

One Hilltop, Three Major Watersheds!

Adapted from: An original Creek Connections activity.
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Grade Level: Intermediate to Advanced

Duration: One class period or less

Setting: Classroom

Summary: Students use skills from other Topographic Map Module activities to pinpoint the one hilltop in Potter County from which runoff flows into three different major Pennsylvania watersheds.

Objectives: Students will be able to identify the six major watersheds of Pennsylvania. They will also be able to use their topographic map and watershed delineation skills to locate the single hilltop in Potter County from which runoff drains into three different major Pennsylvania watersheds. They will also be able to identify the strategies that were most effective in locating this hilltop. Finally, they will be able to identify the land use at the hilltop and the potential impacts of the land use on water quality.

Vocabulary: none

Related Module Resources:

- Activities: Watershed Delineation, Watershed Topography, Land Use in Watersheds
- Land Use Impacts on Water Quality Parameters. (at the end of the Land Use in Watersheds activity)
- Book: 100 Topographic Maps

Materials (Included in Module):

- 6 laminated Potter County Maps
- Wet erase markers
- 2 Overhead Transparencies (Figures 1, 2, 3, 4, 5)
- 6 sets of Clue Cards in labeled envelope

Additional Materials (NOT Included in Module):

- Overhead projector

ACADEMIC STANDARDS:

ECOLOGY & ENVIRONMENT

7th Grade

- 4.1.7.B. Understand the role of the watershed.
- Identify and explain what determines the boundaries of a watershed.
- 4.3.7.B. Describe how human actions affect the health of the environment.
- Identify land use practices and their relation to environmental health.

10th Grade

- 4.1.10.B. Explain the relationship among landforms, vegetation and the amount and speed of water.
- Delineate the boundaries of a watershed.
- 4.1.10.E. Identify and describe natural and human events on watersheds and wetlands.
- Identify the effects of humans and human events on watersheds.
- 4.3.10.B. Explain how multiple variables determine the effects of pollution on environmental health, natural processes and human practices.
- Explain how human practices affect the quality of the water and soil.

12th Grade

- 4.1.12.E. Evaluate the trade-offs, costs and benefits of conserving watersheds and wetlands.
- Evaluate the effects of human activities on watersheds and wetlands.

GEOGRAPHY

6th Grade

- 7.1.6.A. Describe geographic tools and their uses.
- Geographical representations to display spatial information: topography
- Basic spatial elements for depicting the patterns of physical and human features: point, line, area, location, distance, scale
- 7.2.6.A. Describe the physical characteristics of places and regions.
- Components of Earth's physical systems (e.g., relief and elevation (topography))
- Comparisons of the physical characteristics of different places and regions (e.g., topography)

9th Grade

- 7.4.9.B. Explain the impacts of people on physical systems
- Forces by which people modify the physical environment (e.g., increasing population; new agricultural techniques; industrial processes and pollution)

12th Grade

- 7.2.12.A. Analyze the physical characteristics of places and regions including the interrelationships among the components of Earth's physical systems.
- Watersheds and river basins

BACKGROUND:

As you have undoubtedly discovered while doing the activities in this module, the topography of Pennsylvania is diverse and interesting. One particular topographic feature that is unique and unusual is an unnamed, nondescript hilltop in Potter County. If you allowed your eyes to scan the Potter County topographic maps, they might first skip over this