Allyn and Bacon, 2000

*Customer Service:*


*Survival:*

Thinking Sideways for Effective Interpretive Managers

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Keywords
setting priorities, management strategy, self-assessment, effective use of time

“In a well-designed organization, the only issues that should reach a senior manager’s attention should be complex, dilemma-like ‘divergent’ issues. These are the issues that require the thought and experience of the most senior people, in addition to the input of less experienced people. If top managers are handling twenty problems in a workday, either they are spending too much time on ‘convergent’ problems that should be dealt with more locally in the organization, or they are giving insufficient time to complex problems.” (Senge 1990)

Interpretive managers face many challenges and frustrations in trying to attain their professional and interpretive goals within their organizations. Thinking Sideways is a tool for the manager to apply self-knowledge to assess priorities and formulate a strategy for effective goal attainment. Thinking Sideways is not about time management, but rather about the self-discovery of where and how one’s energy is allocated toward the multifaceted aspects of one’s job. This self-awareness is an example of metacognition, a higher order thinking skill involving knowledge and control of self as well as knowledge and control of the process (Marzano 1988).

When practiced, Thinking Sideways or tasking theory is an example of meta-cognition. A practical way to implement a Thinking Sideways, or tasking theory, is to view tasks as high level, intermediate level or low level. Each individual can decide at what level tasks make up one’s typical workload, based on the characteristics for the task levels (Figure 1). Tasking theory was originally derived from an extensive time/energy study of what a manager was doing with one’s time.

High-level tasks are future-oriented and the impact on the organization is substantial. High-level tasks are sometimes difficult to identify but do require considerable strategic thinking. High-level tasks take time but when accomplished they provide deep, long-lasting and meaningful feelings of accomplishment. Normally these tasks should not be delegated. High-level tasks usually remain high level even after completion because the task usually cycles. Examples of high level tasks for an interpretive manager might include establishing and maintaining relations with major donors, developing multi-faceted partnerships, developing vision scenarios for the organization’s future, coordinating goal setting and mission direction, enhancing organizational relations within the community, and engaging in strategic planning processes. Generally, high-level tasks focus on people building external to the organization.

Intermediate level tasks are medium range focused, located between today’s agenda and the long-range future. Intermediate level tasks focus on internal relationships and responsibilities such as staff communication, training and supervision. Projects are attainable and meaningful to the current structure and culture of the organization and are produced within a relatively short period of time. Project results are identifiable and concrete. Intermediate level tasks could be delegated to others. Once completed, an evaluation of the task is needed to determine if the task should be moved to a higher, remain at the intermediate level or lower level function. Intermediate level tasks could include staff communication, meeting management, grant writing, budget planning and marketing. Generally, intermediate level tasks focus on people and process building internal to the organization.

Low-level tasks are many times the most “fun” because these tasks have challenges that are easily defined and solved. Managers may find themselves accepting low level task responsibilities because, when completed, there is an immediate sense of accomplishment. The trap, however, is that low level tasks are very short-range focused and do not necessarily contribute to the long-range success of the organization (or the individual!). Low level tasks, once completed, remain low level tasks. Examples of low level tasks could include cleaning the toilets, deciding what color upholstery for new office furniture, painting signs, balancing petty cash accounts, constantly responding to emails and text messages, working on the copier, organizing the educational storage room and many others. Generally, low-level tasks focus on things rather than people or processes and should be delegated.

A self-assessment of one’s tasking priorities may reveal an unhealthy reality (Figure 2).

If a manager identifies sets of high, intermediate and low level tasks and determines that most of the time and energy is focused on low to intermediate level tasks, then that person and the organization have a problem. Too much energy is being spent on tasks that simply do not contribute to the long-range success of the organization.

The time on task goal for the director would be to try to flip the amount of time/energy on the tasks (Figure 3).

Bennis (1985), Kouzes and Posner (1991) and other leadership researchers support the concept that effective leaders spend less time on routine, low level tasks and more time on future-oriented higher-level tasks.

The benefit of the tasking model is that it can apply to many
Figure 1. Characteristics of Task Levels

<table>
<thead>
<tr>
<th>Effect</th>
<th>High</th>
<th>Intermediate</th>
<th>Low</th>
</tr>
</thead>
<tbody>
<tr>
<td>Long-range effect, future oriented, +6 years</td>
<td>Medium range effect, 0-4 years</td>
<td>Short-range effect - today</td>
<td></td>
</tr>
<tr>
<td>Focuses on external relationships</td>
<td>Focuses on internal relationships</td>
<td>Internal-physical</td>
<td></td>
</tr>
<tr>
<td>Immediate results not seen</td>
<td>Results within relatively short time</td>
<td>Results seen now</td>
<td></td>
</tr>
<tr>
<td>Process orientation, open, few conclusions</td>
<td>Product through process, some conclusions</td>
<td>Product, conclusion</td>
<td></td>
</tr>
<tr>
<td>Accomplishments are long-lasting, sometimes career defining</td>
<td>Accomplishments are attainable, meaningful, can build confidence, sometimes career developing</td>
<td>Immediate sense of accomplishment, but of short duration or of little consequence, sometimes career ending</td>
<td></td>
</tr>
<tr>
<td>Task should not be delegated</td>
<td>Task could be delegated</td>
<td>Task should be delegated</td>
<td></td>
</tr>
<tr>
<td>Remains high level task even after conclusion</td>
<td>Could remain intermediate or become evaluateequires evaluation to Remains intermediate, or move to higher or lower level task</td>
<td>Remains low level task</td>
<td></td>
</tr>
</tbody>
</table>

Figure 2. Amount of Time/Energy on Tasks

<table>
<thead>
<tr>
<th></th>
<th>High Level</th>
<th>Intermediate Level</th>
<th>Low Level</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>10%</td>
<td>40%</td>
<td>50%</td>
</tr>
</tbody>
</table>

Figure 3. Amount of Time/Energy on Tasks

<table>
<thead>
<tr>
<th></th>
<th>High Level</th>
<th>Intermediate Level</th>
<th>Low Level</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>50%</td>
<td>40%</td>
<td>10%</td>
</tr>
</tbody>
</table>

positions within the organization. Everyone on staff has high/intermediate/low level tasks regardless of their position but those tasks are different depending on the position. For example, a maintenance supervisor’s high level tasks may include enhancing relations with vendors, preventive maintenance planning and input into expansion designs. Intermediate level tasks include budget planning, capital project monitoring, and infrastructure repairs. Low-level tasks include custodial work, lawn care and mail runs.

Thinking Sideways is something we all do as we mature in our profession, but it may not be something we have actively engaged in thinking about or placing into practice. The tasking model assumes the manager is working in an open learning organization and has some decision-making capabilities on how one’s time on task is determined. The learning organization will embrace managers who can set and act upon future-oriented tasks. The non-learning organization, supervisor or board presents a challenge, but not one that is insurmountable. The move towards higher level tasks may take more time and come more slowly.

Before anyone decides never to empty the trash again, there are a few points to consider. Even if it were possible to eliminate the lower level tasks completely, you would not want to do so. We all need to see some things reach closure and we can use low-level tasks for mental breaks.

The opposite is true, too. Even if it were possible to spend all your time on high level tasks, that would tend to isolate you from the on-going heartbeat of the internal organization. A good way to begin implementing the tasking model is to gather the staff together and ask each person to participate in a self-assessment. Individual and organizational action plans designed to move people in appropriate tasking levels will help assure a successful future-oriented organization.

References
The Virtuous Circle: Blending Formal and Nonformal Education for Maximum Impact

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Keywords
field experience, field trip, nonformal education, formal education,

Within the museum field there are currently two terms of importance to interpreters and classroom teachers. These terms emphasize what should be a seamless connection between formal and nonformal education. Whether the task is developing a classroom lesson or unit plan or designing an interpretive experience, keeping these two concepts in mind throughout the process is vital to the development of highly educational learning experiences.

In his 1989 book, The Great Good Place, Ray Oldenburg defined three places in our lives (Oldenburg, 1989). The first place is home, the second place is work (school for children as that is their work) and the third place is the anchors of the community, the places where people socialize. Subsequent writers and scholars have refined the idea of the third place.

In 2009 the Institute of Museum and Library Services (IMLS, 2009) produced a discussion guide based on a two day meeting between a broad range of library and museum professionals. The meeting focused on discussion of the future of museums and libraries in the 21st century. For the sake of simplicity and inclusion, the term museum, as used here, is its broadest definition and includes most, if not all, of the entities represented by NAI and served by the interpretive profession. One of the nine themes developed was that of libraries and museums as the third place and how that role should evolve in the 21st century to best meet the needs of society. For our purposes here, since our topic deals with K-12 education, the second place is school rather than work. And of course, the third place is the variety of museums, zoos, aquaria, parks, nature centers, historic sites, and such, served by interpreters.

These two “places” represent the realms of formal and nonformal education, respectively. One of education’s chronic problems has been, and remains, the dichotomy between these two realms.

Despite frequent calls for greater emphasis on experiential education, recent trends in formal education have pushed such opportunities for K-12 students farther into the background, often, completely eliminating them. We doubt there is anybody at an interpretive site that has not experienced a drop in school visits in recent years. Most of the drop in school visits to nonformal sites, field trips, certainly is attributable to shrinking budgets and crowded curricula but the anecdotal evidence also suggests that their attraction has diminished, at least in part, due to their misuse. The term “field trip,” as often as not, is equated with a day off from school with no connection to the classroom or what is being learned there. So part of our mission here is to help the term shed some of that negative baggage and to set the record straight. Well planned and well executed field trips remain a valuable resource for classroom teachers and provide students with experiential learning opportunities not available in the classroom (Nabors, Edwards, & Murray, 2009).

Ham (2013) differentiates between the characteristics and motivations of audiences in various types of formal and nonformal settings and labels them captive and noncaptive, respectively. A primary characteristic is volition. Captive audiences are deemed involuntary—they have to be there, while noncaptive are generally voluntary, that is, they want to be there. One of the dominant themes in these two categories is the source of motivation. For the captives it is predominantly external and for the noncaptives it is almost exclusively internal. There are many nuances that can be discussed in Ham’s dichotomy but for our purposes, it is simply our contention that although students on a field trip are essentially a captive audience, a well executed field trip can engender in them many of the characteristics of a noncaptive audience. Ham does in fact indicate that the characteristics he describes are largely contextual and therefore variable. In other words, the blending of school and site based experiences, those second and third places, can provide students with learning opportunities that cannot be achieved in the classroom, or at a museum, alone and can positively impact their motivations. It is a synergy with each setting enhancing and increasing the impact of the other.

Our session for this NAI National Workshop models what might occur in one example of just such a synergy by placing the audience in the role of student. It is our contention that field trips are one level of a broader category best described as “field experiences.” Within that umbrella term there are both field trips and field studies. While their goals, content, and process differ, they do share the common characteristic of academic rigor. Our model is that of a classroom teacher with an opportunity to have her students develop a bird habitat on their school’s grounds. Through the implementation of problem based learning (PBL) her students determine and pursue their learning needs in order to acquire the knowledge and skills to create that habitat. In pursuing their goal of creating a bird habitat on their school grounds they experience the best of classroom practice blended with a purposeful field trip.

The message embedded in this session is that for nonformal sites, the third places, to remain relevant in formal education and...
the lives of K-12 students we need to connect to the classroom curriculum in a way that establishes them as a value added experience. Research shows that this process works and works well (Coughlin, 2010; Nabors, et al., 2009). What remains is for formal and nonformal educators to collaborate to achieve that maximum educational impact. As indicated in the IMLS Discussion Guide (IMLS, 2009), the 21st century offers both challenges and opportunities.

References


Reach New Heights: Match Community Needs with Programming Efforts

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Keywords
environmental education, interpretation, nature center, needs assessment, program planning, utilization-focused evaluation

Abstract
Whether program attendance is sky-rocketing or decreasing at your site, knowing what programs to plan that aim to both suit the needs of your audience(s) and fulfill your agency’s mission is not always an easy task. Learn how Schmeeckle Reserve, a campus natural area in Stevens Point, WI is exploring the needs of various user groups to inform the feasibility of expanding educational programs at their site. Discover how your site may benefit from incorporation of needs assessment, or front-end evaluation that enables your programs to “reach new heights”.

Introduction
Often environmental education and interpretation programs, services, and media are developed from something other than needs assessment—someone suggests that a particular audience should be reached, or that a topic may be in need of further exploration. In some cases these programs or services are considered successful; however, the outcomes can be misaligned with the mission of the organization or the needs of the target audience.

In Comes Needs Assessment
Needs assessment is a form of program evaluation that typically occurs early on in the planning stages. However, tailored most appropriately for organizations that are creating new education programs, needs assessment also serves organizations choosing to re-evaluate the need for expanding current programs that perhaps are in need of continued evaluation. Incorporation of needs assessment research provides an important tool that allows for the documentation of an organization’s program planning roadmap—creating a foundation for continued evaluative planning.

Finding “the Gaps”
A needs assessment defines the gap between “what is”, or your organization’s educational mission, and “what should be”, the needs of your target audience. Defining this gap is the first step to developing an evaluation plan. From there, the evaluation plan guides closer examination of the assessment—from determining what types of data (sources and methods) to actual program implementation.

A Brief How-to Guide
Several models, or frameworks exist in evaluation research that are helpful in beginning to plan for needs assessment. This study follows a framework presented as early as 1984 by Belle Ruth Witkin and James W. Altschuld who propose a three-phased approach to planning and conducting needs assessment research. In this format, needs assessment is broken down into the following stages:

• Pre-assessment (exploration)
• Assessment (data gathering)
• Post-assessment (utilization)

In each phase, it is critical to continue to revisit the overarching purpose of your needs assessment. Mapping out a strong evaluation plan will allow you to more clearly define the gaps in your community that education programming at your site may fill.

Conclusion
Needs assessments provide one avenue to document and measure the need for new or expanded environmental education programs at your nature center. When budgets are tight, mission-focused educational programs are even more important. Defensible programs are a key characteristic of quality environmental education programs (NAAEE, 2004).

References


Seeking Out New Life: Biodiversity Discovery in the National Parks

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Kelly Coy  
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Keywords  
biodiversity, bioBlitz, discovery

The National Park Service (NPS) is charged with protecting the diversity of living organisms (i.e., biodiversity) found within its lands and waters. At a time when awareness of the accelerating loss of biodiversity has expanded globally, the national parks are acknowledged to be critical reserves—yet it is estimated that 80-90 percent of species in parks are still undiscovered. This gap in knowledge makes it challenging to protect living resources from emerging threats. Simultaneously, current societal trends include declining relevancy of the national parks to the American public. The NPS will be hard-pressed to accomplish preservation of biodiversity unless the parks and their living resources are considered vital in the eyes of the American public. Biodiversity Discovery efforts, such as bioBlitzes, not only increase our knowledge of life in the parks, but also provide opportunities for participants to directly contribute to park stewardship. Public awareness and involvement in such activities can truly be life-changing, sometimes in ways that are unanticipated. Besides yielding an important amount of scientific biological information, engagement in these efforts satisfies an urge as old as human-kind for participants to discover, explore, and quest—and thereby imprint on the conservation of the life that surrounds them.

