
I have worked with many new and prospective teachers over the past ten years. While they expect many things in educational life to be complex (e.g., classroom management, lesson planning, administrative paperwork, relationships with colleagues and students’ parents), they still underestimate the amount of detail that goes into creating effective learning experiences daily. Field trips, for example, always sound like a great idea, but making them meaningful is more difficult than most teachers realize.

The goal of any field trip is to be a well-managed and motivational experience that also serves as an effective curricular learning tool. New teachers often focus too much on the managerial details of registering for and getting safely to and from the field trip location on the appointed day and time. Yet, the facilitation of students’ meaningful engagement in curriculum-based learning before, during, and after the trip is just as important as the logistics of getting there and back. This type of planning is challenging but also creative and fun. Ultimately, it determines what students learn from their trip.

Learning is an active process, best facilitated by involving the learner in cognitive engagement with the information to be learned (Brooks and Brooks 1993). Assuming students absorb knowledge by simply going on a field trip is too simplistic to be an effective guide for field-based learning. If learning is “about constructing knowledge, not receiving it”; “about thinking and analyzing, not accumulating and memorizing”; “about understanding and applying, not repeating back”; and “about being active, not passive” (Marlowe and Page 1998, 9–12), then what students should be doing on field trips is challenging themselves. They should actively seek out information that makes them think, compare it to what they already know, internalize new information, and question what seems problematic. As Brooks and Brooks note: “information must be acted upon in order to have meaning for the learner” (1993, 27).

Teachers who want their students to connect with curriculum content during a field trip must, therefore, plan interesting activities before, during, and after the trip itself to encourage students to hypothesize, compare, analyze, synthesize, create, and reflect on their experience. These activities can focus students on collaborative or individual learning, problem solving or other applications of content and skills, and on supportively challenging their evolving understanding of content. The lines between instruction and assessment blur as these activities serve to scaffold continuing student learning and assess that learning.

How can teachers deeply immerse students in educational, content-related, cognitive activities before, during, and after a trip? These ideas are initial brainstorming suggestions for teachers to adopt, adapt, or use as a springboard for their own creative thinking.

However, the following are two general suggestions for planning active and effective trips:

- When contacting potential trip locales for initial logistical information (fees, adult-student ratio, handicap access, food policies, maps, etc.), ask if they have educational materials for teachers and students. Some locations, particularly those that do a lot of business with schools or who do educational

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programs for the general public, may have educators on staff to help teachers plan engaging, content-rich trips for students. Collaboration with educational organizations heightens field-based learning (Francis 1997). Some organization-based educators will tailor their programs for your group. Others will have pre-trip or post-trip ideas or lesson plans to send. Knowing early that a location does not have staff educators or instructional materials gives teachers time to plan their own materials and activities accordingly.

• After you identify potential trip locations, teachers should visit them in person. The visits, what Millan (1995) calls “reconnaissance trips,” are a chance for teachers to examine the locations with your curriculum and students in mind. Bring a notebook and a camera (digital or Polaroid offer immediate results). Capture the essential ideas and layout of particular areas that have potential for students’ interaction and learning relevant to your curriculum. Record ideas for activities or questions that might be answered at those sites. Use this information to help you brainstorm engaging pre-, during-, and post-trip activities.

Once this broad planning is done, teachers can focus on specific ways to involve and engage students in field trip-facilitated learning and growth.

**Actively Engaging Students Prior to the Trip**

*Ownership*

Teachers must get students to invest in what they will be doing. The more ownership students have in an event or situation, the more they will engage in it. For example, teachers could allow students’ input into what trips they might like to take, given some basic information about content and topics for the year. Students should have a little time to research suggestions. However, teachers should be aware that waiting too long could result in getting “booked-out” of a destination or bus availability.

All students’ realistic suggestions should be seriously considered. If a student’s suggestion has merit, teachers should entertain the option of using the student’s location. With some creative thinking on the teacher’s part, students might still be able to learn everything necessary while trying out a new field trip locale. Adolescents want to be seen as people with brains and rights who are taken seriously by adults. Giving students a stake in determining a field trip location allows and encourages them to take responsibility for their own learning.

