

The view at the zoo: Using a photographic scavenger hunt as the basis for an interdisciplinary field trip

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Most educators have a love-hate relationship with field trips. On the one hand, field trips are a great way to get students out of the building, enhance learning, and have some fun. On the other hand, field trips are a lot of work (coordinating chaperones and creating activities to keep students focused) and worry (about student behavior in public and the possibility of “losing” a student). Especially now, with the increased cost of transportation and the need for curricular ties, field trips must make the best possible use of time spent away from school. A photographic scavenger hunt as part of an interdisciplinary field trip provides curricular relevance, captures student interest, and capitalizes on the time spent outside the classroom.

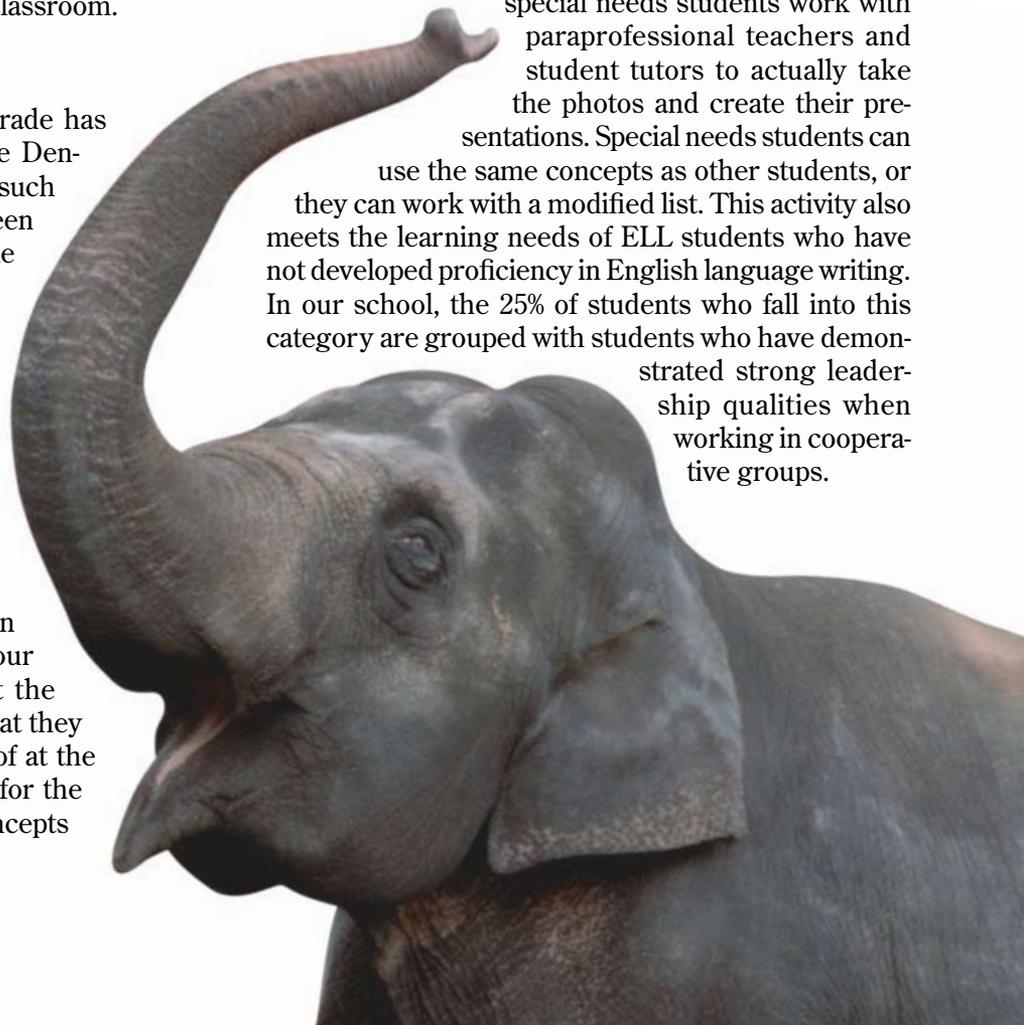
Background

Traditionally, our entire seventh grade has taken an end-of-the-year trip to the Denver Zoo. School demographics are such that many students have never been to the zoo, and after the first couple of outings, it was apparent that the field trip needed a meaningful learning focus that would still be fun for students. We decided on a photographic scavenger hunt at the zoo, which was conducive to the interdisciplinary nature of the field trip and asked students to use critical-thinking strategies and be creative.