Biodiversity Discovery consists of a variety of efforts undertaken by the national parks, in which members of the public, including professional scientists, park visitors, students, seniors, and children participate in the joint discovery of living natural resources. Historically, biological surveys on NPS lands have focused on charismatic species such as birds, mammals, fish, amphibians, reptiles, and vascular plants. Biodiversity Discovery encompasses both biological favorites, as well as lesser-known, very diverse groups, such as invertebrates, non-vascular plants, fungi, and microorganisms. Because such activities often require only excited minds and willing hands, they appeal to children and non-scientists as much as to subject matter experts, with the result that such activities have generated transcendent visitor experiences. In August 2011, NPS released a “Call to Action,” which provides directional guidance to all NPS staff to advance the mission of the Service into its second century. Call to Action Item 7, “Next Generation Stewards” envisioned creating a new generation of citizen scientists by conducting engaging Biodiversity Discovery activities in at least 100 parks between 2011-2016; thereby developing new relationships with diverse audiences, especially children, in the discovery of life in the national parks. Since then, Biodiversity Discovery efforts across the country have varied in size, duration, focus, and in numbers and types of participants. Examples include long term, in-depth inventories that aspire to document all species within a geographic area; bioBlitzes that search for organisms in a short time frame (often 24 hours or less); system-wide inventories that investigate widespread ecological questions; and photo-blitzes that aim to capture literal snapshots of biological diversity. Perhaps the best known efforts are the large-scale BioBlitzes which the NPS has accomplished in collaboration with the National Geographic Society. Occurring annually since 2007, these efforts take place in an NPS unit close to major urban area, and engage under-served and urban audiences in widespread all-taxa inventories. During the 2014 BioBlitz at Golden Gate National Recreation Area, approximately 9,000 people participated, discovering more than 2,300 species in the course of this 2-day event. In 2014, NPS exceeded its “Call to Action Item 7” goal. Between 2011 to present, Biodiversity Discovery activities have occurred in small and large, wild and urban parks across the country; have engaged more than 27,000 citizen scientists; and resulted in the discovery of at least 7,500 species in the host parks. A growing awareness of the possibilities of Biodiversity Discovery has fostered an understanding that energizing and empowering our next generation stewards is one of our best strategies towards accomplishing long-term conservation of the parks’ natural resources. At the 2014 Golden gate BioBlitz, more than 2,700 students from the greater San Francisco area participated on-site, with additional pre and post BioBlitz classroom activities. Currently NPS is developing a STEM-based biodiversity curriculum, tied to Next Generation Science Standards, which will be available online and contain hands-on activities to foster biodiversity awareness and knowledge of our national parks. In 2010, NPS began a corps of Biodiversity Youth Ambassadors. The mission of these Ambassadors is to cultivate youth leadership that inspires next generation environmental stewards in our schools and communities. The Ambassadors participate in national park and local community biodiversity events that catalyze exploration of the natural world, and then continue to cultivate awareness of the importance of biodiversity and environmental conservation at the local, national, and global scales. To date, six Ambassadors, ages 13-17, have been selected from around the country. Accomplishments of the Biodiversity Youth Ambassadors include presenting lectures, organizing school bioblitzes, being featured in local and national media events, and meeting with the Director of the National Park Service. NPS will seek to place these young people into internships in the parks when they come of age.

Preservation of biodiversity can be truly daunting in the face of global challenges such as climate change, invasive plants and...
animals, disease, and human population pressures. Indeed, biodiversity conservation is beyond the scope of any single entity. However, by galvanizing our citizens, engaging them in the transcendent experience of exploration of living organisms, and even more importantly, in the personal discovery of our parks, we enable them to become involved and ignite their passion to pursue active stewardship of our natural resources.

References

Using Google Maps for Nature Exploration

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Keywords
google maps, aerials, land-forms,

This presentation will cover the basics of creating your own map in Google Maps. Google Maps is a desktop and mobile web mapping service application and technology provided by Google, offering satellite imagery, street maps, and Street View perspectives, as well as functions such as a route planner for traveling by foot, car, bicycle (beta test), or with public transportation.

Google maps provides numerous opportunities to highlight your outdoor area through simple map development techniques. With the internet becoming mainstream, Google Maps provides access to maps and aerials photos from around the world. The audience will learn methods to manipulate these maps to tell their own unique interpretive story. You can: Take people on a walking tour of your historic site. Show unique characteristics of the flora and how it effects the appearance of the satellite photos. Create driving tours not found on brochures or travel guides. The opportunities to reach your audience are endless and up to your imagination. This presentation will provide simple techniques to creating maps of your own. Simple icons and place marks can be used to pin-point locations. Lines and polygons will be created to highlight areas or define routes across maps. Techniques will be shown to save and link your maps to websites, Facebook or other social media connections.

This presentation covers only the basics of getting started using Google Maps. With the basics even a technophobe such as myself can create informative and interesting maps that educate and interest the public. The presentation intends to spark your interest in the opportunities to create maps of your own and take away the intimidation of just doing it yourself.
Transforming Streakers, Strollers, and Studiers into Stewards

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Keywords
media, audience, interpretive writing, graphic design, exhibits, photography, design, planning, 3-30-3, streaker, stroller, studier

Did you know that the average attention span has decreased four seconds since 2000? We live in a world where everything seems to be vying for our attention. The constant barrage of information online and in our environments distracts us. As interpreters, we have less and less time to engage our audience, especially through interpretive media. How do we face these challenges while giving the public quality information about our resources? Using an interpretive wayside as an example, let’s explore what we know about audiences and composition in an effort to learn how we can transform our visitors into stewards.

Audiences Decades of research has yielded an array of audience types. Today, we commonly put audiences into three main categories – streakers, strollers, and studiers. Using what we know about their expectations and use patterns, we can thoughtfully create content and design waysides that gets the streaker to stop and linger; the stroller to take it all in; and the studier to take action and become a steward. The Streaker Just as the name suggests, the streaker is in a hurry. They want their information fast (if they want it at all) and are drawn to visuals and brief snippets of text. Media that appeal to streakers should be eye-catching, and titles should be thought provoking. Waysides need to capture their attention, slow them down, and get them to linger like a stroller. The Stroller The stroller takes a leisurely pace. Unlike a streaker, they are in no big hurry. They casually approach exhibits and look for things like images, text, or artifacts that are of interest. They linger here and may move on to other aspects of the exhibit if their interest continues. The stroller might read one section of text, explore images, and read captions. Waysides need to pique their interest and encourage them to continue reading the panel as a whole like a studier. The Studier The studier is in it to win it. No matter the design, the size, or the word count, the studier is going to stay a while. They will read every word, examine every image, and notice everything. Even though studiers represent a very small percentage of exhibit experiencers, we should always write to the studier in mind. With a well-developed thematic wayside with strong universals, the studier is the most likely visitor that will develop into a steward. Connecting the 3-30-3 Rule and Audience Types Quite a lot has been written about the 3-30-3 Rule as it relates to layout and composition. The numbers (3 seconds, 30 seconds, 3 minutes) refer to how much information can be gleaned from a wayside or exhibit based on how much time visitors spend with a composition. If you have only 3 seconds, you should be able to know what the wayside is about; if you have 30 seconds, you should be able to get a clear understanding of the main idea along with supporting sub-themes; and in 3 minutes, you should be able to read the entire panel. To take this idea a step further, imagine that the streaker will spend only 3 seconds on your composition, a stroller only 30 seconds, and a studier only 3 minutes. The goal of creating interpretive media shouldn’t be to simply express a panel’s main idea in 3 seconds or most of the panel in 30 seconds. Rather, we should use those initial 3 seconds to compel our audience to stay longer, transforming the streaker to a stroller and a stroller to a studier. We have the best chance of creating stewards if they can experience interpretive media completely. It’s the layout AND the words To get our visitors to stop and read requires both good design and engaging interpretive writing. If we only have 3 seconds to connect with each visitor, we need to create clean, attractive, and organized graphics that attract audiences, and write thought provoking and engaging text in order to get audiences to read more.

Graphic Design Tips

• Each component of your wayside is an opportunity to connect with your audience. Make every word and every image count.

• You cannot control where your audience will “enter,” so make sure photos have captions with complete sentences and subtitles are just as engaging as your title.

• A good composition has a sense of hierarchy and is organized and clean.

• Use the design to help tell your story. Thoughtful graphic design adds another layer to your narrative and helps create connections. Interpretive Writing Tips

• Use your voice – keep it informal, conversational, and fun (if appropriate).

• Embrace active voice, pop culture references, and figures of speech like metaphors and similes.

• Avoid passive voice, wordiness, jargon, and redundant wording.

• Make sure it’s accurate, grammatically sound, and spelled correctly.

Placing our audiences in three groups – the streaker, the stroller, the studier -- is simply a tool that we use to make strategic and smart decisions about interpretive media. If we can create waysides that appeal to each exhibit experiencer and encourage them to go deeper, we have a greater chance of creating an emotional connections. When this happens, our exhibits turn into action and our streakers, strollers, and studiers into stewards.
References


Kids in Their Natural Habitat: Lessons from an Outdoor School and a Nature Play Space

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Keywords
forest kindergarten, natural play, natural playgrounds, outdoor school

Abstract
We all know that children need connections with nature for their physical and emotional health. Some students in Switzerland attend a “Forest Kindergarten”—they spend every day outside no matter what the weather. The City of Fredericksburg, Virginia, created The Hideout, a space for outdoor play featuring stick shelter building sites, anchored canoes, a mud pie factory (aka sandbox), play campfire, stepping logs, a hide-skinning station, and more! These experiences give children the opportunity to learn from mistakes, develop coping skills, discover how to cooperate with others, and resolve conflicts.

Animals spend a large portion of their development playing: play fighting, learning about hierarchies and dominances in their own social groups, strategies for cooperation, communication skills, and perhaps most importantly, what they are capable of. Human children are too often confined to playing in sterile environments with carefully controlled variables (mostly under the guise of safety) and often with parents, care-givers, and teachers ready to swoop in and “fix” whatever goes wrong. Often these children are denied the opportunity to learn from mistakes, develop coping skills, and resolutions to conflicts.

Forest Kindergarten
In the City of Langnau am Albis, Switzerland, 4-7 year olds attend an outdoor school in a nearby forest. The school is a two-year public program where the children spend every day outside in the forest—rain, snow, or shine. The children engage in fort building, tree climbing, stream crossings, wading, sledding, and snowball fights. They also build fires, carry logs together, swing on tires, tell stories, whittle with knives, and make crafts. The students are not always in sight of the teachers. The toilets are rudimentary: screened by tarps tied to ropes. Math, reading, and writing instruction are delayed until they are about 7 years old. All Swiss children begin academics at age 7.

A 40-minute documentary features interviews with teachers and other education experts explaining that delayed reading and writing instruction are delayed until they are about 7 years old and the benefits of letting children develop motor and social skills first is deemed far more important.

This school is contrasted with a typical kindergarten in the US where every minute of the school day is scheduled with academics and the playground is blacktop and turf, accompanied by the usual playground equipment. Swiss parents describe the experience as sometimes frightening but overall very positive. They have noticed an increased confidence in their children. The toys become simpler and the children’s imaginations soar.

The Hideout
The Fredericksburg, Virginia, Parks and Recreation Department created “The Hideout,” a natural play space, in one of its parks. Inspired by Rusty Keeler’s Natural Playscapes, the department selected a site adjacent to a log cabin nature center at a park popular for hiking and boating. The project cost was $1,700.

City parks crews removed several dangerous trees and marked underground utilities. Two Eagle Scout candidates supplied the work crews. They installed a split rail fence to give a visual focus to the area. Within that perimeter, the key focal points of the non-traditional playground were installed:

• Canoes – Two de-commissioned canoes were anchored in place with concrete footings and bolts. Drainage holes in the seats and the lowest point of the hull were installed. Several kid-sized paddles were provided. Children are frequently seen “paddling” or “racing.”

• Stepping Logs – Pine logs (from the felled trees on the site) were anchored in the ground to a depth of one foot. They were positioned about eight inches apart and at different heights with the highest being eighteen inches off the ground.

• Sand Box – Pressure-treated 6x6 timbers were used to create a sandbox filled with several stepping logs and play sand. Old dishes and buckets were included. This is the most popular feature.

• Play Cooking Fire – A wooden tripod with hanging chain and hook hold a black plastic kettle (with drain holes) over a rock-lined “campfire.” There is also a fish-roasting grill made of cinder blocks and wire racks. Children spend hours roasting rubber fish and baking sand pies.

• Log Table and Chairs – A large tree stump with an unusual top serves as a table. Five log benches are anchored around it. Seat height comfortably accommodates children and adults.

Keywords
natural play, natural playgrounds, outdoor school

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City parks crews removed several dangerous trees and marked underground utilities. Two Eagle Scout candidates supplied the work crews. They installed a split rail fence to give a visual focus to the area. Within that perimeter, the key focal points of the non-traditional playground were installed:

• Canoes – Two de-commissioned canoes were anchored in place with concrete footings and bolts. Drainage holes in the seats and the lowest point of the hull were installed. Several kid-sized paddles were provided. Children are frequently seen “paddling” or “racing.”

• Stepping Logs – Pine logs (from the felled trees on the site) were anchored in the ground to a depth of one foot. They were positioned about eight inches apart and at different heights with the highest being eighteen inches off the ground.

• Sand Box – Pressure-treated 6x6 timbers were used to create a sandbox filled with several stepping logs and play sand. Old dishes and buckets were included. This is the most popular feature.

• Play Cooking Fire – A wooden tripod with hanging chain and hook hold a black plastic kettle (with drain holes) over a rock-lined “campfire.” There is also a fish-roasting grill made of cinder blocks and wire racks. Children spend hours roasting rubber fish and baking sand pies.

• Log Table and Chairs – A large tree stump with an unusual top serves as a table. Five log benches are anchored around it. Seat height comfortably accommodates children and adults.

Keywords
natural play, natural playgrounds, outdoor school

Abstract
We all know that children need connections with nature for their physical and emotional health. Some students in Switzerland attend a “Forest Kindergarten”—they spend every day outside no matter what the weather. The City of Fredericksburg, Virginia, created The Hideout, a space for outdoor play featuring stick shelter building sites, anchored canoes, a mud pie factory (aka sandbox), play campfire, stepping logs, a hide-skinning station, and more! These experiences give children the opportunity to learn from mistakes, develop coping skills, discover how to cooperate with others, and resolve conflicts.

