Maumee Bay State Park: Strategies for Implementing Interpretive Programs for Teens

An Honors Thesis (HONR 499)

by

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Abstract

Interpretive programs are an integral part of the recreational opportunities provided at parks, at both the state and federal levels. Commonly led by the Park Naturalist or Interpreter, interpretive programs are a great way for visitors to connect with the park and its natural resources on a more personal level. While many interpretive programs effectively involve visitors with the park, they often only strongly appeal to two very specific age groups: young children or senior citizens. Through a brief research paper and a series of interpretive programs I designed specifically for Maumee Bay State Park in Ohio, I explore the significance of attracting more teens to parks, along with the ways in which park Naturalists and Interpreters can engage more teens in their programs. Focusing on teamwork and social interaction, channeling individualism and emphasizing independence and responsibility, this thesis expands upon how we can use these three elements to attract our future leaders to become more passionate about the environment and natural resources.

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Author’s Statement

While my thesis is partly a research paper, the central, largest aspect of the project is the series of three interpretive programs that I designed for the state park that I am currently employed at, Maumee Bay State Park in Toledo, Ohio. These programs, once complete, are meant to be used by the Park’s Naturalist in order to engage more teens with the park. After extensive research and talking to several current naturalists and interpreters, I decided upon three different programs: a water sampling marathon, a photography program and a volunteering program. I chose these kinds of programs because through my research, I found that the most effective interpretive programs for kids of this age group involved teamwork and social interaction, enabling them to channel their own individual personalities into activities, and giving them a sense of achievement and responsibility through volunteering. Receiving the opportunity to create these programs as part of my Senior Thesis has enabled me to better prepare for my future career in the field of parks and recreation. Since I intend to be an interpreter for Indiana State Parks, this project has given me the invaluable chance to independently design interpretive programs that will appeal to an age group that is not commonly represented in current programs, and will also give me a competitive edge within the field. Because we often do not study programs for this age group, this project has challenged me academically and helped me grow as a professional. The concepts I developed in this project will undoubtedly aid me in my future career, and may even be utilized by Maumee Bay in the upcoming summer season.
Lesson Plan #1: Water Sampling Marathon

I. Purpose: To get local high school students more involved at Maumee Bay State Park, to teach them about the process of water sampling and why water sampling is important.
   A. Big Questions
      1. What can water sampling teach us about local water quality issues?
      2. How can water sampling be used to prevent these issues, or to teach us more about them?
      3. What can students do individually to positively impact local water quality?

II. Intended Audience: Local high school students (Genoa High School, Sylvania Southview/Northview High School, Start High School, Woodward High School), grades 9-12
   A. Intended for small groups (8-10 students) but can also be applied to larger classes of 15-20 students
   B. Intended to be a field trip activity, but could also be used as a Nature Center activity in the summer

III. Materials: Water sample containers, coolers, ice packs, galoshes, water sampling info sheets (enough for 2-4 teams of students)

IV. General Procedure
   A. Throughout the course of this activity there will be 4 sites visited for water sampling: the inland lake, Lake Erie Beach, the family fishing pond and one of the campground lakes. The first site will be the inland lake — then Lake Erie Beach, the family pond, and the campground lake last.
   B. Students will meet at Nature Center, where the Naturalist will do a brief presentation on what water sampling is, what it tests for, etc. (more detailed information below).
   C. Lead students to inland lake site. Depending on the number of students, separate into 2-4 teams.
   D. Give a brief tutorial on how to properly collect a water sample (more detailed information below). For example, go over how to determine wind direction, how far out into the water to go, what your sample should look like, etc.
   E. Explain the activity. Each team will collect a proper water sample and fill out an info sheet for each sampling site. The team who finishes the fastest with the most accurate information for each site wins. The winning team will be determined after all four sites are complete.
      1. The prize will be a free weekend at the campground for the students on the winning team and their families.
   F. Whole activity will take about 2-3 hours maximum (adjustable for field trip schedules).
   G. After the activity is complete, lead a discussion on the importance of water sampling.
      1. Big questions: What mistakes could water testers make during sampling that could inhibit the integrity of the sample? What kind of information about our local water does water sampling tell us? What are the differences, if any, between all of the
different water samples? What are some ways that you could positively impact local water quality?

