

When Fresh Water Meets Salt

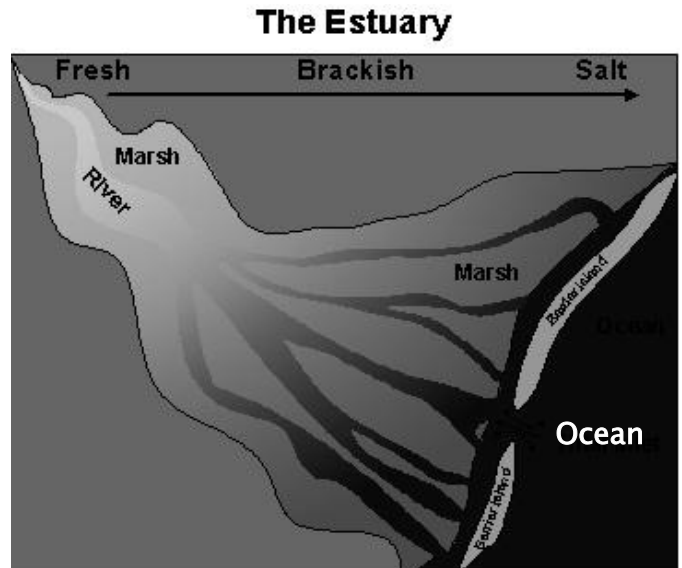
Make your own estuary in a jar!

Materials

- Salt Water
- Ice
- Fresh water
- Food Coloring
- Mason Jar
- Pitcher

Process

1. Fill jar $\frac{1}{2}$ full with cold salt water
2. Add 2 drops of food coloring to the cold salt water, gently stir it in.
3. Fill pitcher with warm fresh water.
4. Add 2 drops of food coloring (a different color than used in the cold salt water) and stir it in.
5. Slightly tilt the jar (don't spill) and gently pour the warm, fresh water down the side of the jar.
6. What happens? Does anything change as the temperatures balance?



So What's Happening?

The Puget Sound is one of the best examples of an *estuary* on the West Coast. An estuary is where fresh water pours into and mixes with salt water. The water in an estuary is usually *brackish*, or less salty than the water of the open ocean. You probably don't think much about what happens when streams of fresh water empty into the salt water of the Sound. Especially in the winter when the streams are cold there are pockets of fresh water that do not mix immediately.

Vocabulary

- **Estuary** – An estuary is where fresh water pours into and mixes with salt water.
- **Brackish** – somewhat salty, especially from being a mixture of fresh and salt water



For More Information

Department of Ecology: Puget Sound Shorelines. "Estuaries." Last Modified 2011.

<http://www.ecy.wa.gov/programs/sea/pugetsound/beaches/estuary.html>

United States Environmental Protection Agency. "Water: Estuaries and Coastal

Watersheds." Last Modified 2011. <http://water.epa.gov/type/oceb/nep/about.cfm>

United States Environmental Protection Agency. "Coastal Watershed Factsheets - Estuaries and Your Coastal Watershed." Last Modified 2011.

<http://water.epa.gov/type/oceb/fact5.cfm>