

Sometimes Paper IS Better: The Case of The Field Museum's Biodiversity Scavenger Hunt

Audrey Aronowsky, Beth Sanzenbacher, and Krystal Villanosa, The Field Museum of Natural History,
1400 S. Lake Shore Dr., Chicago, IL 60605

Email: aaronowsky@fieldmuseum.org, bsanzenbacher@fieldmuseum.org,
kvillanosa@fieldmuseum.org

Abstract: Members' Night is an annual event at which The Field Museum gives members a peek behind-the-scenes with access to collections and laboratories throughout the Museum. Museum staff have collaborated to author and run museum-wide scavenger hunts in 2010 (photo) and 2011-2012 (paper). Directed at families, scavenger hunts give visitors a learning-based mission when exploring the behind-the-scenes. Technology was found to be a barrier to participation in the 2010 photo hunt, with many families lacking the ability to take photos or unwilling/unable to share photos. Feedback and technical difficulties from 2010 forced a shift to paper-based hunts of 2011-2012. Feedback from all years was positive, but the paper hunts of 2011-2012 had higher participation rates and more positive feedback than the photo hunt. Over three iterations, more than 1,000 families have participated in the hunts. Lowering barriers to participation has resulted in a rewarding experience for families at this annual event.

Introduction

As with most museums, less than 1% of The Field Museum's collections are on display at any point in time. Started in 1951, Museum's Members' Night is an annual event that gives special access to members, guests, and their families with a goal of showcasing the Museum's science, research, collections, exhibits, and educational programs. During this two-night event, members can explore a portion of the collections that are normally closed to public viewing, interact with Museum staff, learn about cutting edge research, tour new exhibitions, and take part in activities and games. Music, art, food, and games are used to make the event an enjoyable family experience that celebrates science.

Typical annual attendance for both nights approaches 10,000 visitors. The event attracts a large spectrum of guests, from toddlers to senior citizens, although demographic data indicates that the average attendee is an adult aged 30-40 with children between the ages of 8 to 10.

Biodiversity Scavenger Hunt

Increases in access, options, and visitorship can make Members' Night overwhelming for some guests. To address this, the Museum's departments of Biodiversity Synthesis and Education collaborated to design and offer museum-wide biodiversity scavenger hunt activities that serve as both a learning opportunity and a guide to navigate the event. The Field Museum has extensive experience in developing scavenger hunts for family and teen audiences, both in paper and digital forms. Presently, paper scavenger hunts can be downloaded from the Museum's website and are often available for pick up at multiple information desks in the Museum's main hall. Digital scavenger hunts that incorporate QR codes and multimedia content for smartphones or other mobile devices are also available, but are typically geared toward our teen audiences. Past successes have included introducing audiences to content or areas of the Museum previously unknown to the visitor. Failures have included loss of visitor retention resulting in incomplete scavenger hunts and our observation that digital scavenger hunts that require smartphones are ill-used or unused for a variety of reasons including access to technology and inappropriate fit for audience type.

Offered since 2010, each biodiversity scavenger hunt has two versions: a Behind-the-Scenes Hunt and a Museum-Wide Hunt. The behind-the-scenes areas are the most popular aspect of Members' Night and can be crowded, so the museum-wide option allows players to participate no matter how popular the event becomes. In the Behind-the-Scenes Hunt, players are given clues leading them to specific specimens on display in the behind-the-scenes areas. These specimens are chosen in collaboration with the Museum's scientific staff and showcase current research, important results, or local species of interest. The Museum-Wide Hunt consists of open-ended questions in which players can use the entire Museum to find answers. These questions challenge players to use their science

knowledge and apply it to the Museum's exhibitions and collections. The two versions are as equally popular with players and most elect to try both. Completed hunts are returned to stations for small prize rewards (such as Museum-branded pencils, water bottles, or stickers) for correct answers.

Each year, the scavenger hunt is widely promoted prior to the event with email and Facebook blasts, in the Member's Night guidebook, and within the Field Museum website. The hunts are broadly promoted during the event with banners and signs, and staff members recruit participants at Museum entrances.