2. Impacts of algae blooms and how water sampling educates us about this issue, especially in this part of the state

V. Introduction Outline to Water Sampling
A. This is a general outline of the information to be presented by the Naturalist at the Nature Center at the beginning of the activity.
B. What is water sampling?
   1. Water sampling is the targeted collection of water samples from a designated site for the purposes of testing.
   2. Depending on the park and its location, water samples will typically be taken once a week or every two weeks. Due to Maumee Bay’s close proximity to Lake Erie and its abundance of water resources, water samples are collected weekly.
C. What does water sampling test for?
   1. In the state park setting, water is typically tested for any contaminants that will make the water unsafe to swim in or ingest.
   2. The most common contaminant that is tested for is e. coli, which is extremely dangerous for humans to come into contact with. Whenever you see a warning sign to not enter the water for health reasons, the most common reason is for e. coli. However, we saw last summer that the public was unable to use Maumee Bay’s Lake Erie Beach due to microcystin, a harmful toxin found in algae.
   a) Discuss health effects of e. coli, potentially discuss microcystin and algae blooms
D. What happens with the water sample once it is collected?
   1. The water sample is sent to the state’s Department of Health for testing. If anything is abnormal with the sample, the park is notified, and park staff will then set up the warning signs depending on the situation.
   2. Different warnings for different levels: yellow means it’s okay to go in the water but is not recommended for young children and the elderly, green means everything is fine, and red means not to go in the water for any reason.
   3. Usually, management of the issue is left to state employees outside of the park. Day-to-day management may be done by park staff, but they are typically directed on what exactly to do from the water quality folks.
E. Who is in charge of fixing the problem?

VI. Outline for Water Sampling Tutorial
A. This is a general outline for how to properly collect a water sample, to be presented by the Naturalist at the first site of the activity.
B. General tips on how to collect and store a water sample:
   1. Be sure the water you are taking a sample from is relatively distanced from any waterfowl or other wildlife
   a) Feces can contaminate the sample and lead to inaccurate data
2. When collecting the sample, you want to go out in the water until it gets to about knee-depth
3. You also need to record the water temperature from this location — *not* from the shore!
4. To determine wind direction, look at which way the waves are going
   a) If this is difficult, be sure to have a compass on hand
   b) Alternatively, have some background information on wind direction in your area.
      For example, the wind direction on Lake Erie tends to come from the Northeast (from Cleveland).
5. If you are ever doing this over a series of weeks or months, be sure you are collecting
   the sample from the same location every time
6. When storing the water sample, keep it stored in a cooler with ice packs until it can
   be safely stored in a refrigerator for transport
   a) This helps maintain the sample’s original composition
7. Fill out the info sheet accurately and to the best of your ability
   a) The more information you include, the more accurate the results will be

VII. End-of-Activity Discussion Outline
   A. This is a general outline of discussion questions to be used for the discussion part of the activity after the marathon.
   B. What mistakes could water testers make during sampling that could inhibit the integrity of the sample?
   C. What kind of information about our local water does water sampling tell us?
   D. What are the differences, if any, between all of the different water samples?
   E. What are some potential causes for bad water quality in this area?
   F. What are some ways that you could positively impact local water quality?
   G. *This part of the activity could be completed by either the Naturalist or the teacher, either at the park directly after the activity or back at the classroom.

Warning sign at Maumee Bay State Park’s Lake Erie Beach after this past summer’s algae blooms. (Reuters, 2014)
Lesson Plan #2: Photography Activity

I. **Purpose:** To get local high school students more involved at Maumee Bay State Park, and to inspire a personal connection with the park’s natural resources within the audience.