Similarly, teachers might brainstorm pre-trip with students about the questions that they would like to answer during the course of the trip. Teachers can incorporate additional questions not among those raised by the students to enhance the discussion. Teachers can then use this final list of questions in various ways. Some ideas include: tailoring a destination’s educational programs for your group; creating an information scavenger hunt for your students to complete while on the trip; framing students’ post-trip projects or presentations; sparking literature-based activities before, during, or after a trip (Ewoldt and Miller 1990); or providing fodder for a post-trip quiz.

*Building Readiness*

Teachers can build readiness and excitement for the trip by sharing information about the destination. Students should be aware of safety rules, materials to bring and not to bring on the trip, logistics of the day, etc., before a trip. Students are more than capable of becoming involved in those aspects of the planning. (See Goldsworthy [1997] for one example of how well students can assist in planning—and later, processing—field trip experiences.) Elected student committees might research information about a particular destination, passing that on to a planning committee, who then make recommendations to a communication committee that is responsible for sharing that information with the class, parents, or even administrators. Safety committees or chaperone information/coordination committees also are good ideas. However, teachers should consult with every committee along the way to ensure that information is well researched and planned and presented as smoothly as possible.

Another way to build readiness and excitement for content-related learning is to help the students create frameworks for the new understandings the trip will bring. Students might research graphic organizers, choosing one type to use during their trip. Later, they can share their notes with the rest of the class after the trip. Students could also do a pre-trip “quickwrite,” outlining their expectations for the trip. This quickwrite could be compared to a post-trip write up.

Prior to any trip, the trip’s significance should be emphasized. Teachers should clearly outline the following: what the students are expected to learn; how the trip ties into the curriculum; and how the destination and its activities relate to student interests. Orion and Hofstein (1994) found that field trip learning was increased when students had preparatory lessons prior to the trip. Many museums and other informal education centers now offer online or mail out curriculum materials teachers can implement prior to the visit. Some places will even send their own educators into schools to lead pre-trip lessons. (For one excellent example of readiness building, see the online description of programs offered to schools by the Lincoln Center Institute in New York City.)
Actively Engaging Students During the Trip

Cognitive Processing

Students need to actively engage with new information to understand and learn it well. Aside from involving them in programs done by onsite educators, many quick and fun ways to cognitively engage students with new material during a field trip exist.

Incorporating student projects into a trip is often a meaningful tool for facilitating learning (Faiöl 1991). Here are a few ideas for projects in which students might participate as individuals or as members of groups during a field trip:

Create-a-game: Gather information and images in notes, sketches, and photos and create a card, board, or simulation game to demonstrate content-related learning.

Expert group research or the five-minute peer-teach: Capture information on different topics or themes to make a class presentation. Students can use notes, sketches, and photos.

Game show: Jot down content-related questions for a game show to be held during an upcoming class.

Photo essays: Use disposable or digital cameras to collect images for use in collages, scrapbooks, or multimedia slideshows.

Pictography: Have students guess what other students' sketches represent and have the "artists" explain them in a round robin.

Playwrite: Create skits for the class using information and images from the trip. Although this activity is similar to the "expert group research" idea, the students do more creative writing, role-playing, and acting than is the case in more formal research presentations.

Quiz writing: Make up questions for a quiz near the end of the trip or during an upcoming class.

Scavenger hunt: Observe specific things in or answer questions about different exhibits or areas of the destination. Either the teacher or the class can create the scavenger hunt clues and worksheet prior to the trip, or one can be created during the first half of a trip and used in the second half of the trip.

Science experiments and activities: Plan and run experiments, observational studies, or science activities. Keep a journal or lab report to record the results. Three quick examples are: documenting the frequencies of particular zoo animal behaviors; creating a local geologic events field guide; or measuring force on amusement park rides.

Trip journal: Draw and write about new learning using any journaling form—dialogue, stream-of-consciousness, outline, poetry, narrative, etc.

Trip ticket and passport: Create "event tickets" or "passports" from quick notes about what is seen and why it is important.

These ideas are just a few possibilities to help students cognitively engage with new content learning. As Milan (1995) notes, the act of composing written or verbal narratives about learned information intensifies the meaning that students get from the trip experience. Using other artistic or creative means (e.g., sketches, photo essays, etc.) can also assist that effort.