In the 2010 pilot year, hunters were tasked with taking digital photos to answer to each question. The photo hunt was designed to leverage the Museum's involvement in the Encyclopedia of Life project with the best visitor photos showcased on EOL species pages. More than 100 families participated during the two-night event, taking over 600 digital photos. While feedback from those who participated was positive, many families did not have cameras with them or were hesitant to use their phones to take the necessary photos. Digital photography became an unexpected barrier to participation for the majority of people who expressed interest in the scavenger hunt activity. Many people declined to participate because they did not have a camera or did not want to email images taken with their phones. Visitors who did participate often had trouble getting their images submitted; problems included difficulty locating the correct images on their memory cards and Museum card readers not accepting their memory cards. Demographic data revealed that most participants were adults and young adults who considered themselves active amateur photographers.

In 2011, to simplify participation and address the barrier that digital photography appeared to present, the scavenger hunts were re-designed for paper and pencil only, with both paper and pencil provided by Museum staff. Players simply had to write down the correct specimen name and location for the answers. The reward system shifted from being showcased on the Encyclopedia of Life to only providing prizes of small Museum-branded items. Over 400 families participated over both nights, and demographic data revealed that the median participant had dropped from adult to youth (2011 median age = 9). The 400% increase in participation from 2010 to 2011 suggests that a major barrier to participation was addressed, although repeat players indicate that some of this difference can probably be attributed to the scavenger hunt activity becoming an established event. The paper-based hunts were increasingly popular in 2012 with over 640 families participating over the two nights; the median age continued to reach the youth demographic (2012 median age = 10). The paper-based scavenger hunts were able to reach and engage large numbers of youth and families, where the photo-hunt did not.

Feedback for the scavenger hunts from all years has been extremely positive. Most participants describe the hunts as a helpful way to guide their route around Members' Night and a fun activity for the entire family. Participants said that the scavenger hunts gave them a clear plan of action, allowed them to learn new things, and allowed them to see areas of the museum they had never visited before. Larger families or groups describe splitting themselves into teams to race against each other, an unforeseen modification that may have helped to increase the popularity of the activity. Comparing player feedback from 2010 with feedback from 2011-2012, the paper hunt is more uniformly described as fun and educational than the photo hunt. Common feedback themes were that the paper hunts allowed players to more freely explore the museum without the concerns of worrying about lighting or getting the best shot. Additionally, 80% of players indicated that the paper-based scavenger hunts helped them learn while 64% indicated that it helped them to navigate the Museum. Table 1 contains direct quotes from players who provided feedback on the 2012 paper-based hunts.

"Yes, by doing the hunt I learned about Antarctic dinos, species of birds, tarantulas, fish, komodo dragons, snakes, sharks, Audubon book, amazed at size of some birds! This is the best way to see behind-the-scenes!"

"It got you to places we have never been, even though we come here a lot, we saw new places and learned new facts."

"I learn many new things and I like the prizes. I did photo hunt in the past but it was time consuming to download and share photos, and it was also difficult to take photos because it's so crowded and busy. I liked photo hunt, especially being part of Encyclopedia of Life, but paper hunt is easier to do."

Table 1: Sample player feedback from the 2012 paper-based scavenger hunts.

Paper-based activities have certain advantages that digital technologies, despite their increasing ubiquity, cannot yet replicate. Paper-based scavenger hunts are a familiar and popular activity with a

low-barrier to participation. Digital photo-based scavenger hunts were more difficult for family play because the family may have to share a piece of equipment that certain family members might not know how to use, or that equipment is viewed as personal and not wanted to be shared. The context of Members' Night may also play a role in the popularity of paper-based scavenger hunts. Members' Night is full of new sights, sounds, events, experiences, and learning moments that can result in over stimulation. Adding a camera, smartphone, or other device with a new set of mechanics might be seen as a distraction. The familiarity and simplicity of paper might be the best way to add to an already action-packed event.

Conclusion

While digital technology will become increasingly ubiquitous and barriers to participation will lower with each passing year, for the immediate future, we still need to take technological barriers into consideration when designing games and activities. Activity design must consider what or if technology is really adding to participation and potential learning. Digital technology should be used in the appropriate context and when it adds unique affordances to an activity. Despite the temptation offered by digital technology, sometimes paper is the best medium to engage audiences in an informal learning experience.