Activity 2: Water Detectives

Introduction

Are your kids ready to dive deeper into streams and rivers without getting all wet? Help them make a dipping net and an underwater viewer to get a closer look at what's living in the water.

Supplies (for each child)

- Old pair of tights or panty hose
- Wire coat hanger
- Duct tape
- Small diameter bamboo stake or pole
- Needle and thread
- Scissors and possibly pliers
- Large, sturdy cylindrical plastic container from the recycling bin (such as a 1 lb yogurt container)
- Piece of clear plastic (for example, part of a shower curtain or a large resealable storage bag) or thick plastic wrap
- Thick rubber band
- Clean empty tub(s) or bucket(s)
- Large plastic spoons

Illustration © Monterey Bay Aquarium

Get kids thinking ...

What animals, birds, plants, and insects might you expect to see at a river or stream? **Ask the kids:** How do they live there? How do they rely on each other to survive? How do they get food? How is a river habitat different from other habitats? What do they think life in the water is like?

Help them further explore those questions with the help of a homemade dipping net and underwater viewer and a trip to a river or stream.

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Let's get started!

To make a dipping net, take an old pair of tights or panty hose and cut off the legs mid-thigh. Have kids tightly tie the open ends of the legs together to form a net. Take a wire coat hanger

and stretch the wire triangle into a square. Kids will need help to stretch the elastic waist of the tights over the square frame, fold the waistband over the wire, and sew the waistband closed around the wire with needle and thread. To form a handle for the net, completely straighten the hook of the hanger — adult hands and pliers may be helpful — and insert it into the bamboo pole. Secure it with duct tape and kids are ready to dip!

To make an underwater viewer, cut off the bottom of a cylindrical container. Have kids stretch a piece of clear plastic over the bottom of the cylinder. Fasten it with a rubber band and seal with duct tape.

Have kids gather their new tools for exploring, along with a tub or bucket and some large plastic spoons and head to the water! You might also want to bring a magnifying glass, towels, and some hand sanitizer.

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Make sure kids stay at water's edge until everyone understands and agrees to water safety rules. Talk with them about what they think they might find in the water and share ideas about what to look for — bugs, insect and frog larvae, worms, tadpoles, small fish.

Start by filling the tub or bucket with water from the river or stream. Let kids test their underwater viewer. Have them lower the viewer into the tub of water and look through the open end of the viewer. What do they see?

To get dipping nets going, let kids stand at water's edge and sweep the nets slowly through the water, avoiding stirring up the bottom too much. You can use plastic spoons to help them transfer whatever ends up in the net into the tub filled with river water so they can get an up close look and try to identify their finds using their underwater viewers.

Move upstream and downstream to sample from different sections of the stream or river. Talk with kids about how the physical characteristics of the stream or river create different habitats for different plants and animals. For example, shallow depths and a rocky bottom make a habitat with plenty of light and oxygen for plants and creatures that eat plants. Small, irregular waves or riffles on the water's surface can help you find this type of river habitat.

Encourage kids to take plenty of notes about their observations. Ask, Is there a plant, animal, or insect you'd like to learn more about? Head back to hit the books and find out more!

More activities

Make-and-take field equipment (Oregon Department of Fish & Wildlife)
http://www.dfw.state.or.us/fish/STEP/docs/SS10_FieldEquiptment.pdf

Make your own monitoring equipment (Maryland Department of Natural Resources)
http://dnr.maryland.gov/education/Documents/MakeYourOwnMonitoringEquipment.pdf