

Watersheds & Pollution



Recommended Grades:

K-5



Time Needed:

15-20 minutes

Description

- Students will explore Kentucky's rivers and waterways and discuss watershed and/or water pollution.

Learning Objectives

Students will:

- Be familiarized with the larger rivers and waterways in Kentucky.
- Learn about watersheds.
- Learn about the movement of water.
- Learn about the movement of water pollution.

Materials

- Chains
- Chips

Preparation

- Set out the map and chain.
- Choose a few starting rivers (Optional)
- Divide the Poker Chips into groups (will be needed when students are divided into groups)
- Link to watershed map: <https://epccgis.ky.gov/watershed/>

Rules: (e.g., have students remove shoes before walking on map)

Directions

1. Introduce the students to how rivers and water bodies are symbolized and labeled on the map, both of them are in blue. This type of labeling is often standard for maps involving water features.
2. Ask students to find examples of water features on the map.
3. Introduce the topic of watersheds to the students. This could include discussing how all the water that falls into drains or falls when it is raining has to go somewhere. This water goes into the nearest body of

water. All the land in an area that has water go into the same body of water is a part of the same watershed.

4. Introduce the idea that smaller watersheds-creeks, smaller rivers, etc.- are a part of larger watersheds. For example, the Ohio River Watershed is part of the larger Mississippi River Watershed.
5. This next series of steps would likely be best to divide the students into groups of about 6-10.
6. Either ask 1-2 students to find a river or give 1-2 students a specific river to find. This would be best if it was a smaller river or waterway. Four example rivers are listed at the end of the lesson plan.
7. Have the next 1-2 students find the river or waterway that connects to the first river or waterway.
8. Continue the step above until the Mississippi River has been reached.
9. Have another student hand part of the chain to each student standing on a river or waterway, starting from the first student. Discuss how this chain shows the movement of water from the first river or waterway to the Mississippi River.
10. Optional (Have the students put down the chains. This time give the first student some of the poker chips. Have the first student pass the poker chips to the next student. Continue this until the poker chips reach the Mississippi River. Students could then place the poker chips on the ground and leave them there. Talk about how these poker chips can represent water pollution traveling through the rivers and waterways.)
11. Have the next group of 6-10 students complete steps 6-10 again with a different river or waterway. (If doing the Optional Step 10, continue having all the students leave the poker chips by the Mississippi River until all groups have had the opportunity to participate.)
12. Repeat Step 11 until all students have had an opportunity to participate.
13. Discuss with students the connections between the different rivers and watersheds.
14. If completing the optional water pollution section, look at all the poker chips that have been left at the Mississippi River. Discuss how all these pollutants started in different rivers but they all wind up in the same place (the Mississippi River).

Example Rivers and Waterway Selections:

- Big Sandy River to Ohio River to Mississippi River
- North Fork River to Licking River to Ohio River to Mississippi River
- Red River to Kentucky River to Ohio River to Mississippi River
- Barren River to Green River to Ohio River to Mississippi River

Example Water Pollutions That Could Be Discussed:

- Trash
- Fertilizer from farms (Nitrogen and Phosphorus)
- Pesticides

Connections to the Kentucky Curriculum:

4-Ess2-2. Analyze and interpret data from maps to describe patterns of Earth's features.

5-ESS2-1. Develop a model using an example to describe ways the geosphere, biosphere, hydrosphere and/or atmosphere interact.