YOU'RE TRIPPIN: TEACHER GUIDE

Subject: Earth Science
Grade Level: Middle School
Last Updated: September 26, 2008

Case Summary

Bow Wow and Ciara have just gotten into a horrible fight and have broken up! Bow Wow is desperate to get away for a while and has called you to help him plan out a road trip to visit different areas in the United States to see the different landforms. His vacation is in your hands.

Credits

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Learning Objectives

1. Differentiate types of landforms.
2. Locate regions where types of landforms can be found on a U.S map.
3. Define elevation.
4. Read a topography map.
5. Find a location based on latitude and longitude coordinates.
6. Calculate a budget.
7. Create a map of the U.S. with landforms identified.

Georgia Performance Standards

S6CS3. Students will use computation and estimation skills necessary for analyzing data and following scientific explanations

b. Use metric input units (such as seconds, meters, or grams per milliliter) of scientific calculations to determine the proper unit for expressing the answer.

ELA6W2. The student produces technical writing (friendly letters, thank-you notes, formula poems, instructions, web pages) that:

a. Creates or follows an organizing structure appropriate to purpose, audience, and context.

b. Excludes extraneous and inappropriate information.

c. Follows an organizational pattern appropriate to the type of composition.

d. Applies rules of Standard English.

ELA6LSV1. The student participates in student-to-teacher, student-to-student, and group verbal interactions.

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M6P1. Students will solve problems (using appropriate technology).
b. Solve problems that arise in mathematics and in other contexts.
c. Apply and adapt a variety of appropriate strategies to solve problems.
d. Monitor and reflect on the process of mathematical problem solving.

Assessment

The students will submit box charts from each scene as well as a map of the trip with the locations of each visit identified. On the final day of the case, the students presented their trip to the class and turned in a poster they created including a budget and driving directions. A rubric for the student presentations is included in the ***Student Materials***.

Implementation Strategy

Students work in small groups of 4 to 6 for this case. Two facilitators were present and roving the room as the students worked. Each scene of the case was read aloud as a class and then students broke into pre-assigned small groups to work on the box charts and research. The following implementation strategy was be used:

Day 1 (1 hour 50 minute class)	• Scene 1 introduced • Box charts created • LI assigned • Independent research • Report back on learning issues within the group • Choose locations
Day 2 (1 hour 50 minute class)	• Scene 2 introduced • Box charts created • LI assigned and researched within group • Group work on presentation of itinerary and budget
Day 3 (60 minute class)	Research and Preparation continued
Day 4 (50 minutes of class)	Group Presentations

Case Notes

What went well:

1. We worked with the librarians who created a page of links that could be used in the library to help direct the students' research. Although students did stray from the suggested links it gave them a place to start. Additionally, at our request the librarians provided a set of books on U.S. geography for the students to use in the library and the books were brought to our classroom on the 2nd day of our case.
2. The students were very involved in searching for hotels, gas prices, and restaurants for the budget. They were excited about this part of the assignment and put a lot of time and thought into this portion of the assignment.

What could be changed:

1. This case was originally scheduled for 3 days but had to be extended by a day to allow the students time to put together their presentations and complete their research. This extension could be avoided in future implementations by making sure the students are on task and complete their research for homework.
2. For some classes, we had to scale back the requirements, like reducing the elements of the budget. We also cut the second scene which included GPS coordinates because we did not have enough time to get to that portion of the case and allow students adequate time to complete their work in class. This also goes back to the first point about making sure the students are on task and completing their homework.
3. It will also help to spell out the expectations in the beginning of the assignment. When we passed out the presentation guidelines, we did go over them at that time but we could have also given them some steps along the way. For example, on the 2nd day of the case some of the groups had still not chosen the stops for their trip. We were able to get access to a computer lab for the 2nd day as well and did not let the students onto the computer until they had chosen their stops as a group. Depending on the time allowance, the budget could be cut from the project and the students would just have to plan their trip and obtain driving directions.
4. Group size should be limited to 4 students if possible. We had a few groups of 5 and 6 students and they had more trouble completing the tasks and making decisions as a group.
5. This was one of the first cases that we implemented in this classroom so we did not give them as much guidance on constructing their box charts as we have done on subsequent cases. We allowed them to brainstorm in their groups but they were getting distracted and not coming up with as many of the important learning issues as we would have liked. We did start having a group discussion after the first run through and suggested some learning issues. In our subsequent cases, we have let them brainstorm as a group and then after a group discussion, we hand out a box chart with some suggested learning issues to which they can add any additional points that come from their group discussion.
6. We did not hand out the rubric to the students for this case. This was changed for our future cases because we felt the students needed more guidance in completing the assigned work. For this reason, the rubric has been moved from the Teacher's Guide to the Student Materials.

Resources

Exline, J. D., Pasachoff, J. M., Simons, B. B., Vogel, C. G., Wellnitz, T. R. (2001). *Science Explorer: Earth Science.* Needham: Prentice Hall.