



Reality Check (Learning Experience #3) Student Procedures



Summary

After you team has designed and tested potential solutions to address the decrease in trout in Smith Creek, students will compare their ideas to those of scientists from James Madison University, state and federal conservation bureaus, and citizen groups (i.e. Trout Unlimited, Chesapeake Bay Foundation). *Reality Check* (Learning Experience #3) is designed to serve as the capstone to this scenario and provide students opportunities to understand the correlation between the quality of local water supplies and the overall health of the Chesapeake Bay watershed.

Essential Questions

- How could a rural county restore and maintain a reproducing population of brook trout in a local stream?
- What is the connection between clean water in aquatic habitats and animal and plant life in an area?

Procedure

1. Watch the video about the Smith Creek, Virginia Restoration Project that was produced by a student at William and Mary College for a class project. The leader of the team is Dr. Mark Hudy, the national expert on aquatic biology for the United States Forest Service and a professor at James Madison University in Virginia. The people working in the stream with him are Dr. Hudy's graduate students. Be prepared to complete *SCTHRP Participants* (Student Sheet #1) as you watch the video (note: you may want to see the film a second time to see additional details).
2. Compare your team's restoration plans to those of Dr. Hudy's team. Answer question #1 regarding the two sets of plans on *SCTHRP Progress* (Student Sheet #2).
3. Read the 2012 Report on the Smith Creek Restoration Project and complete the remaining questions on *SCTHRP Progress* (Student Sheet #2).
4. Imagine that you could have a conversation with one of the scientists in the film. Record in your science journal at least two questions that you would like to ask the scientists and/or graduate students.



5. Apply what you have learned about restoring Smith Creek to a situation in your own town region that was due to either a water quality problem or degraded aquatic habitat. Once your team has determined the problem, research information about past and current conditions, design a restoration plan, and complete *Neighborhood Action* (Student Sheet #3).

