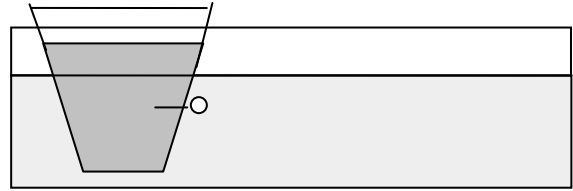


Estuary Layers: salt water and fresh water

MATERIALS:

Clear plastic tray
2 paper cups
Table salt
Teaspoon measure
Food coloring
Straight pin



What happens in an estuary when fresh water coming down the river meets ocean water? Try these two experiments to find out.

Experiment #1

1. Fill the tray with fresh water about half way up the sides and add 2 Tablespoons of salt.
2. Add fresh water and 3 drops of food coloring to the cup. Fill the cup so that the water level is deeper than the water in the tray.
3. Place the cup to one side in the tray.
4. Push a pin through the side of the cup and let it stand a minute until the water stops moving.
5. When the water is still, slowly pull the pin out.
6. Watch from the side.

Record your observations.

Experiment #2

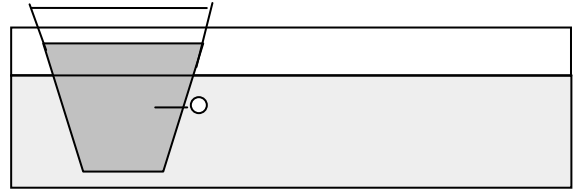
1. Fill the tray with fresh water about half way up the sides.
2. Add fresh water, 2 teaspoons of salt, and 3 drops of food coloring to the cup. Fill the cup so that the water level is deeper than the water in the tray.
3. Place the cup to one side in the tray.
4. Push a pin through the side of the cup and let it stand a minute until the water stops moving.
5. When the water is still, slowly pull the pin out.
6. Watch from the side.

Record your observations.

Estuary Layers: warm water and cold water

MATERIALS:

Clear plastic tray
2 paper cups
Ice water and warm water
Food coloring
Straight pin



What happens in an estuary when warm water meets colder water? Try these two experiments to find out.

Experiment #1

1. Fill the tray with cold water about half way up the sides.
2. Add warm water and 3 drops of food coloring to the cup. Fill the cup so that the water level is deeper than the water in the tray.
3. Place the cup to one side in the tray.
4. Push a pin through the side of the cup and let it stand a minute until the water stops moving.
5. When the water is still, slowly pull the pin out.
6. Watch from the side.

Record your observations.

Experiment #2

1. Fill the tray with warm water about half way up the sides.
2. Add cold water and 3 drops of food coloring to the cup. Fill the cup so that the water level is deeper than the water in the tray.
3. Place the cup to one side in the tray.
4. Push a pin through the side of the cup and let it stand a minute until the water stops moving.
5. When the water is still, slowly pull the pin out.
6. Watch from the side.

Record your observations.

Estuary Layers: salinity and temperature layers

In an estuary, water of different salinities AND different temperatures often come together. What combination causes the water to mix together? What combination makes the water form very distinct layers that don't mix?

Design your own experiment to find out what you can about water in estuaries. In the space below, list your materials and the steps to be followed.