The Power of Wetlands



QUILLS

Queen's University Indigenous Land-Based Learning STEM

A Water Filter Activity

After reading the short summary of the study, students should understand that the common reed acts as a water filter for aquatic life. Wetlands, as whole ecosystems, act as water filters for surrounding ecosystems, as well. They do this by slowing down the water current, holding water for long periods of time and soaking up certain nutrients, slowly releasing water, and by trapping sediments into the soil. As such, wetlands are commonly referred to the kidneys of the earth. For more information, check out this awesome resource! After being introduced to the significance of wetlands, students can then make their own water filter using natural materials from the land. This activity has been adapted from a lesson plan provided by EarthDay.org. Please refer to the worksheets here, and consider our adaptations below.

With our adaptations, some activities in the lesson can be omitted and substituted with other activities from the Water Bundle. We believe that the activities in the bundle will provide a more rich, meaningful, and localized learning experience, when accompanied with the water filter activity.

Activity #1 can be omitted if the background information on water pollution has already been discussed. Since this resource is based in the United States, the conversation can be localized so that there is more meaning and relatedness to the activity. Other activities in the bundle that speak to the relationship with water, being reciprocal with water, and learning about drinking water crises/environmental racism can substitute this beginning activity.

For Activity #2, encourage students to find natural materials from local natural areas for their filters. Teacher can also provides sand, gravel, and clay. During their search for natural materials, the students can be thinking about what each material represents in their filter. Another note about this activity is to ensure that the pollutants are disposed properly. We also suggest that an example of a water filter is shown to the students, using the bottle and natural materials, so that the students can fully understand the task and the worksheet structure.

The wrap up discussion can also be omitted from the activity. Instead, students can watch these two videos, which can lead into a discussion about the importance of wetlands.



Wetlands: The Superheroes of the Natural World

Why Wetlands are Nature's Super-Systems

Questions Students Can Reflect On:

- Why are wetlands important?
- Think about your home and the land you live on. Where is the nearest wetland?
- What can you do, in your relationship with that wetland, to support it?
- If the wetland benefits you, how can you benefit the wetland?

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