



# Kid's Page

## Estuaries and Salinity

The Choctawhatchee Bay is an estuary!

An **estuary** is a body of water where freshwater from creeks and rivers meets saltwater from the sea, creating brackish water. The main source of freshwater in our bay comes from the Choctawhatchee River, which enters the bay on the East side, near Freeport. Saltwater enters the bay from the Gulf of Mexico through the Destin Pass.

Freshwater, saltwater and brackish water all have different salinity levels. **Salinity** is the amount of dissolved salt found in water. Looking at the image above, you will see the different salinity ranges for each type of water.

**Salinity:** The amount of dissolved salt found in water.

The salinity level in the bay varies from day-to-day and location-to-location. The bay has lower salinity levels near freshwater sources, and higher levels near the Destin Pass. Salinity levels in estuaries can change depending on rainfall, droughts, tides and other factors.

Did you know that estuaries are often referred to as the "nurseries of the sea?"  
That's because estuaries provide shelter for many young marine species, like ME!!!

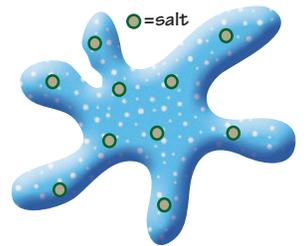


**Estuary:** a partially enclosed body of water where saltwater from the ocean mixes with freshwater from rivers or streams

The salinity level is measured in ppt. What does this mean?

The amount of salt found in water is measured in **parts per thousand** or ppt. So if the water has a salinity level of 10ppt, this means that in this sample of water 10 parts are salt and 990 are water.

There are 1,000 parts in this water sample. How many are salt?



So this means that the salinity level is 10 parts per thousand.

This is a difficult concept to understand, so use the image to the right to help you.

Florida Pompano  
*Trachinotus Carolinus*





# Salinity Crossword

**Across**

- The Gulf of Mexico contains this type of water.
- This river empties freshwater into our Bay.
- We measure the salinity level in parts per \_\_\_\_\_.

**Down**

- This type of water is found in rivers, creeks and streams.
- A partially enclosed body of water where saltwater from the ocean mixes with fresh water from rivers or streams.
- Because estuaries provide shelter for many young species, they are often referred to as the "\_\_\_\_\_ of the Sea."
- A mixture of freshwater and saltwater.
- The amount of dissolved salt found in water.

## What Type of Water Am I?

Draw a line connecting the water drop to the correct body of water!



**Brackish water**  
*Estuaries*



**Freshwater**  
*Rivers, Creeks*



**Saltwater**  
*Gulfs, Oceans*



## Make your own Salt Crystals!

### Supplies

- 1 cup (250 mL) of warm water
- 1/3 cup of table salt
- String
- Pencil
- Button
- Clear Jar

### Instructions

- Place 1 cup of warm water into the clear jar.
- Mix 1/3 cup of table salt into the cup of warm water, stirring constantly.
- Tie the string to the pencil. To make sure the string is long enough, place the pencil over the jar. The string should barely touch the bottom of the jar. If the string is too long, wrap the extra string around the pencil.
- Now tie the button to the other end of the string.
- Lay the pencil across the top of the clear jar so that the button hangs down into the saltwater solution.
- Place the clear jar in a warm place, like a window sill.
- Do not disturb the clear jar for 5 days. However, do make daily observations as to what is happening on the button.
- On the 5th day, remove the button. Observe the types of crystals found on the button. What do they look like? How were they formed?