Prior to the trip, the teachers on my team brainstormed concepts our students had learned throughout the year in each of our subject areas that they could find photographic evidence of at the zoo (Figure 1). In choosing items for the scavenger hunt, we looked for concepts

that would allow students to take one picture and then link some of the concepts together for a deeper understanding of the connections among the subject areas. For example, a picture of the lion enclosure represents the lion’s adaptation for obtaining food with its teeth and claw structure (science concept), and the landscape of the African savannah provides grasslands for the lion’s prey (social studies concept). (Students learned some of this information by reading the text on the plaque at the lion enclosure.)

One reason our interdisciplinary team is so enthusiastic about this project is that it allows all students, regardless of their abilities, to find evidence to support their understanding of the concepts. Severe special needs students work with paraprofessional teachers and student tutors to actually take the photos and create their presentations. Special needs students can use the same concepts as other students, or they can work with a modified list. This activity also meets the learning needs of ELL students who have not developed proficiency in English language writing. In our school, the 25% of students who fall into this category are grouped with students who have demonstrated strong leadership qualities when working in cooperative groups.



Activity Worksheet: View at the zoo

Students use this interdisciplinary worksheet to guide them as they search for concepts at the zoo.

Mission: Your mission is to take pictures to show evidence of your understanding of concepts you have learned throughout the year in science, social studies, math, language arts, and electives. Each picture will explain the statement “I chose this picture to represent _____ because _____.”

You have 27 pictures on the camera. You have five concepts from each core class and need to show two concepts from an elective. This could be art, music, PE, industrial tech, computer tech, or consumer family studies. One picture should be of your group. This totals 23 pictures, leaving you with four extra pictures. The list that follows should help you keep track of the pictures you have taken.

Preparing for the trip

Forming student groups is often a challenge. Letting students choose their partners can lead to unbalanced groups, but assigning students to groups doesn't instill student buy-in for the trip or the assignment because students are not with their friends. The solution is a compromise: Students choose one partner and are guaranteed that they will be together in the same group, then two sets of partners are blended into one group before the trip. This allows teachers to balance the groups' ability and creativity levels, resulting in groups that work productively.

We meet with parent chaperones in the morning prior to leaving for the zoo to explain the day's task in depth. Parents understand that the assignment is the key learning component of the field trip and encourage students to stay on task and complete the requirements at the zoo.

On the day of the trip, each group of four students is given a disposable camera with 27 exposures, which is purchased with the team's budget. We have found that 27 is a good number of photos for the length of time we spend at the zoo and the size of the paper students use for the poster assignment, but the number of photos can be changed based on the number of concepts students need to identify. However, having a limited number of exposures requires students to use scientific debate within their

Here is a list of the concepts from the core areas:

Math

- Measurement
- Two-dimensional geometric shapes
- Three-dimensional geometric shapes
- Fraction or percentage
- Evidence of showing a ratio

Science

- Adaptation for protection
- Adaptation for obtaining food
- Habitat and biome—take a picture of an animal and explain its habitat and name the biome where it lives
- Food chain—take a picture of an animal and then design a food chain around it
- Take a picture or pictures to explain how the zoo classifies its animals

Language arts

- Greek or Latin roots
- Write a simile, metaphor, and hyperbole about your picture
- Nonfiction text
- Problem-solution text feature
- Cause-effect text feature

Social studies

- Take a picture of the zoo entrance. Give the zoo's relative location.
- Take a picture of an animal that lives in a country we have studied. Name the country and continent.
- Take a picture of a “region” that is part of a zoo exhibit.
- Name the region and describe it as a “place.”
- Rivers were key in developing civilizations. Take a picture of an animal that lives in a river or along its banks.
- Music is part of culture. Take a picture of an instrument from a specific culture.

small cooperative group as they negotiate which picture best represents the concept. Not only are students applying knowledge, they must confer, come to a consensus, and, as part of their poster presentation, justify the photographs they chose to represent those concepts.

We purchase cameras from a discount store, and students are encouraged to bring their own cameras

FIGURE 1 Zoo assignment data-collection sheet.

Students record their concepts and corresponding photograph numbers to use for reference when constructing their poster or PowerPoint presentations.