Animals spend a large portion of their development playing: play fighting, learning about hierarchies and dominances in their own social groups, strategies for cooperation, communication skills, and perhaps most importantly, what they are capable of. Human children are too often confined to playing in sterile environments with carefully controlled variables (mostly under the guise of safety) and often with parents, care-givers, and teachers ready to swoop in and “fix” whatever goes wrong. Often these children are denied the opportunity to learn from mistakes, develop coping skills, and resolutions to conflicts.

Forest Kindergarten
In the City of Langnau am Albis, Switzerland, 4-7 year olds attend an outdoor school in a nearby forest. The school is a two-year public program where the children spend every day outside in the forest—rain, snow, or shine. The children engage in fort building, tree climbing, stream crossings, wading, sledding, and snowball fights. They also build fires, carry logs together, swing on tires, tell stories, whittle with knives, and make crafts. The students are not always in sight of the teachers. The toilets are rudimentary: screened by tarps tied to ropes. Math, reading, and writing instruction are delayed until they are about 7 years old. All Swiss children begin academics at age 7.

A 40-minute documentary features interviews with teachers and other education experts explaining that delayed reading and writing instruction are delayed until they are about 7 years old and the benefits of letting children develop motor and social skills first is deemed far more important.

This school is contrasted with a typical kindergarten in the US where every minute of the school day is scheduled with academics and the playground is blacktop and turf, accompanied by the usual playground equipment. Swiss parents describe the experience as sometimes frightening but overall very positive. They have noticed an increased confidence in their children. The toys become simpler and the children’s imaginations soar.

The Hideout
The Fredericksburg, Virginia, Parks and Recreation Department created “The Hideout,” a natural play space, in one of its parks. Inspired by Rusty Keeler’s Natural Playscapes, the department selected a site adjacent to a log cabin nature center at a park popular for hiking and boating. The project cost was $1,700.

City parks crews removed several dangerous trees and marked underground utilities. Two Eagle Scout candidates supplied the work crews. They installed a split rail fence to give a visual focus to the area. Within that perimeter, the key focal points of the non-traditional playground were installed:

• Canoes – Two de-commissioned canoes were anchored in place with concrete footings and bolts. Drainage holes in the seats and the lowest point of the hull were installed. Several kid-sized paddles were provided. Children are frequently seen “paddling” or “racing.”

• Stepping Logs – Pine logs (from the felled trees on the site) were anchored in the ground to a depth of one foot. They were positioned about eight inches apart and at different heights with the highest being eighteen inches off the ground.

• Sand Box – Pressure-treated 6x6 timbers were used to create a sandbox filled with several stepping logs and play sand. Old dishes and buckets were included. This is the most popular feature.

• Play Cooking Fire – A wooden tripod with hanging chain and hook hold a black plastic kettle (with drain holes) over a rock-lined “campfire.” There is also a fish-roasting grill made of cinder blocks and wire racks. Children spend hours roasting rubber fish and baking sand pies.

• Log Table and Chairs – A large tree stump with an unusual top serves as a table. Five log benches are anchored around it. Seat height comfortably accommodates children and adults.
• Log Benches – Log slabs were anchored onto vertical logs to make attractive benches located in the shade and are used by everyone.

• Stick Shelters – Six 10-foot poplar poles were anchored, teepee fashion. The open structure allows kids to prop up assorted branches for a cozy hideout. This stick shelter can be constructed and re-designed over and over.

• Hide Skinning – A deer hide was attached to a board and secured with nylon cord to a frame made from logs that beavers had felled. A basket filled with flat rocks provides simple tools to scrape the pelt.

• Mulch – The entire site was covered with twelve cubic yards of wood chips to keep down weeds, prevent erosion, and to soften falls.

• Other – A rake and broom hung on a tree are used for clean-up and play. A pup tent and cabinet for storing pots, pans, sand toys, and paddles complete The Hideout. Several signs request users to zip up the tent and return dishes to the storage cabinet.

Our goal was to encourage children who might not hike in the woods or go camping to experience these outdoor activities. The area is designed so adults can interact with their children by assisting with shelter building or fish roasting, or they can read in the shade and let children design creative play scenarios on their own. After only three months The Hideout is very popular. Many families return multiple times. Comments from parents include: “This reminds me of my childhood!” or “We went home and built a stick fort in our backyard after coming here!”

Conclusion
Using creative thinking and input from experts, many agencies in urban settings can provide outdoor play and learning experiences for young children.

The City of Fort Collins Natural Areas Department has started the discussion in its community by showing the Forest Kindergarten to parents of toddlers and to environmental educators. The nature educators in Fredericksburg are talking to other municipalities about their project. Start the conversation in your community!
Between Two Trees: Is What You Do Awesome and Part of Everyday Life?

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**Keywords**  
culture club, snark, humor, debate, pop culture

Do you tumble for audiences? Do you drown when you meet them downtown, or uptown their sound? Ask yourself, when was the last time my site was in some way part of pop culture. Was it referenced by a celebrity, TV show, or movie? When was the last time something you interpret was part of a national news story and conversation? What did you do to with your 10 seconds of fame? Should you seize it or ignore it? How can Ask each other, when was the last time you made pop culture part of your interpretation. Did you mangle a quote? Reference something obscure or well-known? Throw down some song lyrics? Used a story in the news to connect your site to your audience? What do you do with tangible and intangible resources that may last forever or never?

Should pop culture be part of interpretation at our sites and places? How can we harness the power of the inane, foolish, and fickle beast we know as pop culture? Should interpreters use pop culture to preserve our resources and engage audiences so we are their baby, their score and so much more? Are the sites we work at doomed to become karma chameleons without conviction?

Pop culture and interpretation. Peanut butter and jelly or hairdryers and bathtubs? Either way, take me on (take on me) I’ll be gone...in a day.
No Animals? No Problem! Animal Programs Without Live Animals

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Keywords
programs, live animals, artifacts, puppetry, games

Using live animals can take a program from ordinary to extraordinary. The audience connects on a deeper level because of being able to see, hear and, possibly, touch the actual animal. But many times, it isn't possible to have live animals as part of your presentation. That doesn't mean you should avoid doing animal programs – it just means you need to be creative and resourceful in providing participants with experiences that help them learn about the animal.

What can you do if you don't have a live animal?
Often, live animal presentations include information about the animal's physical characteristics and how it interacts within its environment. The same information can be presented using artifacts, mounts, puppets, costumes, posters, and other resources. Your program could be one where materials are shown to the group and then passed around the audience or you could set up stations and have groups move from one activity to another after some explanation from you.

Ideas for Learning about Animals' Physical Characteristics
Costumes: Costumes are a good way to explain the various features and adaptations an animal has. You may want to create a costume for the interpreter to wear as s/he takes on the character of the animal. Or you can make a costume that will be worn by someone from the audience. Don't worry about creating a completely realistic costume – use materials and objects that highlight the function of the body part. For example, use forks to represent talons and a soft bath towel for owl's specialized wings. Keep it simple – easy to put on and take off.

Artifact Quiz: Set out a number of artifacts and/or props concerning one kind of animal (e.g. beavers) or comparing various kinds of animals (e.g. reptiles vs. amphibians). At each station, the participants use the artifact to answer a question. (e.g. Look at the pictures – how are toads’ feet different from frogs’ feet?)

Skulls: Another way to use artifacts is to focus on skulls. The participants can compare the way they take in information to the way an animal would take in information by comparing their heads to skulls of other kinds of animals. Have them compare the location of eye sockets, length of nose, and kinds of teeth. Audience members could examine skulls and use the dentition information to classify the animal as an herbivore, omnivore, or carnivore. You could also have them compare the locations of the eyes and determine if the animal is a predator or prey. They could try to identify the animal by matching the skulls to pictures of the animals.

Silhouette Flyover: Participants lay shoulder-to-shoulder on the floor. One person stands on a chair at one end of the group while another person stands at the other end of the group, a length of monofilament line stretched between them. The person on the chair hooks a cutout silhouette of a bird on the line and lets it slide down to the person holding the other end. The people on the ground watch as the “bird” passes over them and then tries to guess its identity based on size and body shape.

Bird Beak Simulation: Set up stations that use various household tools to represent different kinds of animal beaks. Give the participants time to experiment with the beaks as they try to pick up different kinds of foods. After a given amount of time, debrief the activity using skulls or pictures to show the animals’ actual beaks as you discuss feeding patterns of birds.

Sound Identification: Don't forget to incorporate sound into your programs. You can quiz participants on which animal calls or sounds they recognize or you can introduce them to the sounds associated with a particular animal.

Ideas for Learning about How Animals Interact with Their Environment
Games: Games allow participants to apply skills and techniques used by animals as they move, hunt, browse, and do all the things they must on a regular basis. The game can be simple, needing very little equipment or preparation (e.g. “Bat and Moth”) or may be more involved (e.g. “Oh, Deer” from Project Wild). Adapt existing games to fit your particular needs (e.g. “Ships across the Ocean” becomes “Salmon Across the River” with the taggers being hungry bears.)

Puppet Shows: Depending on the age of the audience, using puppets to teach about the life cycle and habits of an animal can be very engaging and effective. Often a puppet is less intimidating than the actual animal so the child is able to focus on what is being shared rather than worrying about what the animal is going to do.

Camouflage Activities: Looking for hidden animals is a favorite activity for many people. You can use animal mounts to create a camouflage trail. You could hide paper cutouts of bats or plastic insects around the room or on the outside of the building. You could give pieces of camouflage fabric to a small group to use to hide themselves and then have others look for those hiding.

Programs Without Live Animals
**Conclusion**
Don't worry about limiting yourself to only doing programs about animal you have at your site. No doubt, an actual animal engages audiences in a special way. But if your goal is to help people really understand an animal, the wise and creative use of artifacts, costumes, games, puppetry, and more will make as deep an impact as having the live animal there.
“So What?” A Creative Way to Creating Interpretive Themes

Jeff Miller, CIG; CIH; CIT
Interpretive Trainer
InterpreTraining

Abstract
Are your visitors and guests leaving and just saying “SO WHAT?” Are they just getting a bunch of Interpredata or Interpretainment? Get them to say “WOW” when they leave. This hands-on workshop will show you a step-by-step process to help easily develop themes for your interpretive presentations and products.

Keywords
creating themes, organizing thoughts, topics, ideas, interpretive, presentations, products, panels, signage, brochures, exhibits, thematic

Introduction
There is a fine line between being an entertainer or just giving a bunch of facts and data as opposed to actually making your interpretive product interesting and thematic. We all should be using themes in our presentations, tours, programs, signage, exhibits, etc.

This core subject of “Creating Themes” is relevant to what we all do and this hands-on workshop will show participants how easy it is to create good themes for all their needs. According to researcher P.J. Thorndyke and professor and author Sam Ham, people will forget facts, but they will remember themes.

Creating Themes Using Graphic Organizers
This is a very hands-on workshop presentation where participants will use and complete graphic organizers to assist them in creating themes. When you leave this session you will have a greater understanding of creating thematic interpretation and an easy step by-step process laid out for you on how to create themes for your guests and visitors and your interpretive products.

During this hands-on session, participants will be able to develop interpretive themes related to telling their story, be it a park, museum, historic, cultural or heritage site, zoo, aquarium or anywhere you are interpreting for guests and visitors.

Using graphic organizers, participants will be lead through a step-by-step process to manipulate facts, topics, concepts and ideas turning them in to themes relevant to their particular location. They will explore aspects of their locations and create thematic interpretation that will satisfy their visitors’ needs.

Participants will learn to pull together and construct central theme ideas and statements, which can then be used at their locations for everything from talks, tours, presentations and educational programs to printed materials, panels, signage and exhibits. They can use this technique for themselves and easily teach it to others at their locations.

Conclusion
There is no one perfect way for accomplishing the difficult task of creating themes, yet themes are essential to successful and meaningful interpretation. The process shared in this presentation will show you another creative way to help achieve your goal of creating themes.

References
Interpretive Methods for the 21st Century Interpretive Administrator

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Keywords
management, Larry Beck, Ted T. Cable, master planning, new supervisors

So, you think you want to move from the front line to the management office. Maybe you do not think you have the right skills or qualifications. Trust me if you have been an interpreter, you absolutely have the right skills. In fact, one of our go-to books for interpretation can help you make the transition. Have you read “The Gifts of Interpretation?” The same 15 guiding principles we used as new interpreters can serve us as managers.

I first read Larry Beck’s and Ted T. Cable’s book in 1999. I was a graduate student and the 15 principles seemed to perfectly sum up the essential aspects of interpretation. Shortly after graduate school I found myself in a managerial role. I was looking for ways to apply my business knowledge to the field of interpretation. Almost by accident, I realized these principles also applied to my new role as a manager. (During the workshop, each principle will be covered along with current references to managerial best practices – each participant will receive a workbook to help plan their next steps related to each principle.)

• The Gift of Spark: the manager must understand that their audience now consists of interpreters, park staff, concessioners, etc. This also means the way they interact with their coworkers many need to change.

• The Gift of Revelation: there is still a need to go beyond simply providing information about administrative items and reveal deeper meanings. This deeper meaning may include an organization’s mission, closer demographic studies, and the connection of a budget to process.

• The Gift of Story: Managers must share knowledge in a way that makes it meaningful to employees. Asking staff to make good spending choices is not nearly as effective as sharing how budgetary savings translates to more programing and direct experiences for participants.

• The Gift of Provocation: Mangers must now encourage staff to continue learning and bring consistently high levels of engagement to each program.

• The Gift of Wholeness: Mangers must look beyond just their team or department to understand the mission and goals of the entire organization

• Gift of Targeted Programs: Mangers must understand difference management styles that may be effective with generational, cultural, educational, and positional differences.

• Gift of Personalizing the Past: Managers should learn, acknowledge, and respect the past to ensure transitions are smooth and the future meaningful.

• Gift of Illumination Through Technology: Managers must continue to understand new technology and utilize it in an organized fashion to the benefit of self, staff, and organization.

• Gift of Precision: Managers must have a variety of research avenues on which they can rely and a variety of delivery methods for imparting best practices.

• Gift of Professionalism: Mangers must understand basic business principles. Continued program and/or facility improvement will depend on skills and knowledge that develop continually.

• Gift of Interpretive Writing: Business and marketing plans should address what boards, funders, and the public would like to know.

• Gift of Relationship: The program, department, and agency must be capable of attracting support and the manager must know what aspects of program will appeal to specific audiences.

• Gift of Beauty: Managers need to find ways to keep staff cognizant of the affect their work has on participants.

• Gift of Joy: Managers must design hiring, training, and logistical aspects of their programs with safety, finances, and unique experiences at the forefront of consideration.

• Gift of Passion: Managers have to be able to find and maintain their passion for the resource even as they spend less time in direct contact with the resource and the visitor.

• Gift of Hope: The work of a manger must be grounded in the hope for a continued and improved visitor experience.