II. **Intended Audience:** Local kids, grades 8-12 (ages 13-18).
   A. Intended to be an informal Nature Center activity, run ideally in the summer months. Kids can sign up on a rolling basis at the Nature Center or Campground Office.
   B. Can be run continuously for an entire summer, or for a certain span of time in the summer — or into fall. Activity allows for flexibility in scheduling.

III. **Materials**
   A. Cameras (DSLR or simple digital), small notebooks to make mental notes/note locations of photos, materials for making photo essays (scrapbooking/craft materials).
   B. Participants may be able to provide their own materials, depending on the funding acquired for the program.

IV. **General Procedure**
   A. Every weekend or every other weekend, the Naturalist (and their interns and/or park volunteers) lead participants around the park for 1-2 hours.
   B. Participants will take photos based off of different prompts the Naturalist will create. Possible ideas for prompts include but is not limited to:
      1. A scavenger hunt, where the participants will have to take photos of specific things
      2. Only taking macro photos
      3. Being required to take photos from a certain perspective (ex. from above, from below)
      4. Being given a quotation and asked to take photos that they think are representative of that quote
      5. Listening to music while out taking photos, and being asked to take photos of things that connect with the music they’re listening to
   C. Additional information can be provided about the park to the participants as they perform the activity.
      1. For example, if the group goes to the wetland restoration area some brief background can be given on the area as they are taking photos.
   D. Alternatively, the group can communicate with each other on a purely social/personal level; introducing themselves, talking about their photos, school, etc.
      1. Allow for social growth and the opportunity to make friends within the activity.
   E. If participants are interested, the opportunity to create a photo essay of their pictures exists. The best photo essays will be displayed in the Nature Center (or all of them will be displayed, depending on participation).
      1. Photo essays will be a creative endeavor left entirely to the participants. Captions for photos will be required, but photographers will have complete artistic freedom in this respect.
2. Captions can be song lyrics, quotes from books or movies, or written by the participants themselves.
3. Collaboration between no more than 2 photographers will be an option.

Photo taken by a 10-year-old as part of the Parks in Focus program. (Parks in Focus, 2014)

Photo of the Grand Canyon taken by a 14-year-old as part of the Parks in Focus program. (Parks in Focus, 2014)
Lesson Plan #3: Weekend Buddy Program

I. Purpose: To get high school students more involved in Maumee Bay State Park, and to provide a “buddy system” for younger children who are guests at the campground.

II. Intended Audience: High school kids acting as the older “mentors” for elementary-age children — visitors at the park campground.
   A. The teens can receive volunteer hours for participating in this program.
   B. Allows parents to get a “break” from looking after their children and allows them to spend some quality time together.
   C. Allows the children to spend time with older kids, and to get the experience of having a mentor figure in their lives.

III. General Procedure
   A. An application/interview process for the program should be developed in order to ensure that responsible individuals get the mentor positions and can be trusted with children.
   B. Make applications available in the spring, and also hold the interviews during this time.
   C. Once applicants are chosen, hold a couple of orientation sessions on how to handle children, what kind of activities you could do with them, etc.
   D. Participants can start with the beginning of the summer season.
   E. Working specifically in the campground, have participants run a “buddy program” with the campground’s children on weekends. They should function not only as babysitters, but as older mentors that do activities with the kids and form a relationship with them.
      1. Activities limited to the campground area — parents will not want their kids going too far away, and they will be easier to monitor in this smaller capacity.
   F. Ideally, have buddy programs available every weekend. Have parents and their kids meet at the Shelter House in the morning so they can meet the volunteers and learn what kinds of activities their kids will be participating in throughout the day.
      1. Volunteers shall be dressed in official t-shirts and hats, or uniforms of some kind, to distinguish them from other kids.
      2. Naturalist will supervise Shelter House meetings and offer introductions and other general information to the parents.
   G. For a couple of hours maximum, have volunteers take a child and spend some time with them.
      1. Suggested activities: bike rides, wagon rides, fishing, taking a walk around the campground, trip to the Camp Store, yard games (catch, frisbee, jump rope, etc), visit the playground.
      2. Want the volunteer’s time to be limited — parents probably do not want their child gone for the entire day.
Introduction: Teens and the Need for This Age Group in Parks