Names of group members:

Picture number	Concept	Picture description
1		
2		
3		

to take additional pictures. The photos students take with their personal cameras can be used as backup photos, if needed, or as additional representations for the concepts, if agreed upon by the group. This encourages collaboration beyond the photos taken with the school-supplied camera. Students who do not bring their own cameras are not at a disadvantage because they have ample exposures from the camera supplied by the teacher. In addition, students may share their unused photos with other groups and with students who were not able to attend the field trip, providing choices for their posters. Students who use their own cameras develop or print their own pictures to use on their posters. The school cameras are labeled with the group's number, which helps teachers return developed photographs to the appropriate group.

We make double prints of some photos to give to students who were not able to attend the trip. A local grocery store that generously donates funds toward the project does the developing. We allow one week for film processing before starting the poster project, however, overnight developing is an option.

In addition to the camera, each group receives a list of concepts from each of the core subjects and electives and two copies of a data sheet on which to record evidence (Activity Worksheet and Figure 1). Students keep one data sheet and turn one in with their cameras as they board the bus at the end of the day.

At the zoo: The photo scavenger hunt

Each group of four students is accompanied by a parent chaperone as students search for the concepts

on their scavenger hunt lists. Two students are recorders for the group; they keep a record of which picture is taken to represent a specific concept. Having two recorders ensures that the data record is not misplaced. Another student is the photographer and the fourth student is the time keeper. These roles are interchangeable during the day so that all students have an opportunity to experience the different roles. For example, one of the concepts for science is to show evidence of an adaptation that animals or plants use to obtain energy. In the past, students have photographed the neck and tongue of a giraffe, an elephant's trunk, the constricting muscles of the snake, and the long, slender flower of a pitcher plant.

Students must use their communication skills as the team makes a decision, reflecting and advocating for their choice, and, finally, coming to a consensus. Once the picture is taken, the two recorders note the group's choice on the data sheets before the group moves on to the next concept. This gives students a written record of their choice and a reminder when they are working on their poster presentations of why they believed each photo best represented the corresponding concept.

Students learn quickly that zoo docents and the plaques that accompany exhibits can provide valuable information. The plaques also help students with the challenge piece of the assignment that asks them to link concepts together in one picture. The time frame for the scavenger hunt can be adjusted, depending on the number of concepts students are searching for. We arrive at the zoo at 9 a.m. and leave by 1 p.m. This provides plenty of time for students to finish the assignment, with time built in for lunch and additional exploration of the zoo.

FIGURE 2 Sample final poster project

In the classroom: The poster presentation

Using their data sheets for reference, the student groups design a poster (alternatively, students can prepare a PowerPoint presentation) that includes each photograph and a caption that explains how the image illustrates a concept (see Figure 2). Completed posters are displayed in the hallway and students take part in a gallery walk that gives them an opportunity to see others' choices for the same concepts. This prompts discussion, and students are encouraged to write down questions about the posters, which they can ask during the poster presentations. Individual students in the group choose which photographs they will explain during their

group's presentation and then answer questions from the audience about those photos.

Conclusion

This field trip has been successful for all parties involved. Parent chaperones like the opportunity to interact with students and help them with the project, thus becoming more active participants in the trip. As teachers, we appreciate that the scavenger hunt is locally relevant and reinforces scientific communication. Also, this field trip has curricular ties to many disciplines, with emphasis on critical thinking, problem solving, and cooperative learning. It provides an opportunity for differentiation for learners with an open-ended assignment that is challenging, yet accessible for all students, and fun, engaging, and relevant. In addition, this student-centered activity allows teachers to assess students based on their differing abilities. Students enjoy becoming photojournalists, and some who may not have had access to local resources now gain an appreciation for their community. As colleagues, we enjoy working together and examining the field trip through each other's lenses. In the four years that we have used the photo scavenger hunt as part of the zoo field trip, we have found that students have become more aware of the importance of supporting their ideas with evidence in all the core content areas.

With a little creativity, this interdisciplinary activity can be adapted to any field trip, whether to a museum, nature area, amusement park, or even your own school yard. If the trip is to a site you're unfamiliar with, visit ahead of time to get inspiration for concepts. We suggest that teachers take a list of concepts they want to assess with them when visiting the site to make sure students can find examples to support their understanding of the various concepts. Let your imagination and creativity be your guide. ■

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