The consequences of moving from front-line interpretation to program or facility management are often minimized. So often, the move is based on a financial incentive with little consideration for the full implications. Many new managers do not fully understand how their relationships with staff and the resource will change. Former colleagues often remark to new managers that they have changed. This can cause distress for the manager as change is often perceived as negative. However, if the manager is succeeding in their position, change is imperative. New managers must embrace this gift of change and their new role in ensuring the continuation of a program or place for future generations. We are lucky that many of the skills developed early in our career can help with this transition.

References
Selling World War II

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Keywords
Interpretation, tangibles, intangibles, universal concepts and compelling takeaway messages.

Freeman Tilden states: “Any interpretation that does not somehow relate to what is being displayed or described to something within the personality of the visitor will be sterile.” Another word for relate is connect. It is this connection between the tangible or intangible resources and universal concepts all wrapped up into a compelling story that determines whether an interpretive program is effective in provoking people to action. The United States Government used the interpretive process during World War II (WWII) to establish a connection between the general public; personalize the War, and encourage financial and public support for America’s War effort. At the beginning of WWII the federal government released only raw facts and figures about what was needed to support the war in hopes that the public would provide the money needed to meet those war needs. They continually failed to connect these numbers to any universal concept within the general public and consequently didn’t get the public support they desired. In May 1942 the government created the Office of War Information (OWI). Their mandate was “to coordinate the dissemination of war information by all federal agencies and to formulate and carry out, by means of press, radio and motion pictures, programs designed to facilitate an understanding in the United States and abroad of the progress of the war effort and the policies, activities and aims of the government.” Facilitating understanding is a major goal of interpretation. The OWI turned to the interpretive process to effectively connect their messages to the universal concepts expressed in President Franklin D. Roosevelt’s Four Freedoms Speech (January 6, 1941): “Freedom of speech, freedom of religion, freedom from want and freedom from fear.” These concepts were incorporated into all forms of media including advertisements in major magazines and newspapers. The presentation will demonstrate that interpretation can take place in several ways; the spoken or written word, in pictures or a combination of all of these elements. Using examples of commercially produced advertisements, including printed materials, music and motion picture clips from the WWII period the presenters will lead a discussion of what interpretive elements were used to create the various types of media. Participants will also discuss the tangibles, intangibles and the universal messages within each and how they were used to connect the consumers with the product being advertised while at the same time supporting the War effort.

After the initial presentation of numerous slides of WWII era advertisements the presenters will have the participants view a specific slide of an advertisement from the period. Each person will be given a paper copy of the projected image and a related worksheet. In groups, participants will be asked to read the advertisement, identify the tangibles, intangibles, universal concepts and take away messages they find and write them onto their worksheets. Each group will then have an opportunity to share what they find with the rest of the groups. Participants will leave with a matrix that can be used to formulate interpretive programs that include tangibles, intangibles, universal concepts and take away messages.

References

Kennett, Lee, For the Duration, the United States Goes to War; Pearl Harbor -1942, 1985. Charles Scribner’s & Sons, New York.
National Geographic Society, images taken from National Geographic Magazines, 1942 to 1946
Interpreting Critical Issues Using Civic Engagement Strategies

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Keywords
Facilitated dialogue, 21st century skills, 21st century themes, controversial topics, civic engagement

Facilitated dialogue requires the facilitator to use the 21st century skill of communication and collaboration. To coordinate the many different parts require having access to colleagues who can help in planning and to give feedback. It is difficult to execute properly in isolation. The components of facilitated dialogue include: facilitation skills, ground rules, questioning technique, shared experience, formulating the Arc of Dialogue, and techniques or strategies for engagement. Each of these is of equal importance and will take some time and practice to master. According to The Museum Experience Revisited, museums no longer have the “luxury” of dictating from a top-down perspective about what the public should receive. The museum can no longer expect that one approach, one label, one type of experience will satisfy all. Facilitated dialogue is one tool that can allow museums to engage the public in what is relevant to them. Their truth is just as important as the stories we share. The key is to actually understand the purpose of civic engagement. In the article, The Definition of Civic Engagement, “civic engagement means working to make a difference in the civic life of our communities and developing the combination of knowledge, skills, values and motivation to make that difference.” What should visitors learn, feel, and do when they visit and when they leave? When deciding to genuinely “do” facilitated dialogue it is important to embrace facilitation. The facilitator’s role is to facilitate—to manage the program (the experience). A facilitator listens to the audience, engages the audience by asking questions, (redirecting questions and even asking clarifying questions), assist visitors in engaging with one another, allow visitors to see the world through others eyes through strategies that were selected beforehand (or ones selected spontaneously).

Establishing group guidelines might seem basic but is proven valuable. When possible post them so that they can be viewed throughout the dialogue. This might be difficult for a walking tour but keep in mind, that you do not know everyone’s intentions. It is the responsibility of the facilitators to keep visitors safe. A example is to “Be open to listen to other perspectives.” Developing questions that will be asked during the dialogue can seem difficult to create. For a program on climate change I wouldn't actually use the words, climate change in any of my questions. For example, I might ask participants to respond (in small groups) to “Describe your favorite place and and “What is it about this place that makes it special?” On a program for MLK Day I might begin with a question like, “What did you dream of doing when you were 10; could you do that? Why or Why not?” my next question might be “Think of someone you’ve lost, what is their legacy? How might someone answer that question about you?” The goal for each question is to ensure that all visitors can answer the question; they do not have to be an expert on climate change to have an opinion or participate in the dialogue. For the MLK Day program, it might not benefit the group by asking visitors to explain the impact of Martin Luther King’s death on America, but you could ask “Why have Americans achieved their American Dream? Why haven’t they?”

Shared Experience
The shared experience might be the best part of a facilitated dialogue program. This is where an integration of “power of the past/place.” What can places and objects tell us about the past? The shared experience is where visitors are given the opportunity to learn about the resource. It’s the experience that allows them to gain knowledge and access to the same themes and concepts as everyone else. The shared experience could be a silent walk through the exhibits; it could be an interpretive talk, a guided tour, a primary source document, an object, an excerpt from a book, or a quote. This is where the interpreter gets to be creative. Arc of Dialogue Arc of Dialogue model integrates four phases. Phase 1 is the ice breaker; the phase where you build community with those who are in attendance. The goal at this phase is to give everyone an opportunity to participate. I might ask participants to, write down three characteristics that describe who they are. Phase 2 is sharing the diversity of personal experience. The goal of this phase is to allow visitors an opportunity to be heard, based on their own experience. For example, describe a situation where you … How did this make you feel? What did you do? People who visit have a wealth of experience and we must value this and realize that we can also learn from the public. Phase 3 is exploring the diversity of perspectives beyond ourselves. The goal at this phase is to allow participants to consider how others have faced triumphed and tragedy. You can use quotes to get other perspectives in the room. Phase 4 is synthesis and meaning making. What does this mean for us? What can I do now or tomorrow? At this phase, it is important that the dialogue draws out that history holds lesson for addressing today’s challenges. The techniques or strategies for engagement are the tools used to directly engage the public. Will you begin your program in a large group circle and then placed visitors in small groups? Will you use a graffiti wall (that embraces creativity by allowing folks to respond not just in words but through art) or a gallery walk (participants are asked to walk in silence while reflecting on a question by either looking a photographs or the museum exhibit)?

When it comes to controversial topics like slavery, war, civil rights, and immigration how does an interpreter best navigate the emotions of park visitors? Using dialogue promotes the process of giving up the stage and allowing all voices to be heard and listened to. Accepting this approach as a technique...
challenges our traditional approach but transitions to a more community-centered institutions that values stewardship and civic engagement.

References


The “Other” Interpreters: Working with Translators & Non Native-Language Visitors

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Keywords
language, translation, translators, multilingual, multicultural, international, immigrant communities, cultural awareness, stereotypes, spanish, latinos, bilingual recruitment

Learning Objectives: A. The practical differences between interpreting and interpreting to non-English speaking visitors, both with and without a translator. B. The four broad categories of translators: professional, academic, amateur, and “accidental”. How do they differ and how to best partner with each. C. What it's like from the other side: Things translators wish presenters knew. D. How to recruit and engage bilingual volunteers and staff. E. Using a heat map to evaluate your site's capacity and potential for multilingual interpretation. A common challenge of interpretive sites is the task of creating meaningful experiences for international visitors and immigrant communities, particularly in the presence of language or culture barrier. This can be a wonderful and exciting experience for everyone involved as we overcome boundaries to share our stories and find common ground between the interpreter, the visitors, and topics covered. It can also be a cause of anxiety and confusion, leading to unsatisfactory experiences for everyone involved. These include avoiding interactions with non-native speakers, attempting unprepared interactions and feeling as though nothing truly got across, or inadvertently “deputizing” translators as proxy interpreters without a method of sharing the toolbox of skills and tricks that go with the trade. Fortunately, there are a variety of simple ways in which any site may provide itself with the resources, support, and awareness that can increase both the effectiveness of its programs and a sense of comfort and welcome that communicates itself across any boundary. In this presentation we’ll be going over several of those methods, with a particular focus on working with those who often represent the voices of both the presenter and the audience: the translator.

We will start off by discussing the similarities and differences between professional, academic, informal, and “accidental” translators can be distinct, and being aware of those differences can in itself be the difference between a meaningful experience and a lackluster, or even damaging, one. These often-overlapping categories are not meant to be rigidly defining of any individual you work with, but even having a general idea of the sort of knowledge and tendencies your translator is working with is valuable information to have. We will continue with a discussion on the specific time- and cost-efficient ways in which an interpreter, program lead, or site manager can prepare in advance to effectively serve their international or non-English speaking visitors. This will also include advice on how to engage a wider multicultural community as partners in both communication and possible bilingual interpreter recruitment and training. As every site and program has different factors to consider, each participant will be able to plot out these options on a “cost vs reward” scale specific to their own circumstances. This will be followed by a cooperative discussion on “in the moment” tips, tricks, and pitfalls that can be invaluable tools for both seasoned and new interpreters to draw upon when a language or culture barrier arises. This will include a discussion on the functional differences between cultural awareness and stereotyping.

The purpose of this presentation is to share meaningful dialogue on addressing and overcoming factors that can cause a sense of alienation and avoidance between interpreters and non-native language fluent visitors. To that end, your translators are your partner in interpretation in a unique and absolutely necessary way. They work with you to create meaning and relationships between your site and the visitor, linguistically and culturally. In many ways they are your interpretive target, as they need to understand your message to relay it effectively. The investment of time and energy put into developing these partnerships will pave the way for productive future community interactions and hopefully - an increase in the diversity of interpreters at your site and in our professional field as a whole.

References
Interpretation for the Youngest Visitors

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Keywords
early childhood, inquiry, whole-child, emergent learners, pre-verbal, authentic experience, nature deficit disorder, infants, toddlers

Engaging small children in nature may be as simple as walk in the park, but it can be so much more. Research into early brain development stresses the plasticity of the brain during the first few years of life. The human brain is hardwired to learn from the world around us through emotional and social interactions, these include interactions with people and the environment. Studies have shown that the first three years of life are crucial for certain types of learning. Can interaction with nature during the early years also be crucial in the development of a comfort and appreciation of nature? What methods of nature education, both formal and nonformal, are best for infants and toddlers? What are the best practices for your nature location?

Focus points in this session will include:

• Understanding developmental milestones of infants and toddlers will make your interpretation relevant to this young audience;

• Authentic experience through the introduction and repetition of nature words, natural places and material is of vital importance to the developing brain;

• Small is big and simple takes time: preparing inquiry-based and child-led opportunities;

• Evaluating effective programming with a pre-verbal target audience.

Opportunities for establishing a life-long connection to nature for this age group are especially rich. Theories for nature education such as getting lost in both place and time and collecting nature materials that lead to a conservation ethic are timely ideas in this age of loss of wild spaces and over-sanitized play yards. The adult role is integral for the youngest learners, for both caregivers and educators. The challenge is to shift from relying on educator-driven programs to a child-led experience. As interpreters we connect the visitor to the resource. Through authentic experience, we understand the value in offering immediate and tangible connections. Building upon this knowledge to include our youngest visitors, will enrich the whole family and the whole site.

References


Teeth on the Trail: Playing with Descriptive Language

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Keywords
nature writers, naturalists, descriptive language; bridging the familiar with the unfamiliar, analogies, metaphors, similies, nature interpretation, imagination, interpretive writing, personal interpretation, non-personal interpretation, relevance, handles

Descriptive language has always had a place in the interpretation field. Founders of the interpretive profession were writers, and many among our ranks today express this talent. Whether creative writing is our forte or our challenge, for personal or non-personal interpretation, inspiration is around us to discover by our own observations or by paying attention to those of others.

Analogies, metaphors and poetic phrases from favorite nature writers are inspiring resources that help interpreters bridge the familiar with the unfamiliar when describing a natural object, process or sound. Sometimes we think of these ourselves, sometimes our audiences do, such as the child who exclaimed on a woods walk one day that sourwood tree flowers look like teeth. They do!

Though inspiration takes some study time it is all around us to ponder. Some useful resources and forms your handles can take are:

- Poems
- Naturalist writings
- Field guides and other identification books
- Cultural and historical names of plants and animals
- Latin and scientific names, other Etymology
- Songs
- Comparisons to everyday objects
- Riddles
- Use of all senses- taste, smell, touch, sound, sight
- Mnemonic devices such as familiar phrases that describe bird songs.

Favorite sources of inspiration are nature books from the late 1800's and early 1900's. Many are digitized and can be read or downloaded from the web. Among these are works by Anna Comstock, William Hamilton Gibson, and books from the Little Nature Library. Contemporary authors include Mary Oliver and David George Haskell. You likely have your own favorites you turn to.

Borrowing metaphors and other descriptive phrases is a common and accepted practice in interpretation and part of our own learning. Give credit as often as possible, maybe not specific for a group of children beyond "I once read that...." or "someone who loves nature once wrote...." For many audiences citing the source may entice someone to read your favorite authors, pay attention to scientific names, or listen to the world around them more closely. You may open a new world for them beyond the interpretive stories you are telling.

Though we may not feel we are writers ourselves and the on-our-feet spoken word comes differently than thoughtful lines on paper or screen, we can still paint pictures with words to help our audiences of all ages recall information we are giving them. We can spark their imagination and spread a sense of wonder and beauty. We can paint with words, creating mental pictures. Lace your talks with words that hold attention and make listening fun. Add pizzazz with a bit of poetry. Play with language and interpret!
Branding Through Interpretation

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Keywords
branding, brand, standards, off-brand, behaviors, guest, service, touch point, culture,

Your brand can be thought of as the image of your organization that is held by the external world—your audience and beyond. It is used to differentiate your products and services from others and to assign a value to those products and services. In short, your brand is your identity in many ways—and many of us lack a strong brand. The good news is that it doesn’t take an expensive advertising campaign to develop a strong brand. The members of your organization—particularly interpreters—can develop the brand for your organization.

