

Travel Brochure

http://www.accessexcellence.org/AE/AEC/AEF/1995/porter_cell.html

TYPE OF ACTIVITY:

- Authentic assessment
- Hands-on project
- Creative

TARGET AUDIENCE:

- Life science
- Biology
- Integrated science (level 1&2)
- ESL, LEP

This activity offers an alternative to cell models to help students understand cell organelles and their functions.

BACKGROUND INFORMATION

NOTES:

Students may begin this project with little or no knowledge of cell structure, as the project is investigative in nature. A background in cell theory is helpful for students and increases motivation. Class time needed can be as little as 30 minutes to explain the requirements for the brochure. I have found that students understand the concept more easily if they look at examples of travel brochures that I have collected from my travels. My inspiration came from the brochures that can be found in racks inside restaurants, the more outlandish the better!

STUDENT REQUIREMENTS:

Students are required to produce a travel brochure that describes a plant or animal cell as if it were a large exhibit/amusement park. They must accurately describe/draw/explain at least 8 (10?) organelles (attractions) and their functions. Humor and creativity are strongly encouraged (this makes this project very enjoyable to grade!).

PROJECT DESCRIPTION

ABSTRACT:

Students produce a travel brochure to attract visitors to spend money to visit an animal or plant cell. Students can think about their cell as a huge amusement park, or even better, a small roadside attraction. The brochure must describe at least 8 "attractions" (organelles or cell processes) that will "delight and amaze" their potential customers. Humor and creativity are encouraged. Brochures are evaluated by accuracy of organelle descriptions, design and creativity.

PROCEDURE:

Using small roadside attractions as an inspiration, students produce a travel brochure to entice visitors to take the next exit and visit the "incredible!, amazing!, and unbelievable!" sights of an animal or plant cell. For example, visitors might want to "visit the ribosomes, located just outside the nucleus, and watch as proteins are synthesized RIGHT BEFORE YOUR VERY EYES!". Students should be allowed creative license in their descriptions, such as "be sure to visit the Golgi center inside the gift shop, and have your purchases gift wrapped for you before you leave."

This exercise seemed to appeal to nearly all the students, and definitely to all achievement levels. Since there was no limit to what was expected, the high achieving students tended to go the extra step. Some described protein synthesis or mitosis which had not yet been mentioned in class. Those who were not as artistic found other ways to make their brochures attractive, such as computer images or cut-outs from magazines.

EVALUATION:

Brochures were evaluated on accuracy in describing functions of organelles, design, and creativity. After completing the project, test scores were the highest I have had in my career, and organelles and their functions seemed to be second nature in class discussions. Students report that the project was fun to do, and many have mentioned how it made studying easier and more enjoyable. For me, the project was very enjoyable to grade, and I got to see a side of my students that just cannot be expressed in a traditional lab report.

EXTENSION:

This activity can be adapted for ESL/LEP students by requiring a bilingual brochure. Individual or class models of a "cell amusement park" can be constructed concurrently or after the brochures have been produced.