

Oatmeal Runoff Activity

Materials

1. Boxes of oatmeal
2. 1 or 2 oz paper cups to dip oatmeal with
3. Brooms and dustpan
4. Wide roll of paper 20 feet or longer
5. Masking tape
6. 20 sheets of cardstock
7. Watch with second hand

Prep work

1. Draw river outline on the paper
2. Label one side of cardstock:

- * Nine wells
- * Five springs
- * Three underground rivers
- * Two ponds
- * One lake

Site preparation

1. Sweep the area well before students come in so you can salvage the oatmeal for reuse next session.
2. Tape the river down in several places
3. Scatter the cardstock sheets out, most along the edges, some in the river, label side down

Process

1. Have students line up on either side of the river (not standing on the cardstock)
 2. Identify which end is the mouth and which is the headwaters of this river.
- * Which way is the water flowing?
 - * What is polluted runoff?
 - * Where does it come from?
 - * Why is it a problem? Why is it a particular problem in our area?

First iteration

1. Give each student just a little bit of oatmeal.
2. When you say go, the students at the head of the river turns to the next student and pours her/his oatmeal into the palm of that student. They continue to hand the oatmeal downriver. (What ever falls stays put.)

- * What happens?
- * Does all the oatmeal make it down the river?
- * Was it hard to pass?
- * How is this like what happens with polluted runoff and our rivers?
- * Is it possible to have no polluted runoff?

Second Iteration

1. Give each student one measure of oatmeal in the hand.
2. When you say go, the students at the head of the river turns to the next student and pours her/his oatmeal into the palm of that student. They continue to hand the piles of oatmeal down river.

- * What happened this time?
- * Did you drop more this time?
- * How is this like polluted runoff? *Everyone contributes.*
It is a cumulative problem, a little here, a little there, is soon too much
- * How did it feel to be downstream?
- * Did any of the runoff get on you?
- * Can polluted runoff hurt people if it gets on or in them - if you swim in a polluted river? Drink from a polluted well?

Next step:

Now imagine that I am a trucker hauling gasoline. I have an accident and my truck turns over right here next to your river (dramatically begin to throw PSP items into the river going further down stream with every throw).

- * Is this polluted runoff?
No, point source pollution - comes from a single source, you know where it is coming from.
- * How is it different that polluted runoff?
Easier to stop, you can make the person doing it clean it up.
- * What steps should we take?
Stop the source, keep it from spreading, pick it up.

Okay, you have one minute to get as many of the PSP items out of the river as you can.

Go!

Next step:

1. Now look for the blank cards around and in the river. Can you count or measure the oatmeal on the one closest to you?
2. Dump the oatmeal into a container, and read the label on the bottom of the card.

* What does this mean?

Some of the polluted runoff ended up in wells, springs, etc.

* How does this happen in real life?

Gets into the groundwater; porous nature of karst terrain

Final iteration:

Best Management Practices

What are some things we could do to reduce the amount of pollution in our river?

- * Not have as much oatmeal- reduce use of agricultural and household chemicals
- * Control erosion
- * Filter before it gets to the stream - increase riparian zone vegetation
- * Maintain septic systems
- * Move use away from the stream - fence cattle out of stream
- * Don't drive in the creek bed or along edge of stream

How can we do that with the oatmeal? Let's try it!

- * Step back from river edge
- * Some people pass oatmeal, some just try to catch any spills

Post session:

- * Pick up the rest of the PSP items
- * Sweep up the oatmeal
- * Reset the cards
- * Check in about how that session went and what you could do differently with the next class.