How is a brand built? It all comes down to the people in the organization. The strongest brands are the result of people that care about the quality of their work and about the quality of the interactions with their audience. It’s very simple; you people are your brand. That goes for the back-of-the-house staff as well as the public-facing staff. In many of our organizations that means that staff in maintenance, custodial, exhibits, construction and concessionaires all need to know their efforts are highly visible to the clientele and the quality of their work matters at all times. A lot of people think a quality product is the basis of a strong brand, and that’s partially accurate. In reality, it’s the commitment to quality (and follow through) from the people developing, designing and building the product that contributes to a strong brand. A good product is an important start, but it’s not the whole story. The interpersonal interactions—that person-to-person interface—between the external world and the organization can make or break your brand. We all know the basics of positive body language, good customer service, being knowledgeable, and using polite and courteous behavior. Making sure those are practiced universally in the organization is perhaps another matter, and one that should occupy the attention of every manager and supervisor. More about that later… And where do interpreters fit in? The strongest brands belong to organizations that have a story, an identity, a sense of heritage, a sense of mission. Interpreters are often the keepers of that sense of mission and the tellers of the organization story.

Good interpretation—even a brief, informal encounter with an interpreter—can imbue the audience with a strong sense of organization identity that incorporates mission, purpose, caring and professionalism. Interpreters (and in this application I include docents, entry kiosk staff, front counter staff or anyone else that has interpretation and public contact as part of their formal/informal duties) become roving ambassadors for the organization and are also the biggest brand builders you have. Two Key Concepts: Touch Points & Brand Behaviors. An important concept in branding is to consider each encounter with a representative of the organization as an opportunity for the audience to “touch” the authentic culture of the organization. Each organization develops its own distinct culture, and we each reflect that culture to the outside world. Is your culture one of caring or callousness? Enthusiasm or exhaustion? Whatever it is, that culture is projected through each of us as a touch point. Organizations or settings that are rich in touch points (i.e. easy access to ample representatives) are know as “high touch” and are frequently viewed as top-of-the-line organizations (i.e. Nordstrom’s, Disney, Ritz Carlton). Brand behaviors are those actions that model, support or exemplify the brand or your organization. Some of these are simple customer service behaviors, and the list may also include effective communication techniques, good interpretation, or how you respond to requests or the various needs and issues that can arise with your audience. We often take these behaviors for granted as “common sense.” However, it can be very helpful for various work groups to define the brand behaviors to which they want to be accountable. This list can be invaluable in training new members of the organization to understand and apply these standards, and to help each group spot “off-brand” behaviors and turn them around before the brand of the organization is damaged.

Assessing Your Brand Remember that your brand is how the outside world perceives your organization, most importantly your services and products and the quality of interactions with people that represent your organization. So a logical starting point is by monitoring audience perceptions. This can be done through formal surveys and marketing studies, or informally by talking with visitors, listening to their comments, and monitoring reviews on social media (i.e. Yelp, TripAdvisor and others). Develop a list of services and behaviors that seem important to your audience and add your own thoughts to begin building that list of brand behaviors. Now you’re ready to start some informal walkabouts to look for touch points and brand behaviors. Do you have enough touch points and are they located strategically in the flow of the visitor experience. If you need more, how can you get them? Do you spot things that are decidedly off brand? How can that situation be corrected? Are your concessionaires or other key partners adhering to the same brand standards? Do you need to provide new or different training to address off-brand situations? Most importantly, with your list of brand behaviors look for good examples and reinforce those. The best way to build a strong brand is to build a strong positive organization culture with a strong sense of identity. Timely, positive reinforcement for good work is the fastest way to get there.

Building a strong brand takes time. A brand is built with each
interaction we have with any of our large and varied audiences. And maintaining a strong brand requires ongoing attention. One bad interaction, one bad blog or disparaging comment on social media can do a lot of damage to your brand. However, if you make strong brand behaviors part of your organization culture, you can enjoy the increasing value that your visitors and supporters associate with your products and services. Those strong brand behaviors are intrinsic in good interpreters and interpretation.

References


Demystify the Cosmos! Astronomy Can Be Easy and Comfortable for Everyone

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Mountains Recreation and Conservation Authority

Andy Bleckinger, CIG  
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Keywords  
astronomy, night sky, camp, star program, storytelling, hands on activities

Introduction
1. Maslow’s, duration, questions at any time, and overview including theme
2. Introduce ourselves  
   a. Andy  
      i. Personal story about how he got interested in astronomy.
   b. Carolyn  
      i. Personal story about how she got interested in astronomy.
3. Introduce Mountains Recreation and Conservation Authority and position  
   a. We work as naturalists with the MRCA

Body
4. Mercury - Closest, not the hottest, uninhabitable. Where we do astronomy can sometimes seem pretty harsh, like Mercury.  
   b. Have both urban and rural parks (pictures of Vista Hermosa Natural Park and Upper Las Virgenes Canyon Open Space Preserve)  
   c. Transition: Pros and Cons of various sites
5. Venus - Hottest and blindingly bright. Just like Venus can be so bright it’s hard to look at, there can be so much information about astronomy that it can blind you.  
   b. Thumb assessment.  
   c. Theme: Astronomy can be easy and comfortable for everyone.
6. Earth - A comfortable place. Start by teaching what you are comfortable with.  
   b. You don’t have to memorize and know everything!  
   c. When you go on a flower walk you don’t know every single flower.  
   d. There are tools to help (more later)
7. Mars - Looking for life and with Rovers and Probes. We have found streams and CO2, which help tell the story of Mars.  
   b. Stories are a great alternative  
      i. Native American Night Sky story - Andy  
      ii. Cygnus the Swan, with Deneb and Albireo - Carolyn  
   c. Stories are told to help connect the audience with cultures and people from the past and the present. This helps some people better understand how they relate to the stars.
8. Jupiter - The biggest planet. The size and distance of our solar system can be scary, but it doesn’t have to be. Activities help bring things down to a manageable size.  
   b. Have just a few interesting facts  
      i. What is a shooting star, and how is this different from a comet?  
      ii. Ask people about their childhood astronomy stories.  
   c. The numbers of size and distance don’t have to be so scary  
      i. Demo: A walk through the solar system - 1 quick fact at each stop.  
      ii. Demo: Yarn Planets  
      iii. Remember, it’s optional!  
      iv. There are tools to help.
9. Uranus (Yes, we skipped Saturn, but will return to it later) - A cold outer gas giant. Now unlike this planets name, these old fashioned gadgets are no joke.  
   b. "Gadgets do not supplant the personal contact; we accept them as valuable alternatives and supplements" - Freeman Tilden “Interpreting our Heritage”  
      i. Without gadgets is great  
         1. Books and guides  
         2. Star charts  
         3. Measure with hole punch (Moon), finger or fist (Polaris)  
         4. Star circle
10. Neptune - This planet was only discovered once technology had advanced enough.

b. Technology can be a great supplement to any astronomy program.
   i. With gadgets is great
      1. Telescopes, binoculars.
      2. Laser pointer
      3. Smart phone with apps like Google Sky Map, LunaFAQT, NASA, Planets, etc.
      4. Stellarium
      5. Websites like www.spaceweather.com/flybys, and www.skyandtelescope.com

11. Saturn - A view of this beautiful planet through a telescope can be life-changing.

12. Pluto - Scientists reassessed the criteria for a planet, which affected Pluto’s status.

b. You always have to reassess your astronomy program and keep it safe, current, and relevant.

c. Learn from our experience:
   i. Safety - use common sense
   ii. Weather - be prepared and always have a plan B
   iii. Hard/weird audience questions - "What do you think?"

**Conclusion**

13. Restate theme: Astronomy can be easy and comfortable for everyone.

14. Re-asses thumb scale

15. Point out other resources

16. Thank you

17. Questions, Gadget Demonstrations
Changing Landscapes: Discovering Climate Change through Digital Photography

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Keywords
climate change, digital photography, guided walk, informal education, technology, hands-on, phenology

Congratulations! You have been tasked with developing a climate change interpretive program at your site! Further, your goal is to get your participants excited about weather, climate, invisible changes and long-term impacts expected after they have left your town, and you have to do it all in about an hour. What you will need to achieve this goal is research, creativity and confidence. Wrapping your head around what climate change impacts you see at home may be easy like it is in Alaska, where the signs are huge: tons of glacier ice melting, for example. Often it is not easy to learn about impacts facing your site and when you do they aren't the kind of changes that lead the headlines. (Drying wetlands are neither dramatically exciting nor easy to notice to an untrained eye.) Developing interpretive walks that tease out these smaller climate change impacts and make them meaningful to your visitors is really important. If we expect our communities to take up the charge to make informed decisions on how to respond to the changing landscape, then we have to be talking about climate change at our sites. How do we connect people to climate change through interpretive programming? Ranger talks have been effective in some places. In others, environmental education programs are explaining the carbon cycle, greenhouse gases and the difference between weather and climate to school children. At my site, Kenai National Wildlife Refuge, in southcentral Alaska, guided walks that illustrate not just the individual changes but how they in turn impact the local natural systems have been effective, and popular. These are no ordinary walks. They are exciting, hands-on and fun-for-all-ages digital camera photo safaris.

There are few interpretive topics more complex than climate change. Interpreting climate change impacts at your site to an audience without alienating or overwhelming is a feat that takes preparation and creative program design. First, you have to educate yourself on the topic's local impacts. Biology departments are key, followed by academic paper research. The study of climate impacts on the Kenai National Wildlife Refuge is very active, so there are many data sources available, some published some so current that they are still in the field research stage. Conversations with lead biologists helped develop a short list of obvious and hidden climate change effects. This became the core of interpretive response through these guided photo walks and also a self-guided trail activity booklet and visitor center exhibit. What I discovered as I prepared these interpretive programs was the complex relationships between the impacts and the ecosystem were not going to hit home without a much closer study of what makes the land special first. A visitor who doesn't know the connection between spawning salmon and forest health will not perceive the larger threat that degrading natal stream health has on everything they appreciate in the boreal forest. We have to look closer first. Enter the digital camera photo safari. The debate between those who see technology as a barrier and those who embrace it as a tool to access nature is a big one. Where do you stand? Do you love to share images of your hikes with friends through sites like Facebook or Instagram? Do you recoil at the thought of seeing nature through an lcd screen? Using technology on guided walks has been extraordinarily rewarding. Certainly there are limitations that have to be considered from short battery life during cold winter walks to keeping cameras working in the hands of preschoolers. Conversely, using cameras on guided walks offers great opportunity to interpret complex topics effectively. Each walk begins with every person already engaged. The interpreter's job is less about getting people involved and more about revealing subtleties that support the message that climate change is happening and there are very real results to be seen. Today's youth are digital natives. They do not know a time when powerful computers didn't fit into their pocket. They form meaningful relationships with people that exist purely in the digital realm, online and through social media. For these young people, the next generation of citizens who will be entrusted to continue the conservation efforts we hold dear, it is not a question of if but how they make connections to their world using technology. Instead of banning all tech from the trails, using it to connect kids to nature is altogether rewarding and the bond built is a lasting one. Through the camera lens, participants of digital camera photo safaris look closely at their world, sometimes with the challenge of taking macro shots from an insect's point of view, other times a group goal will be to document the way the forest is different from the wetland. The interpreter's discussion as these photos are being taken leads the group to pick out what parts of the scene are a result of climate change or are at risk of changing because of it. Then the interpreter explains why they are important. For example, incursion of grass into the boreal forest not only increases competition for other plants but changes fire behavior by serving as a ladder fuel, sending ground-based wildfire up into the much windier canopy. This conversation occurs organically, anticipated by the interpreter as cameras are pointed towards the dew-covered grass, but presented casually as points of interest along the path rather than as a prepared trail stop with a static audience.

At trails end, the interpreter connects all these moments together into the conclusion, recapping and bringing into focus the effect of climate change on the resource and its visitors. Collected photos from each safari get logged as a Facebook album and are used in other climate-based programs to compare same weeks during different years on the same trail. Participants leave with
not just a sheet of prints from their cameras but a new-found understanding of ecosystem interdependencies in the changing landscape they have just explored. Climate change is real, it is here, and they know it.
Know Your Audience’s Brain

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Keywords
brain-based, relevance, brain science, learning, cognitive bias, audience needs

What did you notice when you came into the room you’re in now? Consider this: your conscious mind might recall 3-5 different things, but your senses registered a whole lot more. Every second, day or night, your brain is bombarded with billions of bits of sensory information. Brains are trained to filter and sort the information, controlling the flow so only about 2000 bits of information per second enter your brain. Most of the sorting is done automatically, but while you’re here today, we’ll look at how you can increase the chances that the information you’re trying to get across gets through the filter and sticks in your audience member’s brains. You will experience concrete ways that an effective interpreter can provide motivating, enjoyable experiences that the audience continues to think about long after those experiences are over.

Knowing basic brain biology can help you build strategies to better equip your audience for success. (First, a disclaimer: This is a vastly simplified description of what we understand about brain function and there is a lot that we are still learning about.) Your senses are constantly at the alert, collecting information. Sensory input first goes to your brain stem area, which connects sensory input to other parts of your brain, acts as the gatekeeper, and determines whether to ignore that input or pay attention to it.

Information that gets through the gatekeeper goes to be analyzed as to whether it is useful to help you survive or bring you pleasure. Emotions, emotional behavior, and motivation are integrated and memories are stored.

Next, the brain links new sensory information to past memories and stored knowledge to make relational memories. Judgment, analysis, organizing, problem solving, planning, creativity are all examples of relational memories. When we are focused, and in a positive/controlled emotional state, we create, solve problems, apply solutions, all of which strengthen neural pathways, and thus learning. When there are positive emotions generated by enjoyable experiences, the brain learns and remembers.

Emotions such as anxiety, frustration, sadness, boredom, or fear all cause the sorting part of the brain to use excessive oxygen and nutrients, putting your brain into survival mode and blocking entry of new information to the thinking part of the brain. Audience members who are anxious, sad, frustrated or bored may react to your interpretive program by ignoring it, fighting it (perhaps reacting inappropriately), or avoiding it (daydreaming).

As interpreters, we can help set up our participants to get the most out of what we offer. Many of us have been trained to apply Maslow’s Hierarchy of Needs to our programs. Making sure that participants feel safe and can take care of hunger, thirst, and restroom needs goes a long way toward initiating program success.

Once your audience is primed by having basic needs met, consider these research-based ideas to enhance positive emotions, thus increasing your odds of creating a memorable interpretive opportunity.

