Wild Guardians: Exploring and protecting waterways video guide

Teacher directions:

Before class: Review the video guide for possible stopping points during the video to discuss and reflect. Decide if you want students to discuss whole group, in small groups or with partners using a protocol like Think-Pair-Share.

Before viewing: Students complete the "Pre-watching activity" to consider the movement of water in different landscapes.

During viewing:

0:19	Ask students, "Would you want to snorkel in a river? Why or why not?" • *Students share their opinion based on experience or comfort level.*
1:02	Ask students, "Why would a plastic bottle in the river be a problem?" • *Students share background knowledge about pollution and its effects on ecosystems. Encourage cause and effect language (_____because ...; _____, so_____; etc.)* Ask students, "Where do you think the 'long journey' would take it?" • *Students make predictions about where the bottle will go based on their knowledge of Tennessee and United States geography. You may look at a map to get a general idea of what water runs through the community and where it goes, but this will be seen in the video next.*
1:58	Ask students, "What is a watershed?" • *Students summarize the video definition and give examples.*
2:54	Ask students, "How can building a road or cutting down trees affect how water moves?" • *Students may refer back to the images from the "Pre-watching activity" to point out how water is pooling or appears to be moving in the images.* • *Be sure to define "erosion" if this concept is new for your students, relating this to the movement of water especially.*
3:05	The video (2:55) says, "What happens upstream, like that bottle, doesn't stay still." Ask students to think about, "Why does this matter?" • *Students do not share, but just consider the implications of moving water based on the discussion so far.*

3:36	Ask students, “How did looking at the animals in the water help the students to know the quality of the water?” ● *Students summarize their understanding that different organisms can “tolerate” different levels of pollution. The students used the animals to indicate that the water was good for some of the animals to survive.*
4:17	Ask students, “Do you know where our watershed is?” ● *Students share guesses based on the knowledge of the community. Students may share the names of local rivers, creeks, lakes, or even the ocean. Write down the places students share. If they don’t know that is okay, too!*

After viewing:

1. Ask students, “How would the actions described in the video help our watershed?”
    a. Plant native plants (reduce erosion, give homes/food to native wildlife, filter water from rain going into the waterway).
    b. Monitor water quality (recognizing a problem before it gets worse is important to ensuring the water is healthy).
    c. Pick up litter (water flows downstream and pollution flows with it, affecting plants and animals in different places).
2. Review the list of waterways discussed during viewing. Distribute maps of your area, or view a map together. Locate the waterways students were familiar with and additional waterways. Trace these areas in blue on the map and discuss the movement of water in your community.
3. Students choose an action (as a class or individually) to support the waterways on the map.

Name _____ Date _____

Exploring and protecting waterways video:

Pre-watching activity: <u>Version A</u>

Before you watch the video, look at the images with a partner and follow the directions. Then, talk to someone with the other Version about their noticings.

1. Today it is raining. What do you notice about the water in the pictures?



Image: Canva



Image: Mongabay Kids

2. Circle the places where the water is sitting (pooling).
3. Circle the places where the water appears to be moving.
4. Where do you think the water is moving to? Why do you think this? What evidence from the image supports your answer.

_____

_____

5. What if there was something big in the water? What would happen to it? What if it was small? What if there was something mixed in with the water?

_____

_____

_____

_____

Name _____ Date _____

Exploring and protecting waterways video:

Pre-watching activity: <u>Version B</u>

Before you watch the video, look at the images with a partner and follow the directions. Then, talk to someone with the other Version about their noticings.

1. Today it is raining. What do you notice about the water in the pictures?



Image: Canva



Image: Mongabay Kids

2. Circle the places where the water is sitting (pooling).
3. Circle the places where the water appears to be moving.
4. Where do you think the water is moving to? Why do you think this? What evidence from the image supports your answer.

_____

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5. What if there was something big in the water? What would happen to it? What if it was small? What if there was something mixed in with the water?

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