The intended audience for this project, older adolescents, includes kids between seventeen and twenty years of age — primarily high school students. According to Outdoor Recreation and Society, this age group is commonly associated with a dramatic transition to adulthood (80). While in the process of “growing up,” older adolescents begin to take steps toward creating a sense of independence and successfully establishing an identity (Outdoor Recreation and Society, 80). These teens are also taking on more adult roles and responsibilities than younger adolescents, and become less concerned with peer pressure and other peoples’ opinions. In short, “the successful conclusion of adolescence brings increased stability and insight as well as enhanced abilities to make plans, pursue goals, and reach decisions” (Outdoor Recreation and Society, 80). Different from middle school students, high school students, the target of these interpretive programs, are more focused on maintaining their independence and solidifying their sense of individuality.

According to the 2014 Outdoor Participation Report, about 60% of American teens from the ages of seventeen to twenty years of age engage in outdoor activities, such as visiting parks, every year (The Outdoor Foundation, 22). Only 29% of these teens, however, are engaging in outdoor recreation to enjoy nature (The Outdoor Foundation, 24). Similarly, only 27% of teens in this age group participate in outdoor activities to observe scenic beauty (The Outdoor Foundation, 24). Compare this to the over 47 million adults ages 45 and over who participate in outdoor activities every year, which is more than both teen demographics (ages 13-17 and 18-24) combined (The Outdoor Foundation, 11).
The Outdoor Foundation lists lack of interest as the number one reason why teens of this demographic are not interested in outdoor activities (The Outdoor Foundation, 28). As such, Naturalists and Interpreters, working in the parks and recreation field, have the rare opportunity to enhance the outdoor experience for teens and thus increase their compassion for nature and the environment. Older adolescents are also unique in that they are considering future career paths and academic majors. If people working in the parks and recreation field can strengthen these teens’ relationship with the outdoors, it may inspire more teens to pursue environmental careers in the future.

Getting teens more involved in parks not only has potential future benefits for our society, but also for the teens themselves. According to researchers for the National Recreation and Park Association, “park and recreation departments are ideally situated to supply the supports, opportunities, programs, and services to facilitate adolescents’ development into healthy and fully functioning adults” (Witt & Caldell, 3). Effective park programs can also foster self-confidence, optimism and initiative in teens (Witt & Caldell, 4). They can also promote supportive relationships, opportunities to belong, opportunities for skill-building and positive social norms (Witt & Caldell, 4).

By designing interpretive programs that are geared specifically towards older adolescents, Interpreters can instill a compassion for nature in these kids, along with promoting other positive social development such as increased self-esteem and supportive relationships, among many others. Helping create this connection with the outdoors in teens will inspire this demographic to ideally pursue environmental careers and contribute to a “greener,” more sustainable society. Three central strategies: incorporating teamwork and social interaction,
channeling participants' individual personalities, and giving participants a sense of achievement and responsibility through volunteering have been used in the interpretive programs designed for this project as the most effective means in achieving these goals.

**Incorporating Teamwork and Social Interaction in Interpretive Programs for Teens**

Approximately 70% of older adolescents participate in outdoor recreation to spend time with friends and family (The Outdoor Foundation, 24). According to data from the Carnegie Corporation cited in *Outdoor Recreation and Society*, “young people value and want opportunities to build their personal and social skills” (*Outdoor Recreation and Society*, 81). In short, teens would be more willing to be involved in park interpretive programs if they involve some kind of group or social interaction with other teens.

