

# Rolling Through the 'Shed



This activity center is part of the **Water Protection** theme.

## Purpose of this activity:

Students learn about water pollution by pretending to be water drops moving through various parts of a watershed.

Ensure that the children understand the key terms **highlighted** in the activity by using them in several different contexts throughout the presentation.

## Key Messages:

- Water flows in a continuous cycle
- Water may pick up a variety of contaminants along the cycle
- We must do our part to prevent water contamination

## Materials

- 6 gym mats silk-screened with words *Roads, Agriculture, Lawns, River, Air, and Development*.
- 5 Velcro Vests
- Laminated 'contaminants poster'
- Dozens of corresponding colour-coded pieces of felt – pink, orange, yellow, green, blue
- Replace Velcro strips and felt pieces as needed
- Extra pegs to hold down tarp (if tarp is elected to be used instead of gym mats)

## What will I be doing?

You will be helping students to put on vests with Velcro strips that pick up felt pieces that represent contaminants. You will also be explaining the contaminants and posing and answering questions about how they affect water.

Help the students to put on the vests with the Velcro strips on the outside. The students should line up and wait their turn to roll on the gym mats. **THEY MUST LISTEN TO THE EXPLANATION BEFORE "ROLLING"**

Explain to the students that they will each pretend to be a water drop falling on the ground. Water drops reach the ground through **precipitation**. Ask, "What are some forms of precipitation? "Rain, snow, hail".

We are going to trace the life of a water drop as it moves through a **watershed**. Ask, "Does anybody know what a watershed is?" It is an area of land where all water drains to a certain point. For example, if you live in the Lake Ontario watershed, all of the water that falls on the ground drains into Lake Ontario. Explain to the students that they will be moving through different areas of a watershed where they will pick up different **contaminants**. The second volunteer will explain the contaminants to the students after they finish rolling through the watershed.

Have the students drop down, one at a time, and roll over the gym mats labeled for what they each represent: road, river, air, lawns, agriculture, etc.

When they are finished, with the vests still on, the students should hear explanations (given on the poster mounted on the display board) of the contaminants they have picked up. E.g., pesticides from lawns, animal wastes from agricultural land, Sulphur Dioxide and Nitrogen from air, etc.

PINK	Animal wastes	Agriculture, River
BLUE	Nitrogen, Dust	Air, River
GREEN	Pesticides	Lawns, River
YELLOW	Silt, Soil	Development, River
ORANGE	Gas, oil	Roads, River

The students should also realize that some of the contaminants are washed away in the river and that's why the river mat has sticky Velcro on it, to attract some of the pieces of felt (contaminants) from the vests/water drops.

They should also realize that even things that are not placed in the water directly could still be picked up by it.

Ask the students for ways that we can prevent pollution, e.g., don't use pesticides on lawns, use cars less so we don't have to build more roads and so we make less **emissions** (the dirty air that comes out of cars) which is

picked up by water in the air causing acid rain. Fewer roads mean less road salt in the winter. Road salt also pollutes our water.

Certain types of energy generation (e.g., coal powered) also lead to emissions that contribute to acid rain.

We should also NEVER pour solvents, paints, motor oils or other chemicals down the drain because these end up in our water supply and harm plants, animals and people.

Then ask, *"What are some ways that you can help to protect our watershed?"*

Be sure to encourage thought about immediate actions that students can take to avoid contaminating water;

- Don't throw litter into ditches, creeks, lakes where they live (or anywhere else!)
- If they live by a ditch, stream, or waterfront, ask their parents not to apply pesticides, herbicides to their lawn.
- Encourage their parents/neighbours etc. to undertake a community clean up of streams and waterfronts (seek proper permissions!)
- Adopt-a-stream
- Don't cut grass right to the edge of a ditch, stream, creek or lake – leave a natural 'buffer' which will delay many forms of run off and contamination

## Clean Up Procedures:

- Collect vests and put them all together to avoid losing any
- Collect the pieces of felt and place them all back in the container
- Roll up the tarp/mats and poster so that they can be put into overnight storage
- If a tarp is selected, collect all the pegs so that they can be used the next day as well
- Place the spare Velcro strips into the container in case they are needed the next day

## Review Questions

1. What are some ways that you and your families contribute to water pollution?
2. What are some things we shouldn't pour into our drains or sewers at home and why?
3. Why is it a bad idea to cut the lawn near a waterfront or use pesticides?
4. What are some ways that we are trying to curb car emissions today? (If they don't know the answer, explain the brief concept of hybrid vehicles, which lower emissions greatly by using much less gasoline.)