

# Porthole to the Sea

Here's your chance to get creative mixing crayons, markers and water! Based on the properties of water, all the pieces will interact in different ways. Find out what happens and why!

## An Artistic Experiment!

### Playing with water resistance and attraction

1. On a sheet of paper, create an undersea scene using crayons and markers.
2. With a brush, paint plain water over your drawing. Watch how the water interacts with your crayon and marker images.
3. While your painting dries, cut out a paper plate rim to decorate as a porthole.
4. Tape your porthole frame to your dry painting.

## Materials

Paper  
Crayons  
Washable Markers  
Paint Brush and Water  
Paper Plate  
Scissors  
Tape



## Resistance, Diffusion, and Capillary Action

**Resistance** occurs when two unlike substances slide past each other and do not mix. This is happening between the water and oil in the crayon drawings.

**Diffusion** occurs when you have an area with a high concentration of substance spreading into an area of low concentration. Watch how the concentrated marker ink spreads into the plain water!

**Capillary Action** occurs in the presence of two forces: **cohesion** and **adhesion**. Here, they work together to draw water along the paper fibers, even to spots you haven't painted yet.

**Cohesion** is the force between molecules that holds a substance together, like water!

**Adhesion** is the force between two different surfaces, like water and glass, that cause them to stick together.



Capillary Action in Action