In a study published in the *Journal of Park and Recreation Administration* in 2014, researchers led a series of three group activities with students of the adolescent demographic. The three activities, called “Island,” “Pirate” and “Superheroes,” were all designed to foster teamwork in the participants; for example, the “Superheroes” activity involved the individual teams making capes and using each team member’s individual superpower to accomplish a common goal (Roark et. al, 85). The results of the study showed that the participants acquired teamwork skills. The researchers also found that when designing these programs it is more beneficial to plan for a specific outcome or goal and gathering evidence of such outcomes or goals in order to promote further support of the program (Roark et. al, 88).

In a personal interview conducted with Micah Leinbach, an environmental educator at Crystalaire Adventures in Michigan, group hiking trips that foster teamwork in setting up camp,
gathering firewood, cooking, etc. are extremely effective in keeping this teen demographic returning season after season (Personal Interview, January 2015).

Teamwork and social interaction in interpretive programs, if administered effectively, go hand in hand. According to Roark et. al, “teamwork is an important skill to learn for youth to be successful in the workforce and in society” (88). Being able to put the groups’ goals above your own and the ability to work and compromise with others is an important skill that will serve teens well in their collegiate careers and in their professional lives. Activities that build on teamwork, however, also allow the participants to have fun and “maintain friendships, study and play together” (Roark et. al, 88).

The first interpretive program presented in this project, the Water Sampling Marathon, centers around teamwork and social interaction in older adolescents. Teens are separated into groups and work towards a common goal — seeing which team can properly take a water sample the fastest from each of the four sites. Additionally, the common outcome is recorded by the teacher or Interpreter leading the activity, which follows the researchers’ suggestion in the Journal of Park and Recreation Administration article. This activity also allows the participants to form friendships with their fellow teammates. Lastly, a sense of independence is fostered in the participants as they are simply directed in how to take a water sample, but the actual water sampling process is left entirely to them. This independence and forming their own conclusions and opinions is also fostered in the discussion portion of the program. In discussing how they can individually impact local water quality and learning more about their home’s water resources, teens can also strengthen their own individual identities and set goals for themselves to make a more positive impact on how they use water.
Incorporating Individualism into Interpretive Programs for Teens

Another important aspect to consider while designing interpretive programs for teens is the fact that they are in the process of solidifying their own individual identity and sense of self. In this part of their lives, they are also striving to gain a stronger sense of independence.

According to Witt and Caldell, researchers for the National Recreation and Park Association, teens need to “have opportunities to ‘develop themselves,’ and they need adults to serve as enablers in this process” (Witt & Caldell, 3). In other words, while it is important for adults to serve as guides in interpretive programs for teens, it is even more important for them to be able to engage with the program on their own terms in order to give them the opportunity to develop their own identity — their own thoughts and opinions. Effective interpretive programs should also give teens a sense of independence, a sense that they are forming their own ideas and beliefs.

These ideas are embodied in a current program called Parks in Focus, which is a program lead by the Udall Foundation. The Udall Foundation is an independent executive branch of Congress that works to reward students dedicated to environmental studies through scholarships, fellowships and internships (Morris K. Udall and Stewart L. Udall Foundation, 2015). Parks in Focus, one of the Udall Foundation’s most successful programs, is meant to connect adolescents to nature through photography. In conjunction with national and state parks, Parks in Focus leads teens on hiking and camping trips while also engaging them in photography. In a personal interview with Bret Muter, the director of Parks in Focus, he discussed the program’s rapid expansion in recent years due to its popularity among the kids; they have made several new
full-time positions available, along with starting up new Parks in Focus programs in Michigan and California (Personal Interview, February 2015).