- Add movement, whether with the whole body or just hands, to enhance brain activity. Scribble, draw, manipulate objects, or do a large-motor activity.
- Novelty makes the brain sit up and pay attention (note that the attention span at full concentration for adults is 15-20 minutes—it is less for younger people). Change the pace. Use something familiar in a new way. Do something unexpected—break into song, tell a joke, or toss a balloon. Create something—tell stories, build something out sticks, draw, etc.
- The brain loves context and patterns. Patterns include putting things into categories or organizing them in some way; many interpreters naturally do this. Provide context and relevance. Sort and categorize objects or ideas. Recall past events or knowledge and connect it to what’s being learned or talked about or experienced. Look for patterns and relationships.
- Provide challenges and feedback. Challenges and feedback produce endorphins—feel-good chemicals that are like Velcro on the brain. Examples of challenge: problem solving, critical thinking, relevant projects, complex activities.
  - Engage all senses. Senses provide internal feedback.
  - Emotions help provide internal feedback and engage meaning. (relating to others, setting goals, memories, and evaluating)

All of these ideas can help, but what is already in your audience’s brain also influences what they’ll take away from your interpretive program. We all develop thought patterns known as cognitive biases. A cognitive bias is a pattern of deviation in judgment whereby inferences about the world are made in an illogical fashion. These are three common cognitive biases that are directly relevant to our work as educators and interpreters:

- Current moment: We would rather experience pleasure now and face the consequences later.
- Objects have essences: We often believe that there is an invisible value that an object gets from its provenance (i.e. John Lennon’s piano draws huge crowds).
• Symbols have power: We might believe that heavy things are more important, we gravitate toward people and things that share our names or initials, we anthropomorphize.

If you are interested in learning more, consider reading *The Seven Laws of Magical Thinking*, referenced below. Examining the roots of biases and consequent thought patterns might provide you with ideas of both conventional and novel ways to help link people to your resource. Or you might think of ways to break through the biases and engage a different way of thinking.

Knowing more about brain-based interpretation has made me more aware of how I can increase the chances that my messages will be remembered long after a program is over. You can help your audience and yourself by providing reflective closure time, one of the most effective methods in establishing memory and learning. At the end of your program, pause for your audience to integrate what they learned with something they already know. Encourage them to write their own take-away messages, figuratively or even literally. "I'm going to give you a minute to think of at least 2 ways that you can use this brain-based information in your job." What will you use?

**References**


Laureen Trainer
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Trainer Evaluation

Rachel Murray
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Denver Botanic Gardens

Betsy Martinson
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Buffalo Bill Museum and Grave

Keywords
evaluation, audience research, evaluation capacity building, toolkit

Rachel Murray of the Denver Botanic Gardens will begin the presentation with a “bean-voting” activity, the first lo-tech, lo-budget tool attendees will add to their toolkit. Rachel will talk about the Denver Botanic Garden’s participation in the Denver Evaluation Network (DEN), a group of 15 institutions in the Denver Metro area. These institutions represent a range of museums, from large institutions like Denver Zoo, History Colorado, and the Denver Museum of Nature & Science, to smaller, community museums such as Golden History Museums, Lakewood Heritage Center, and the Longmont Museum and Cultural Center. The collaborative formed in 2010 to create a place where museum professionals, who were not formally trained as evaluators, could meet and share evaluation knowledge, resources, and information on how to build the evaluation capacity of each institution. DEN received IMLS support in 2012 and is currently finishing up work related to the two-year grant. Rachel will discuss how the collaborative was formed, what she has learned as a member and the how she has used evaluation and audience feedback to inform her role as Manager of Interpretation and Evaluation at the Gardens.

Laureen Trainer of Trainer Evaluation and Betsy Martinson of the Buffalo Bill Museum & Grave will focus on the ‘how and why’ of evaluation. And how talking to your audience about their thoughts, ideas and experiences can strengthen your institution’s connection to the community and increase the relevancy of your institutional offerings, including exhibitions, interpretations and programs. Laureen and Betsy will present several different data collection options geared to all levels and all budgets. They will focus on a range of methods, from lo-tech stickers and post-it notes options to more hi-tech tablet and online software options. Each data collection option will include an introduction to the methodology, how and when each option is appropriate, the type of information each option yields, and examples of how museums, zoos, historic parks and gardens have used these techniques. Additionally, attendees will try their hands at each option modeled during the presentation.

We will conclude with our last evaluation technique, a carousel brainstorming session. This is a great tool for gathering information from your visitors as well as an internal brainstorming tool. The presenters will introduce this activity and then attendees will have the chance to break into groups to complete the activity which involves collecting and coding audience data. This last technique represents the final addition to attendees toolkit. We will save the last few minutes of the presentation for a final question and answer session.
Beyond the Clues: Critter Scene Investigations

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Keywords
evidence, critter scene investigations, wildlife forensic scientists, clues

Incorporating different senses into a program allows for a more well-rounded experience to animal tracking and observation while in the field. Using our human senses helps us better connect and understand the mindset of animals or at the very least, help us locate clues quicker. Animals have strong adaptations to survive in the wild, from larger ears to hear predators and alleviate heat, to lacking olfactory abilities so they can eat carrion. Children and adults alike can enhance their animal observation skills by utilizing multiple learning styles (audio, tactile, verbal and visual), as well as tapping into our own body senses. Using the sensory mnemonic of your hands to your face will help you to remember the human senses: hearing (thumb in ear), seeing (index at eye), smell (middle finger on nose), taste (ring finger on tongue) and touch (pinky finger on chin).

Hear
When coming across a fresh critter scene to investigate, have your audience listen to their surroundings. Do they hear rustling in the brush, animal sounds nearby, possible water source gurgling, or are the animals quiet? Having moments to pause and listen truly heightens the overall experience for your participants by connecting to their surroundings through a meaningful pause to reflect. Remember, silence is golden, especially if it is at least 15 seconds of silence. Sound can also be introduced by the pitch, volume and cadence of your own voice, sharing the critter scene with your audience through your emotional connections and setting the pace of storytelling.

Sight
Through basic field observations, one can gather much information before entering the critter scene. Typical questions can be asked like what do you notice in this surrounding area, or is anything out of place. Become familiar with your surroundings helps to better prepare for the unexpected. Are there footprints leaving the area, or perhaps smudge marks along a tree trunk? Figuring out what does and doesn’t belong to the area can help start the path of clue discovery.

Smell
Nature is full of scratch n’ sniff clues. Some are pleasant like the blooming bud of a rose, while others are left to view from afar, like a decomposing critter. It is important to be aware of what you smell, as some evidence can cause humans harm, such as bacteria or airborne germs. Some smelly clues are quite obvious in our discovery, such as the pungent odor of a skunk or markings from a feline friend.

Taste
It is important to never eat things directly from nature in front of your group, especially young ones, as this can set a bad precedence for the public to nibble on all things along the trail, possibly removing important resources or consuming something fatal. Discuss with your group how some things may smell unpleasant to us maybe enjoyable for others, such as the turkey vulture or dung beetle. Help share in these edible joys by creating your own “Scat Creation.” Using a Clif Bar (chocolate is a deeper black color while peanut butter shows off the nuts), mold it into scat tubes and set along the trail. When you come across it, share with your audience how you can discover much about an animal through its scat: its shape and size are based on the animal’s own shape and size, the texture and color for what it has eaten, and the taste “chomp!” for what it has enjoyed!

Touch
Tactile learners love to pick items up and move them around, figuring out how things operate. This may not work well if they want to pick up the dead creature or smelly scat, but it is important to share models of items for closer examination. An owl pellet is easily carried in one’s pocket, or a small skunk skull wrapped in a handkerchief in a backpack. Time for further examination allows for a more in depth response, and possible more possibilities to what has unfolded in the evidence.

The benefits of utilizing our full senses while searching out critter scenes to investigate are used in any park type and location, indoors or outdoors, and for the young and young at heart. A historical park can reference critter clues on historical buildings, while an urban park can search for clues in the sports fields. The best part about developing your senses for investigations is that they can take place in your own playground or backyard. Just remember, don’t taste the scat.

References


Mystery, Surprise, and the Promise of a Good Story

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Abstract
Every story begins with a mystery. We expect something to happen; exactly what is a surprise. If it isn't, the story is less satisfying. From unexpected twists to novel analogies and unusual words, surprises reinforce our need to know what happens next. Surprises also increase dopamine levels in our brains—the same thing that happens when we fall in love. This combination keeps us engaged and makes the story's content more memorable.

Keywords
writing, interpretive writing, editing, story, creativity

Every story begins with a promise, a hint of intrigue, a mystery to solve. We expect something to happen in a story. Exactly what that something is, is a surprise—and if it isn't, the story is less satisfying.

Surprises, from an unexpected twist in the tale to novel analogies and unusual words, reinforce and fulfill our need to know what happens next. Surprises also drive up dopamine levels in our brains—the same thing that happens when we fall in love. This combination of mystery and surprise—the promise of a good story—keeps us engaged with the story and makes the story's content more memorable. But surprise can also feel scary and risky; it feels far safer to simply list the facts, to follow the tried and true and always-done-like-this.

What draws visitors in? How do we capture—and keep—their attention? In this highly interactive session, we'll explore and experiment with writing and story techniques to create memorable interpretive stories.

The problem with story: Every story has a beginning, middle, and end, but those three things aren't enough to make a story. Every story has a point, a problem, and a character who struggles to solve the problem.

Telling details: You can never tell the whole story, even with an infinite number of web pages. The right details open the way to greater meaning with fewer words.

Metaphor, megaphore, miniphore: Creating the unexpected, defying expectations, incorporating contradictions—language itself can surprise and intrigue our readers.

For more ideas on how to create powerful, effective stories, check out the references listed below.

References


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Keywords
Prezi, presentation, powerpoint, slideshow, zooming, audio, video, design, create, tutorial, how to, 101.

Prezi is a presentation tool that lets you design a more eye catching and interactive delivery. When you are first learning, it is easiest to think of it like a 3-dimensional Powerpoint, where you can zoom in and out and rotate the screen to see the next slide. As you develop your Prezi skills, you can grow your presentation from a simple slideshow into a beautiful work of art.

This workshop will introduce you to the world of Prezi, showing you its versatility and capabilities, and reveal the tips and tricks to making your presentation blossom. During the last hour, we will guide you all through the step by step process as we each build a Prezi template together from the ground up. While we will start with the basics, by the end, everyone will know how to create their own Prezi that includes text, images, video clips, audio clips, and even learn how to present their masterpiece.

While not affiliated with Prezi, we have come to appreciate this creative 3-Dimensional presentation world that helps share ideas with others, and hope to pass that along to you. Who here has used Microsoft Powerpoint or a similar type program before? What about Prezi, or another 3-Dimensional Presentation program? Well, today we will be showing you ideas that will hopefully inspire new creative possibilities of your own, whether you are a seasoned Prezi designer, or are just starting out.

Here is a sneak peak at the Prezi that we will be designing today.

Grow your presentation from a simple slideshow into an exciting interactive Prezi.

1. Some wind dispersed seeds begin life floating through the air. Your Prezi begins life in the cloud.
   a. The free version, which we will all be using today, only needs a connection to the internet. The presentation that you build is stored online, so you can access, edit, and present it anywhere. You can also share the presentation with other people, and have up to 10 people working on the same presentation at the same time. If you want you can pay a small monthly/yearly fee to be able to download the software to your computer and are no longer as limited by cloud storage space.
   b. Both Mac and Windows computers and laptops can create Prezis, and some tablets and smartphones can present them. Also, most browsers work with Prezi, including IE9+, Firefox 3+, Chrome, Safari, and others. Just be sure you have an updated version of your browser and Flash Player.
   c. You can also download your finalized Prezi so you can present it and share it with other people while offline. We will show you how to do this at the end of this workshop with the Prezi that you create.

2. Just as plants serve many different purposes in our environment, Prezi is versatile and can be used in a variety of situations.
   a. From board meetings, to staff training, and even workshop presentations, Prezi can have a dramatic impact on your audience. It can look professional, while at the same time grab the audiences attention and help your delivery have more of a theme and flow.
   b. Here you can see a Prezi that the MRCA created to present at a board meeting. It is designed to show the impact a Junior Ranger program can have on underserved youth.
   c. It can also have a fun and kid friendly approach, as you saw in the Prezi that we will all be designing today.

3. The vast capabilities of Prezi can sometimes get you lost in the shadows. Keep your leaves in the sun with these simple tips and tricks.
   a. When you’re starting, keep it simple. Too much twisting, turning, and zooming can make your audience dizzy.
   b. Build around a theme. This helps the audience make connections from one slide to the next.
   c. Limit your text. We all know what it is like to sit in front of a Powerpoint slideshow full of text, especially if the presenter decides to read it all to you. Prezi is a tool to help guide and accent your presentation, not a presentation in itself. Although, we should mention that with its audio and video embedding capabilities, you could record yourself and insert your presentation speech into the Prezi.
4. Now, let’s dive into Prezi and get your roots wet!

   a. If you have not already, download the Prezi Building Materials we have provided. These will be used as we put images, audio, and even video clips into our presentation.


   b. Today we will help you create a new Prezi from the ground up. You will be building the Prezi that we showed you earlier, so you don’t have to worry about coming up with your own ideas and images. We will go step by step, making sure you are all on-board. If your neighbor gets stuck and you are able to help, please feel free to assist them.

   c. We will be going through a step-by-step tutorial that we have designed to help you quickly learn the majority of what Prezi has to offer. If you would like to download the slideshow and the accompanying slide-by-slide tutorial, they can be downloaded here:

      1) The slideshow pictures can be downloaded here: http://bit.ly/NAI9SS

      2) The tutorial notes for each step can be found here: http://bit.ly/NAI9TS

   d. After building this Prezi, we hope you feel comfortable with the basics and are confident enough to try making a Prezi of your own.

   e. We will leave a few minutes at the end for some questions and open discussion on Prezi capabilities and possibilities.

**Conclusion**

We hope we have planted the seed of inspiration, and that you leave here full of potential Prezi ideas. Just like any other design tool, you will get more confident and your creativity will grow as you use Prezi more. The possibilities are endless! There are many creative Prezi designers making works of art that inspire and excite. Watching other people’s creations will help you fine tune your skills and give you new ideas. Now get out there and make your presentations blossom with Prezi.
Trail Walks: Engaging Young Children in Active Learning

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Keywords
shared wonder learning tools role play

“A child’s world is fresh and new and beautiful, full of wonder and excitement.” (Rachel Carson)

Walking with young children and seeing the forest through their perceptions is a wonder. A walk may not go very far or last for very long, but great treasures will be found and great discoveries will be made. It’s a guarantee.

Every week the children who attend the “Mud Pies” program, a drop-in and play for children ages 5 and younger with an adult partner, go on a “Little Walk”. Matching the walk to the week’s natural science theme focuses everyone’s attention. However if a snail, ant hill, or really neat scat appears on or near the trail, it’s a given that a time out from the theme will occur while the find is explored and admired. The walk is really about the children’s enjoyment of being within the forest.

Adult partners are a very important part of these walks. The adults, through interacting with their child/children, become comfortable as listeners and interpreters.

The children are a very important part of these walks. Children are generous in sharing their observations. Their senses are keen. Learning about their world as they practice observation skills, acquire new language, categorize, and make connections is very important to them.

