
Hoptoad Habitats: Salamander Crosswalks

Summary: This activity is designed to stimulate thought about what students have learned regarding amphibians and their habitats over the course of the module, and provides a medium to link self with society. In the process of encouraging problem-solving and creative writing, the teacher may also use the resulting story to probe the students' understanding and content knowledge regarding amphibian habitats.

Objective: Students will write a creative essay to solve a conflict based on a fictional situation involving amphibians and suburban development. The essay will encourage creative problem solving and draw on students' knowledge of amphibians.

Grades: 3-5

Subject: Language

Skills: writing, communication, problem-solving, public speaking

Materials: pencil, paper

Activity

In *Salamander Crosswalks*, students will be asked to determine the “why” in a situation, solve a problem (or multiple problems if they choose), and defend their prediction through facts and terms learned. A minimum of facts are provided, and the teacher should encourage and expect many varied “answers.” Ample time should be provided to allow the students to carefully consider the situation and recall what they have learned.

Step 1. The Situation:

The citizens of Watersville have asked you, an amphibian habitat expert, to visit their town to solve a problem: a massive migration of salamanders across a busy local highway. The first rainy spring night this year, thousands of small, red salamanders tried to cross the new highway. The highway was built last fall through the middle of Big Oak Woods to access a shopping mall. There were a number of wetlands that had to be destroyed to build the road, but others were protected when possible. Some local residents are upset about running over so many of these creatures at one time, while others find it to be just plain disgusting. Either way, the sheriff is depending on you to do something.

Step 2. Your Suggestion:

Based on your knowledge of amphibians and their habitats, your task is to write a story explaining what may be occurring at Big Oak Woods, and possible solutions to save these red salamanders. There are no right or wrong answers, but what you have learned so far about amphibians and their habitats will help you determine what is occurring and why. Finding a solution, however, will require creative problem solving, as well as an understanding of the salamanders' behavior. The local paper would like to publish a story about what you think is occurring and the solution. Your task is to write a story that explains what these creatures are, why they are crossing in massive numbers in spring, where they came from and where they are going, and a potential solution to prevent this roadkill. Discuss your solution, explaining why it might work as well as potential problems. Some of the citizens want to protect the salamanders, while others don't care. Remember, the citizens do not know anything about salamanders, and are asking you to help.

Step 3. (Optional) Public Forum:

The teacher may wish to have all students read their essays, and then allow students to ask questions about their suggestions. Or the teacher may wish to choose 3 stories that are very different, and have the students read them to the class for discussion and comparison.

Teacher Notes

The salamanders are crossing the highway to breed. They can infer this since the season is spring, and the condition during the event is a rainy, spring night. Since the highway is new, this problem hadn't existed before, and students may indicate this as a link between society and environmental conflicts. Students may explain the relationship between salamanders and vernal pools, their secretive nature, and the timing of the migration. At minimum, the students should connect the migration with breeding, and potential habitat on the other side.

Although it is given that wetlands were destroyed, we do not know if there are any vernal pools on the other side of the road. Students may infer that there are, and may suggest studies to find them, an excellent link demonstrating actions to be taken to better assess the problem. Or the vernal pools may have been drained or damaged during construction of either the road or mall. In addition, if the pools are near the road, pollutants from the highway may degrade the water quality and impact the organisms. Students may suggest that the pools be protected. At minimum, students should mention that vernal pools were at least historically present, which is triggering the migration across a road that was once not there.

Solutions to this problem may range widely. Potentials include an underground salamander crossing (actually implemented, see www.fwha.dot.gov/environment/wildlifecrossings/main.htm), crossing signs, closing the road on migration nights, volunteers moving the salamanders in buckets or by hand, or altering the highway. Remember, there are no wrong or right answers, but students should provide some rationale and discussion of positive and negative aspects of their solution. Students should also discuss protection of vernal pools and the benefits of amphibians to help persuade the public to find a mutually beneficial solution.