Of the three interpretive programs designed as a part of this project, the Photography Activity best exemplifies giving its teen audience the opportunity to channel their own individual personalities into the program and giving them creative independence. The "adult guide," or the Interpreter, serves as the "enabler" in this activity by providing a loose prompt for the participants — whether it be a scavenger hunt, having to take photos from a certain perspective or taking photos based on a quote or song. This gives the participants enough guidance to complete the activity but also enough freedom to put their own individual personality into it and go about the activity in their own way. By being able to submit photo essays of their work to the park’s Nature Center, the program can also give them a sense of accomplishment and achievement. These elements of the activity are very similar to the elements used in the Parks in Focus program, which have been proven to be successful in the program’s recent expansion.

In short, a photography activity could serve as an invaluable way for older adolescents to not only develop on their own individually, but could lead to a greater appreciation of nature in its participants. This activity could also allow for social interaction, another facet of teen interpretive programs that appeals to and is highly valued by this age demographic.

**Incorporating Independence and Responsibility into Interpretive Programs for Teens**

As previously discussed, another crucial facet of engaging older adolescents in park interpretive programs is in giving the teen participants a sense of independence and responsibility. One of the best ways interpretive programming can engage this part of adolescent development is through volunteering, specifically through mentorship programs.
Abby Halparin, career Interpreter and currently a Conservation Corps Fellow for New York City Parks, has had extensive experience in developing environmental education curricula and park programs for both young and older adolescents. With her previous work experience at South Platte Park in Colorado as both an Interpreter and School Programs Coordinator, she says that one of the most successful and rewarding programs that she has ever spearheaded is a teen mentor program she developed at South Platte. Through this program, teens received the opportunity to mentor a younger child and accompany them on hikes and other park activities throughout the course of a summer (Personal Interview, December 2014).

The implementation of a volunteer mentorship program, the third and final installment of the interpretive programs in this project, involves many of the different facets of teen engagement that have been discussed. Since teens spend over 60% of their time doing necessary activities such as school and work, this program effectively uses teens’ time by engaging them in park activities while also giving them the opportunity to earn volunteer hours for school or college applications. Since older adolescents are in the process of receiving more responsibility and independence, this program also gives them the chance to use those privileges and feel more self-sufficient and accomplished. This program could even contribute to their development of an individual identity in that they can interact with their younger charges in their own unique way. It is also a great way to involve teens in the community. Additionally, by participating in this kind of activity in a park, this program would contribute to developing teens’ compassion and positive associations with nature.
**Conclusion**

Older adolescents are a difficult age demographic to appeal to due to their unique developmental situation and the limited amount of time they have for recreational activities. Additionally, older adolescents’ struggle to balance school, work and a growing sense of independence and responsibility can make it hard for park Interpreters and Naturalists to create programs that appeal to their interests.

While the design and implementation of these kinds of programs can be difficult, there are certain strategies that Interpreters can use to best appeal to this age demographic that are proven to be successful in providing not only what these kids need socially and mentally, but are also successful in strengthening the kids’ relationship with nature. Using programs that emphasize teamwork and social interaction, channeling the participants’ individualism, and incorporating independence and responsibility are all great ways to better engage teens in park programs. By involving more teens in parks in better ways, we can foster an improved relationship between teens and the environment, and better inspire them to be the future stewards of our world.
Maumee Bay State Park Map

Source: Ohio Department of Natural Resources, 2015
Maumee Bay State Park General Information and Images

Maumee Bay State Park is managed by the Ohio Department of Natural Resources, under the State Parks Division. Located in the Toledo, Ohio area, it is located right on the coast of Lake Erie. Maumee Bay is one of the shallowest parts of Lake Erie, and as such is frequently subject to algae blooms in the summer. The park consists of over 1,300 acres and includes a campground, Lodge, golf course and inland lake, along with miles of trails.

Aerial View

Source: Ken Winters, U.S. Army Corps of Engineers, 1992
Bike Trail

Source: TripAdvisor.com, 2015

Boardwalk

Source: Greg Griffith, 2013
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