

Activity 1 (16 students)

- Give out blue and white neck cards:
 - ▶ 8 Raindrops
 - ▶ 1 Farmer
 - ▶ 4 Cattails
 - ▶ 1 Mouse
 - ▶ 1 Muskrat
 - ▶ 1 Eagle

- Give Farmer 8 blue chips (these represent pesticide). Farmer spreads pesticide on field.

- Each Raindrop picks up 1 blue chip. Rain dissolves pesticide and carries it to the marsh.

- 4 Cattails drink 2 Raindrops - Now each Cattail has 2 blue chips.

- Mouse eats 1 Cattail and Muskrat eats 3 Cattails. Pass along the blue chips.

- Eagle swoops down and eats the Mouse. But he's still hungry, so he swoops down again and eats the Muskrat. The eagle has all 8 blue chips.

- Eagle begins to get sick and then dies.

- Explain the Eagle-death mystery. He ate 2 animals from Troubled Trader's Marsh. Explain bioaccumulation by talking about the food chain.

Activity 2 (24 Students)

- Give out red and white neck cards:
 - ▶ 8 Raindrops
 - ▶ 1 Farmer
 - ▶ 8 Shellfish
 - ▶ 4 Minnows
 - ▶ 2 Bass
 - ▶ 1 Boy

- Give Farmer 16 red chips (these represent pesticide. Farmer spreads pesticide on field.

- Each Raindrop picks up two red chips. Rain dissolves pesticide and carries it to the marsh. Rain becomes part of the water in the marsh

- 8 Shellfish filter feed from water/raindrops - Now each Shellfish has 2 red chips.

- 4 Minnows eat 2 Shellfish. Pass along the red chips.

- Minnows swim into Johnstown River.

- Each Bass swimming in Johnstown River eats 2 Minnows, collecting 8 red chips each.

- Boy goes fishing and catches 2 Bass. Eats them for dinner. Has all 16 red chips!