The interpreter is a very important part of these walks. He/she understands that the walk is a shared experience. Every participant is equally important. The interpreter is a well-planned guide open to spontaneity; encouraging, listening and learning.

Using Learning Tools
What child doesn’t love a stick? Sticks are great tools. Sticks can be diggers. They can be used to poke into a mole tunnel. As the seasons change, sticks can be used to measure the frost in the soil. Sticks can beat a rhythm on different tree trunks to compare the sounds. The sounds can combine into a tree music concert. The length and width of collected sticks can be compared. After a rain, sticks can be used to paint logs with mud. On a deer walk sticks become antlers.

Leaves can be deconstructed. Taking the leaf apart allows the children to discover the structure of a leaf. Children can be shown the drinking straws (stem and veins) of the leaf. Large leaves such as those from a young sycamore can be made into masks by tearing eye, nose and mouth holes in the leaf tissue. Leaves can be collected and sorted by size, shape, or color. As winter changes to spring, the group notices the weekly changes in the growing leaves.

The interpreter accompanying the walk often carries a “learning tool bag” with materials for the walk’s adventure. The group enjoys the mystery of “what’s in the bag this week”. It is very important that there are enough for each child or family to have their own tools.

When going on a spider hunt, the tool bag contains spray bottles so that the families can each gently spray a web to better see the web’s shape. Maybe they’ll watch the spider come out and take a drink. Spray bottles work like magic as the spray “paints” a tree trunk changing the color of lichens.

Scarfes can become wings. Scarves can catch the wind. They can be seed covers or chrysalises. Dancing to fall music with scarves as falling leaves is quite joyful and sometimes quite giggly.

Quality hand lenses aid in seeing frost on branches, the inside world of mosses and lichens, or the depths of oak bark.

Bubble solution and wands add to the enjoyment of wind play. On a very cold day, have the group dip their wand into the bubble solution and hold it still with no blowing. It is amazing to see how quickly crystals form.

Role Play
During the fall, it is usual that visitors see and hear migrating geese. Outside on the patio, the group looks up to watch and be amazed at the waves of migrating birds. The group listens to the sounds. A few moments are devoted to the adults and children sharing their experiences. Question such as where are the geese going and why can be answered.

On the trail, the group becomes geese. Wings (arms) are readied for flight. Wings flap and are spread out to ride the wind. After a “short flight”, ask the children, “What’s missing from our migratory flight?” “How in the vastness of the sky did the geese stay together?”

Honkers, (plastic clown horns), are passed out. Demonstrate the flock responding to a “honk” by honking back. Practice a few times. Then each family takes a turn being the lead geese, honking and having the group respond by honking back and following their flight path.

If the group is still invigorated, the flock can land, feed, find a pond and go to sleep with their heads tucked under their wings. A predator may come by and startle the geese into flight. All will want to begin honking very loudly and lift into the sky.
Taking a Story Walk

On a story walk, the book goes out on the trail and becomes an ongoing part of the experience. Part of the book is read and then the group reacts. *The Earth and I* by Frank Ash encourages the participants to use their senses to tune into nature and to react to the text. For example, after reading "I sing for her. She sings for me", the group can sit quietly for a minute and listen to the forest. They then share their experiences. A scavenger hunt that enhances the Salamander Room can be downloaded from the site; “The Salamander Room – Five in a Row”.

Through participating in the “Little Walks” each week, children and parents bond with each other. They lead each other in the enjoyment, discovery and wonders of the natural world. Adults and children learn to share discoveries and special moments.
Visually Communicating Climate Change At Glacier National Park

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Keywords
climate change communication, Glacier National Park, visualizing climate change

The greatest threat to America’s National Parks is climate change and lack of response to it by the American public. In 2010, The National Park Service (NPS) published its response strategy to climate change, which, in part, details the NPS goals and objectives for communicating climate change to the public. As outlined in this strategy, front line interpreters are expected to play a major role in communicating to the public about climate change. Effectively communicating information about climate change and the urgency for the public to respond to climate change is a challenge-laden task for climate experts and science communication specialists. How can front line interpreters, who can come from a diverse range of backgrounds and education levels, confidently and effectively talk to the public about climate change? Using Glacier National Park as a case study for visually communicating climate change, this session will explore techniques for discussing complex climate processes and human activities that accelerate climate change as well as simple visual techniques for talking to the public about climate change.

At Glacier National Park several methods have been used to communicate climate change information to the public. These include signs, brochures, and climate talks, each since 2008 being used with differing effectiveness. As of 2010, a more direct approach to training interpreters at Glacier national park was adopted. In 2011 a representative from the NPS climate change response program conducted a special training for interpreters on climate communication. Additionally over the past few years, research projects at Glacier National Park have been highlighting climate impacts on the park’s glaciers, charismatic species like the Pika, and aquatic species seen to be at risk in a warming environment. Along with specific climate research examples, using landscape changes over time seem to provide the public with more tangible climate change stories that can be easily visualized. One of the foremost ways to communicate these climate stories has been with the use of repeat photography. Since the development of photography at the turn of the century, photographers have been documenting Glacier National Park’s landscape. Coupled with today's efforts by USGS researchers to capture photos from the same angles as seen in the historic photos, a compelling story of climate change is being told to the public. Using storytelling that focuses on tangible objects seen in Glacier National Park, the four key climate change messages the NPS expects front line interpreters to communicate to the public are that 1) human activities are changing the Earth’s climate; 2) climate change affects national parks and the treasures they protect; 3) the National park Service is addressing climate change; and 4) the choices people make today do make a difference. In this presentation methods used to communicate these four key messages to the public that also help visitors visualize climate change at Glacier National Park will be discussed.

Within the park service, Glacier National Park stands out as a poster child for climate change impacts on America’s National Parks. The park’s name-sake glaciers have been melting in response to climate since 1850 and are currently melting at an unprecedented rate. Researchers predict that at the rate they are melting Glacier National Park can be expected to be glacier free by, and perhaps before, 2030. The massive Pleistocene glaciers that carved and sculpted the park’s mountains tell a story of massive shifts in Earth’s climate. Even the rocks that make up the mountains represent an ancient time on Earth when the area known as Montana today had a climate like the Bahamas. At Glacier National Park the landscape can be used to communicate climate change messages to the public in a powerful visual way.

References


Prairie Perspectives: Connecting to the Land through Cultural History

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Keywords  
cultural history, Cheyenne Indians, homesteaders, prairie

When the Plains Conservation Center began providing environmental education programs in the 1950s as a part of a Soil Conservation District, our main directive was to address unsustainable farming techniques out of fear that man would again plow up thousands of square miles of top soil similar to that of the Dust Bowl of the 1930s. Even though the term had not yet been coined, we were addressing “Nature Deficit Disorder.” From the beginning, we recognized the powerful lessons that could be learned from observing how people lived on the land. Today, as an independent non-profit, we see thousands of school children a year, and continue to embrace the concept of learning from man’s success or hardship on the land. While many individuals focus on Colorado’s rugged peaks, at the Plains Center we recognize the thousands of individuals living on Colorado’s plains, and the need for a deeper connection to the eastern half of the state. We believe when individuals learn how past cultures lived on the prairie, they also develop a stronger connection to the land.

For earlier prairie cultures, such as the Cheyenne Indians and homesteaders, whether or not you survived vs. thrived was strongly related to how well you learned to live WITH the land. By immersing students in our cultural history programs based on the Cheyenne Indians and homesteaders, they discover a new way to view the land and a new way to relate to nature. In our overnight, “Prairie Perspectives,” one and a half day program for Colorado 3rd and 4th graders, we create hands-on immersive activities that challenge students. Meals and snacks become a part of the interpretive program and are also a connection of how we relate to the land. Journaling on personal “perspectives” throughout the program helps students reflect on their own developing views and knowledge of the land. Teachers are typically motivated to come (and willing to sleep on the ground in a tipi with their students) because of the Social Studies connection. However, we feel that the students also leave with a much stronger connection to the land and an understanding of natural processes, and local flora and fauna. While our “Prairie Perspectives” program is the most comprehensive and in-depth program we offer, it is by no means drastically different than our typical day programs. What is unique, however, is how we introduce the program and frame the discussion of how students can process their experiences. We highlight the “5 W’s of the Prairie” including “wonder, walk, watch, water, and work” as a way for students to find a focus within each experience, and highlight the freedom each students has to have their own individual experience within the larger program. Each student is supplied with a journal that they may use to chronicle their experience and their “perspective.” After the initial orientation and framework, we begin an expedition on our 1000-acre short grass prairie. In five-minutes of silence, we allow students a chance to journal their initial thoughts and observations of the prairie ecosystem. When students come together again after this reflective time, students are able to share their observations and are given the roles of a botanist, cartographer, or biologist replicating Long’s Expedition in 1820. As a research team, they must prepare a report for the US Government dictating their findings. Students either hike or take a wagon ride to work on their reports, and inquiries and basic ecology are addressed. At the conclusion of this experience, we encourage students to consider why learning about the ecosystem is pertinent to their cultural history studies. Students then transition into investigating how the Cheyenne Indians thrived on the prairie. Students learn how the Cheyenne depended on the bison, how to move camp to follow the bison (including erecting a 12-foot tipi), practice the skill of archery, and how the Cheyenne interpreted their environment through stories. Students also cook a traditional Cheyenne meal for their dinner. Students then enjoy an evening of storytelling, campfire, and hopefully, a restful night sleep in our 20-foot tips. Throughout the entirety of this experience, we challenge students to make connections to how the environment dictated the choices of the Cheyenne. While students may have had a limited view of the prairie, we try to fashion an understanding that the Cheyenne saw an abundance of resources and possibilities when they viewed the prairie. The Cheyenne were extremely successful at adapting to high winds, extreme temperatures, and limited water. The next morning students continue their cultural history studies in our replica homestead. Students attend a one-room school house for a “day” of lessons, help prepare the noon-day dinner on a wood stove, take care of the farm animals, clean dishes, and pump water from a well. Again, throughout this experience we are challenging students to understand how the land dictated the lifestyle of the homesteaders. From the sod house made entirely out of prairie soils and grasses to the struggle to sustain crops, students witness firsthand the hardships of the homesteaders. Before we say “goodbye” to the students, we take time to reflect on their individual experiences and wrap up with a chance for students to share their new perspectives. During this reflective meeting, we encourage students to compare how two unique cultures lived on the prairie, and how the prairie demanded their consideration with every decision. In conclusion, we also empower students to consider the choices they make on their home on the prairie.
Even though our cultural history programs are currently far more popular than our ecology programs, we feel they deserve equal consideration and stature within our educational catalog. While we strive to connect people to their grassland roots, to feel more connected to themselves, their community, and nature, we recognize when individuals learn about how past cultures lived on the prairie, they also develop a stronger connection to the land.
Bringing the History Harvest Home

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Keywords  
institutional cooperation, partnerships, community outreach, archives, oral history, family history, public history, cultural history, digital history, digital interpretation, colleges, universities, schools, History Harvest, Nebraska State Historical Soc

How can cultural sites better engage with and interpret the stories of their surrounding communities? How can community organizations create an engaging educational experience for college and university students? How can site managers increase their institutions’ community outreach efforts and provide greater access to existing oral histories and objects not currently shared with the general public? The History Harvest seeks to answer those questions by raising visibility and public conversation about history and its meaning, as well as provide a new foundation of publicly available material for historical study, K-12 and college instruction, and lifelong learning. As a collaborative, community-based digital history project and learning initiative, it aims to democratize and open access to cultural history. The project uses interdisciplinary undergraduate teams, community engagement, and digital technologies to share the experiences and artifacts of communities with wider historical audiences. After initial success at the University of Nebraska-Lincoln (UNL), and collaborations with other Nebraska universities, the History Harvest model is ready to go beyond the Great Plains.

This next major segment will address the philosophical grounding of the project and discuss strategies to facilitate undergraduate handling and interpretation of delicate historical materials. Furthermore, it will help attendees weigh the difficulties of organizing a history harvest with the promise of engaging the local community, connecting with undergraduates as future interpretation and museum professionals, and increasing the availability of materials through the creation of a web-based archive. The section will also discuss in detail the structure and scheduling of a history harvest. Undergraduate students conduct each harvest with the input of graduate students and subject matter experts in partnership with local cultural history organizations. During the harvest, community members are invited to share their letters, photographs, objects, and stories, and participate in a conversation about the significance and meaning of their materials. Each artifact is digitally captured and then shared in a web-based archive for future use and study by interpreters, academics, and the public.

The second segment of the session will feature a discussion between attendees and current and past UNL History Harvest project managers as well as former undergraduate collaborators. This attendee-driven discussion is intended to focus on the strengths and weaknesses of the History Harvest model as well as open it to suggestions and feedback from the audience regarding preparation, equipment, and appropriate platforms for a web-based archive. The third workshop segment will be a hands-on mini-harvest. Attendees are encouraged to bring items, personal to their story as interpretation professionals, to the workshop. During the mini-harvest, attendees and facilitators alike will walk through the harvest process from beginning to final digitization and curation into a digital archive at the workshop site (http://historyharvest.omeka.net/). This demonstration will show the power of the harvest to gather the day-to-day stories which enrich cultural interpretation, academic history, and student learning.

The session will conclude with a brief discussion of where interpretation can go after a harvest. What happens to interpretation when you work with tangible resources from the local community? How does cultural interpretation change when the stories that it draws upon expand beyond what is already on the walls or sitting in your site library? What other ways can cultural interpreters build upon user-friendly and web-based storytelling to reach out to underserved communities? What happens when a site, a community, and an institution give to one another?

References


Putting Life in Living History

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New Bedford Whaling National Historical Park

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Keywords  
living history

Living history is meant to be alive, interactive, 3-dimensional and relevant. A successful program is complex, synthesizing facts and research to create a special and individual experience for the visitor. The creation of a character, the fostering of suspension of belief and techniques for engaging the audience will be explored. Situations to avoid and ways to gracefully steer the presentation to a positive conclusion will be shared.

