

The Spanish Conquest – Science



Early Explorers had to travel by ship which was extremely dangerous. The sea could never be trusted in regards to weather and wind accompanied with perfect tides and waves. Therefore, when the explorers traveled they had to take safety into extreme consideration not only for themselves, but for the invaluable horses they carried across the oceans to the New World.

One of the problems they faced during extreme weather was capsizing. Capsizing

is when a boat turns over or upside down under water. This may happen due to weather or waves, mishandling the boat or ship itself, or to cargo shifting.

1. Kids Experiment with waves in a bottle.

Discover how and why water behaves.

What you need:

- Empty plastic bottle and cap
- Vegetable oil
- Water
- Food coloring

Activity:

Wash a bottle and take off the label by soaking it in hot water.

Fill the bottle with 3/4 cup of water.

Add a few drops of food coloring.

Pour 1 cup of oil into the bottle.

Screw the cap on.

Roll the bottle on its side and let it settle for a few minutes.

The water will sink to the bottom and the oil will rise to the top.

Now tip the bottle back and forth and make some waves.

The waves will be bigger at one of the bottle and smaller at the other.

Why? Your bottle wave is like an ocean wave.

Water moves up and down and doesn't go forward as the wave goes through the water.

The friction between water and wind makes a wave.

Longer waves travel faster than shorter ones and go further before friction makes them disappear.

2. Floating the big ships in salt water was easier for the Explorers than in the fresh water streams....Why?

Ask students if they have ever swum in salt water. Did they know it is easier to swim or float in salt water than in fresh water? Try this experiment to demonstrate. You will need the following:

What you need:

- large glass
- warm tap water
- 1 raw egg
- salt
- teaspoon

Activity:

- Fill the glass about half full of warm water.
- Carefully slip the egg into the glass. (It should sink to the bottom.)
- With the egg in the glass, add 1 teaspoon of salt to the glass and stir gently. Keep adding 1 teaspoon of salt at a time until the egg floats to the surface.
- Have groups explain what happened and how this would affect swimmers in salt water.