

Pollution: Sammy the Sick Salmon

5th Grade

Jon Clark, Gloria Arismendy (CSIA), Nicole Clark (Hamilton)

References:

http://www.nationhood.ca/_lib/ILU/PDF/VaM_ILU_5F.pdf

Benchmarks:

ES-5: Explain how the supply of many non renewable resources is limited and can be extended through reducing, reusing and recycling, but cannot be extended indefinitely.

ES-6: Investigate the ways Earth's renewable resources (wildlife) can be maintained.

Objectives:

The objective of this lesson is to get the students to review renewable and nonrenewable resources, but also to show them that when we pollute, it is ultimately ourselves who we hurt.

Materials

- large glass jar
- sponge
- soil
- maple syrup
- sugar
- paper dots
- soapy water
- green and red food coloring

Initial Observation:

The students have talked about pollution and dynamics in the SEED program, and a brief review was used to begin the day.

Procedure:

Each group of students will be given a sponge that they need to cut in the shape of a fish. (Make sure they do not draw on their sponge with any markers or pens prior to cutting out the shape.) Each group will also be given a clear plastic container about half full of water. As a class, the story (see last page) is read and the dynamics are added by different members of the group as Sammy continues to swim in the muck.

Discussion/Summary:

The students should find that the addition of each type of pollution affects Sammy and his environment in different ways. They should also see that some of the pollutants interact with each other to make things even worse!!

Revised Model:

The students will be asked to hypothesize what will happen to Sammy. After they have completed this, ask the students “What do people do with fish?” They should respond “Eat them, or feed them to pets” etc. After that, ask them to hypothesize about what they think is now inside Sammy.

Procedure:

One by one, each group will come up with their Sammy Salmon and squeeze him out into an empty, clear plastic container. They can observe that every sort of pollutant has worked its way inside of Sammy. We will then discuss how this happens to actual fish and that when we eat them; we are eating all of our own pollution!!

Discussion/Summary:

The students will write and discuss ways to eliminate each one of the pollutants that caused Sammy to become polluted himself. This is a great lead into reduce, reuse, recycle.

Story for Sammy:

1. Read the following as a class: Sammy is a happy salmon, he lives in clean water and has lots of healthy food to eat but it’s time to go downstream. The first thing Sammy passes is a farm. The farmer has cut down all the trees for more space for crops. Soil is eroding into the stream (Soil).

Sammy passes a large parking lot. Oil has been leaking from a big truck and is being washed into the stream. (Syrup)

As Sammy continues downstream he goes by a housing development. Everyone wants a really green lawn so they are using lots of fertilizer which is washing into the stream. (Sugar)

Sammy continues to a beautiful park where families enjoy picnics. One messy bunch left their trash which has blown into the stream (paper dots)

As Sammy goes out of town he passes a factory. They are dumping chemicals into the stream. (Soapy water)

Sammy gets to the town dump. All kinds of goo are washing into the stream. (Green food coloring)

As he passes another farm, pesticides are being sprayed to keep bugs away. This too is getting into the stream. (Red food coloring)

2. Discuss observations and reactions.

- How is Sammy doing? What has happened to his water?
- How many of these pollutants were around when the men were fishing in the sketch?
- What might save Sammy?