Ruth and Abby, two very commonplace but adventuresome ladies of the 1850s in Massachusetts, explain why they are in Denver. In the process, they tell of their lives at home in New Bedford, the hub of the whaling industry. After this short presentation, the two park rangers will explain the development of this living history program. First, the resources you are trying to interpret must be identified. Determine the story you want to tell and decide who can best and most impartially tell that story. In our case, we wanted to tell the story of the city of New Bedford during the heyday of whaling. We decided the best people to tell this story were middle class women, women whose families were involved in the industry but were not ranked so high on the social ladder that they would not be out in the community nor so poor that their lives were spent merely surviving. As middle class women, they would be aware of what was going on in the city on both ends of the social strata and yet not be forced by social norm or economics into a set lifestyle. Choosing a well-known person is risky. A false move or statement disrupts the illusion and credibility is lost. Ruth is a real person, one of Lucy’s ancestors, but not someone well documented. Abby is based on real person but is a created character. Once characters were determined, the research truly began. An entire life situation was created for each character. Families, homes, interests, political and religious beliefs, etc. were determined. The city of New Bedford in the 1850s, its newspapers, official documents and publications, and regional histories were invaluable resources. Books, journals, and even dead letters can be rich with details. City directories help to give a feel for neighborhoods and city diversity. We learned as much as we could about the people the characters were based on as well as the “players” of the time. Becoming immersed in the time period, at the local, regional, national and international level is important. The goal was to understand what was possible and probable at that time for these two ladies. Who and what would they know? Nothing is ever said that is not true, possible or probable. It is paramount that incorrect information never be given! One of the challenges is the fact that the program takes place in present day New Bedford. Ignoring the differences between historical New Bedford and the present is impractical. Instead, Ruth and Abby acknowledge new inventions, and changes in the look, sound and smell of the city and express their feelings about them. Comparisons are made and similarities are highlighted. Universal concepts become the focus. Love, fear, disappointment, loss, excitement, adventure, etc. are expressed and shared between people of different centuries. Two characters working together is the best option for a number of reasons. It allows for a measure of safety in an urban area (although it is amazing how respectfully ladies in hoops and bonnets are treated!). It allows conversation rather than monologues. With two participants, while one is talking, the other can be thinking about what might come next. It allows for two points of view on every subject. All this assists in engaging the audience. Ruth and Abby talk with their visitors. It is not a living history presentation, it is a living history conversation. We ask questions and encourage visitors to ask their own questions and add their own comments and stories. It is through the sharing of experiences that a real connection is made and the visit becomes a fond memory rather than remembered history.

By the conclusion of this program, participants will have the tools and ideas for the creation of living history characters who engage, instruct, and involve the audience to better understand and appreciate the resources.
Better than Broadway: How to Use Theatre to Create and Present Amazing Interpretive Programs

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Abstract
Drama changes lives—not just on stage, but in museums, galleries, and historical sites, in amphitheatres (indoors and out), around the campfire, in the classroom, through community outreach, and in happenstance meetings.

Life-changing performances begin long before the actor—or interpreter—appears. In this 3-hour intensive, you’ll experience and experiment with theatrical techniques, from finding stories and developing characters to improv, performance techniques, and program assessment. By the end of the session, you’ll have practice with practical approaches that will improve your interpretive skills, broaden your audience, and help you create memorable experiences.

Keywords
public speaking, acting, performance arts, theatre, theater, museum theatre, living history, play writing, interpretive writing, storytelling, costuming, interpretive program development

Introduction
Drama changes lives—not just on stage, but in museums, galleries, and historical sites, in amphitheatres (indoors and out), around the campfire, in the classroom, through community outreach, and in happenstance meetings.

Life-changing performances begin long before the actor—or interpreter—appears. In this 3-hour intensive, you’ll experience and experiment with theatrical techniques, from finding stories and developing characters to improv, performance techniques, and program assessment. It will be challenging, exhilarating, and creative. It will move you out of your comfort zone without letting you fall into the abyss. By the end of the session, you’ll have practice with practical approaches that will improve your interpretive skills, broaden your audience, and help you create memorable experiences.

Performance 101
Bill Weldon, Colonial Williamsburg

“Any interpretation that does not somehow relate what is being displayed or described to something within the personality or experience of the visitor will be sterile.”

—Interpretive Principle I, Freeman Tilden

Meaningful, lasting learning occurs when emotional engagement stimulates the intellect to process incoming information. That’s why cultural interpretation is most effectively practiced as a performance art.

As a performance art, it is subject to performance standards, summarized as this: if the interpreter is not interesting to watch and listen to, the message will not be communicated effectively. To be effective, interpretation must be visually and aurally compelling.

Most of us are primarily visual learners. Numerous studies conducted over the past several decades have indicated that for most people, 65–75% of communication is visual, 25–35% is aural, and 10% or less is verbal. Other studies show that the greatest retention of knowledge occurs when the communication process adheres to these relative percentages.

“Performance 101” focuses on the visual and aural aspects of presentation. Through selected improvisations, we’ll demonstrate the visual nature of communication. Vocal exercises will underscore how the use of sound in language is critical to effective delivery. These techniques will strengthen your interpretive skills in all settings, whether you’re portraying a character, leading a field trip of exuberant fifth graders, or giving a formal presentation to VIPs.
Anecdotal Storytelling
Simone Mortan, Monterey Bay Aquarium

"Interpretation is an art, which combines many arts, whether the materials presented are scientific, historical, or architectural. Any art is in some degree teachable."
—Interpretive Principle III, Freeman Tilden

Storytelling can be both a very personal experience and a dramatic one. Interpreters can use stories in a variety of ways—to focus the attention of an audience, to change the pace during a program, or to rein in and calm down a group of excited school children.

As humans, we are hard-wired to remember information that is presented in narrative form. Helping interpreters improve their storytelling skills is a great way to move from a program that is a "book report" to a story that makes emotional connections between the audience and the subject of the story.

We’ll create stories by using an exercise I first learned in storyteller Susan Strauss’s workshop many years ago and have continued to use when training new interpretive volunteers at Monterey Bay Aquarium. This exercise will help participants quickly take a personal story and refine it to the best essence of the story that has the greatest emotional impact.

We will use personal anecdotal stories as the source material. Each participant will tell their story three times with three different listeners. Each time, they will hear “appreciations” from their listener for what worked best in their story. The storyteller can improve the telling by pushing forward those elements that worked best while dropping those that did not connect with the audience, quickly developing and refining the story.

Characters, Costuming, and Credibility
John Luzader, Living Museums of the West & Vice President of Programs of NAI

“To portray the past effectively, put on not a new hat, but rather a new head.”
—Juanita Leisch

Interpretive history is not just dressing up in old clothes and using old tools; it is the portrayal of another person in another era wearing clothes and using tools that are contemporary for the represented time period.

Today’s studies demonstrate that our visitors want accuracy and authenticity over entertainment in the programming. They come to learn—and to learn accurate material from living history interpreters whom they can rely upon to provide authentic representations of the past with a “human face.”

The more realistic an interpretation is in sound, smell, and sight, the more it will be remembered by the public. There is responsibility that goes with this method of information: the public and other interpreters will remember what they have learned whether the information is correct or not. Therefore, the interpreter must ensure that the presentation is the best researched and developed program possible.

One of the greatest pitfalls in historic costumed interpretation is the lack of a plan in developing individual characters. Remember that no matter what time period is being represented, the characters did not fall from the sky fully equipped and properly clothed. It is the responsibility of the interpreter to fully research and develop the past and personality of her or his persona.

The Problem with Stories
Judy Fort Brenneman, Greenfire Creative, LLC

“The mind is not a vessel to be filled, but a fire to be kindled.”
—Plutarch

What’s a story?

You’ve heard “beginning, middle, and end”—and it’s true that all stories have those—but they’re not enough to make a story. I can walk across the room, pick up a book, and walk back to my desk—beginning, middle, end—but that isn’t a story.

Ah-hah! you think: nothing happens in this example. To be a story, things need to happen. Preferably dramatic, unusual, or surprising things.

That’s closer, but we’re not there yet.

Stories are not about the things that happen in them—the stuff that happens is the PLOT.

Stories are about what those things force the protagonist to struggle with, and what they force her to overcome internally in the process. These pre-date the plot; the plot itself is then constructed to force the protagonist to deal with them (often kicking and screaming).

To be a story, there must be a clear problem for your character to solve. No problem, no story. “Problem” is another way of saying “there’s going to be conflict.” Conflict—the struggle your character experiences as he or she tries to solve the problem—is what engages us, makes us pay attention and remember.

Story is INTERNAL.
Plot is EXTERNAL.

We’ll use “character, problem, struggle, solution” to help us figure out the STORY. In the process, we’ll also figure out the plot and the beginning, middle, and end.
References
More resources for museum theatre, living history, and performance arts


CILH: Cultural Interpretation and Living History, a section of NAI. Find us on Facebook: NAI’s Cultural Interpretation & Living History Section.


Museum Theatre Best Practices: http://imtal.org/page-1126437

Contact the Presenters
We do this stuff because we love it. We love talking about it, and we teach it, too. So call or email any of us to find out more.
Story, Nature, and Interpretation: “It’s All There”

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Abstract
Elliott will demonstrate how one can use storytelling, and the basic human affinity for narrative to enhance our interpretive programs. We will discuss how to find stories in the resources and sites we are interpreting and how to craft engaging narratives that embody the concepts and information we are trying to impart. We will look at how to incorporate personal experience, family reminiscences, folklore, natural history, scientific facts, traditional mythology, dialog, dialect, and humor into our programs. We will use fun examples from Elliott’s repertoire as well as from participants.

Keywords
storytelling, story, folklore, natural history, nature, narrative, spoken word, cultural arts, interpretation

Introduction
The natural world provides a common meeting place as well as a source of inspiration for storytellers. How do we incorporate the natural world into our stories and turn accurate scientific fact into flowing and enlightening narrative?

To find a story in nature (or anywhere else, for that matter) I often start with an incident, (“This happened…”) an encounter (“I came upon…”), a problem (“What could I do…?”), or a question (“What in the world…?”) This is your hook, not only to your story listeners, but also to yourself as an explorer and an investigator. I let curiosity be my guide. I ask questions. Journalists know that the ability to get a good story is directly related to the ability to ask good questions.

The first and ultimate resource is yourself. How do/did I relate to that incident, encounter, problem or question? The listener is engaged wondering, “How would I relate. What would I do in this situation?” A tension is building. Here is a good opportunity and place for humor. Our first human reaction is often unexpected. Unexpected things are often funny. Surprise is one of the cleanest and finest forms of humor. You can tap other forms of humor as well. We humans do like to laugh at others’ foolishness. It is always a good strategy to portray yourself as naïve, foolish, or the brunt of a joke. It makes others more at ease about their own naiveté or foolishness. Alluding to taboos is another thing we humans think of as funny. That’s why so called “dirty” jokes are popular; because it allows us to acknowledge sexy, intimate things that we are not supposed to talk about. Under the guise of natural history we can talk about all kinds of scatological and sexy subjects. We humans identify and laugh. Humor itself is also a great hook and the sooner you can work it into a story, the sooner the listener gets the idea this story is going to be fun.

After you describe the incident and your reaction. The next step might be an initial resolution concerning your opening incident, or an answer to the question you have set up.

Simply seeing or experiencing something and figuring out what it is can be an interesting vignette but it is rarely enough to make good story. This initial vignette (incident, encounter, problem or question) becomes what mythologist Joseph Campbell refers to as the “call to adventure.” [where through] a herald… often a dark, loathly or terrifying thing…[or] a blunder… the individual is drawn into relationship with forces that are not understood… apparently the merest chance [encounter]—reveals an unsuspected world,…ripples on the surface of life produced by unsuspected springs…[which may be] as deep as the soul itself.” Your challenge becomes how to find and tap those hidden springs of meaning.

After you have explored your personal feelings and reactions you have to find others who might have something to say about what you are investigating. This subsequent investigation—your reading, research and your conversations with other people—becomes the adventure—the backbone or plot line of the narrative. Some of the information you gather, or the anecdotes and tales you hear can possibly stand on their own, but ideally the stories and information will be used as sub-plots to develop your entire piece.

Rather than delivering a natural history lecture you end up with a classic mythic hero’s journey, where the hero (you, most likely) answers the “call to adventure” and wherever the investigation takes you becomes the journey. These facts, tales, and lore become stepping stones on a quest in search of truth and meaning. Rather than delivering a bunch of facts about the critter or phenomenon, we tell a story.

How do you embark on the investigative, story gathering journey? Start researching everything you can find. I often start with scientific sources. Scientific writing gives basic information. The terminology can be dry, technical, and somewhat off-putting unless you can see the humanness and occasional humor in it. (eg. A dung beetle specialist sees a pile of poop as a “patchy ephemeral microhabitat.”) Scientists are not unlike many anthropological subcultures. They observe closely and are deeply involved in their own worldview. They have their own peculiarities, rules and limitations which can be as humorous and interesting as any ethnic group. Scientific names often have interesting roots and origins.
Ask your neighbors, friends and acquaintances (ideally from various subcultures) if they can interpret what you encountered. Look in folklore collections. Check historical sources. Investigate writings of early naturalists and explorers, and anthropological sources. Reports from the Bureau of American Ethnology can often be a treasure trove of info. Studying a native people’s worldview is a great way to shift or broaden our own perceptions of the natural world.

Can you find your subject mentioned in ancient sacred texts from any of the world’s present or past religions? Can you find any universal truths or personal lessons to come back with and share from this journey? If so, great! If not, keep trying. I have a huge reservoir of incidents, encounters, problems and questions on my “back burner”. These things are right there simmering away. I regularly pull them onto the flame and stir them around a bit. I’m always looking for just the right ingredients to add for just the right flavor so it will come out right. Occasionally a story comes together rather quickly, but most of my best pieces have taken years to develop and mature. Many are still in process.

**Conclusion**

One of the best parts of telling these stories is hearing the stories they evoke in others. After almost any concert there are usually people who want to share their experiences with you. Listen carefully because you might hear just the right ingredient — the story you have been looking for.
Water You Know? A Look at Water Use in the American West...Then and Now

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Abstract
Water is one of the most influential natural resources to dictate the course of human civilization in the American West. Participants splash their way through the history of water and its uses - the good, bad and unexpected. Nothing can dampen their spirits as they meet the people, and try out the tools, that shaped the path of water use, then and now. Participants test their knowledge and find out “water they know” about water past and present! They gain information and skills to communicate the importance and relevance of water to your audience through storytelling, demonstration, group participation and humor.

Keywords
Water, history, program, interactive, communication, culture, development, law, conservation, recreation, agriculture, habitat, wildlife

What do agriculture, recreation, policy, commerce, law, transportation, politics, riders, treatment, regulation, conservation, erosion, habitat, mining, literature, music and nation building all have in common? Water. The presence, or lack thereof, has shaped the course of human civilization in the American West. No other single natural resource has determined where we live, what we do in our free time, defined policy and law, built industries, and outlined countries to the same extent as water. What do you know about it?

Water means so much to so many. It is the one thing we cannot live without for any length of time. Our health depends on it, plants and animals need it. Throughout time immemorial water has held a fascination for man. People are drawn to it, find solace in its presence, challenge their very existence through daredevil acts as fast and as far as the water will allow.

Discover the history of water and its uses in the West - the good, bad and unexpected. Nothing can dampen your spirits as you meet the people, and try out the tools, that shaped the path of water use, then and now. You will test your knowledge and find out “water you know” about water past and present! This lively session will give you the information and skills to communicate the importance and relevance of water to your audience through storytelling, demonstration, group participation and humor.

Don't be a drip! Splash on in and explore “water” you know about H₂O!

References