I found buying clipboards and bringing my own box of pens and pencils on a trip supports such processing. If money is tight, students can make homemade clipboards by cutting out and gluing together appropriately sized pieces of cardboard or other stiff material and affixing binder clips at the top. Orange, purple, or green "field trip pens" can add a little fun to their notes. Class cameras—whether digital, disposable, or Polaroid—are another useful investment.

Actively Engaging Students after the Trip—Learning and Assessment

More Cognitive Processing

I prefer to give students the bus ride back to school to continue processing on their own, quietly socialize, or relax. Class-wide verbal processing is often better left until the next class session because some of the products I have required need time for creation or refinement. However, I always use our next class period to do some assessment and metacognitive processing of the trip itself, even if the content-related products are still in development.

Teachers should include students in an evaluation of the field trip itself. I use my understanding of the students' growth in learning as one guide in doing so, other adults' (educators or chaperones) notes about the field trip as a second, and information from the students as a third component in my assessment of the field trip site and activities. The types of field trip feedback questions I often use with students are included in the appendix. In addition to helping me more effectively evaluate the field trip, asking the students to provide this information gives them more practice with higher-order thinking skills and metacognitive processing of their learning.

It is vital to have students process their curricular content learning with both their teachers and their peers. Students need to discuss what they learned and discovered. Teachers should allow them the time to display and explain the concepts behind the work they created while on the trip. In doing so, the students repackage and synthesize important content-related learning. Interacting with and sharing this information is a part of the learning experience. It helps students reconstruct, reinforce, and delve more deeply into understanding while expanding their own horizons.
They might discuss an entry from their trip ticket or journal, play pictography, do a “gallery walk” of their sketches and photo essays, play a game that they created, or present a five-minute peer-teach “lesson.”

All of the activity ideas listed here help students to focus their learning, consider new ideas in light of existing schema, highlight for others new knowledge and skills learned from the field trip, and even possibly confront discrepancies in their learning. As the teacher supports the creation of these products and observes presentations, these activities become the tools through which he or she also can assess student learning. Depending on teachers’ needs, these products might serve as either informal, formative assessments of continued instruction or as formal, summative assessments of learning. With the assistance of rubrics (possibly even created with student participation) teachers can evaluate the activities in ways that give accurate and in-depth feedback about students’ progress and achievement of curricular goals.

Linking and Integrating

After students have processed the new information highlighted by the field trip, teachers should find ways to link the content and skills of the field trip experience to future curricular units. Teachers need to build upon their students’ knowledge, interests, and energy. Continuing to offer students more dynamic and interesting field trip learning experiences that are integrated into the curriculum serves to exemplify and enrich the learning process.

All of these suggestions can be applied to virtual, as well as real-world, field trips. Virtual trips should not replace first-hand experiences but can (1) support student learning when visiting particular locations is not possible and (2) provide strong scaffolding before and after a real-world trip (Bellan and Scheurman 1998; Cox-Peterson and Melber 2001; Holt 1996). Effective virtual trips take into account the logistics and safety issues of Internet surfing and utilize sites linked to the curriculum and state standards. These multi-media-based field trips are interesting and rewarding for students. The Web site for Colonial Williamsburg is an example of a site that offers educational virtual field trips and other related activities.

Whether taking a real or virtual field trip with students, the key is to facilitate active cognitive engagement in learning. When teachers accomplish this goal, student learning is magnified many times over.

Key words: cognitive processing, curriculum development, field trips

APPENDIX

Example Field Trip Evaluation Questions for Students

Field Trip Feedback Form

In order to help me assess the field trip location we have just visited, please answer the following in as much detail as you can. (For more space, use the back of this page.)

Class: ___________________________

Field Trip Location: __________________________

1. How did the things you learned at the field site tie into what we are studying in class?

2. What did you discover that added to or extended your knowledge?

3. What specific activities on the trip helped you to learn? How did those activities help you learn?

4. What questions do you have now because of what you saw on the trip?

5. What suggestions would you make to improve the trip/destination?

6. Should the teacher organize this trip again with students? Explain why or why not.

REFERENCES
