## Hellbender Education

## **LESSON PLAN 3: WATERSHED EXPLORATION**

## MIDDLE SCHOOL STANDARDS ADDRESSED:

West Virginia	S.6.LS.1: Students
west virginia	5.6.L5.1. Students

- S.6.LS.1: Students will construct an explanation that predicts patterns of interactions among organisms across multiple ecosystems.
- S.6.LS.5: Students will analyze and interpret data to provide evidence for the effects of resource availability on organisms and populations of organisms in an ecosystem.
- S.6.LS.6: Students will develop a model to describe the cycling of matter and flow of energy among living and nonliving parts of an ecosystem.
- S.6.LS.7: Students will construct an argument supported by empirical evidence that changes to physical or biological components of an ecosystem affect populations.
- S.8.LS.2: Students will construct a scientific explanation based on evidence for how environmental and genetic factors influence the growth of organisms.

## HIGH SCHOOL STANDARDS ADDRESSED:

# West Virginia

- S.10.LS.11: Students will use mathematical representations to support and revise explanations based on evidence about factors affecting biodiversity and populations in ecosystems of different scales.
- S.10.LS.12: Students will evaluate the claims, evidence, and reasoning that the complex interactions in ecosystems maintain relatively consistent numbers and types of organisms in stable conditions, but changing conditions may result in a new ecosystem.
- S.10.LS.13: Students will design, evaluate, and refine a solution for reducing the impacts of human activities on the environment and biodiversity.
- S.HS.ENV.21: Students will use GIS data to analyze the parameters of a watershed and interpret physical, chemical and biological data as a means of assessing environmental quality.