Salt Level Demonstration
What appears to be very little salt can cause big environmental changes like changing freshwater to saltwater.

If you have completed the Salt and Ecosystems activity, ask students what surprised them from the case studies. Students should point out that the amount of salt or dose makes the difference in ecosystems

Materials
- Water
- Salt
- Graduated cylinder
- Digital scale, if available; or measuring cup and spoons

Demonstration

Key Idea: What appears to be very little salt can cause big environmental changes like changing freshwater to saltwater.

Use a 1000 ml graduated cylinder and a digital gram scale if available to measure out:
- A. 1 mg table salt and 1000 ml of water = Salt levels of 1mg/L (freshwater)
- B. 250 mg table salt and 1000 ml of water = Salt levels of 250 mg/L (EPA drinking water guidelines; freshwater)
- C. 1 gram table salt and 1000 ml of water = Salt levels of 1000 mg/L (considered slightly salty; brackish water)
- D. 3 grams table salt and 1000 ml of water = Salt levels of 3000 mg/L (NY/NJ Harbor Estuary water, considered moderately salty; estuary water that changes with the tides)
- E. 10 grams table salt and 1000 ml of water = Salt levels of 10,000 mg/L (NY/NJ Harbor Estuary water considered very salty)
- F. 35 grams table salt and 1000 ml of water = Salt Levels of 35,000 mg/L (Very salty; open ocean water)

Teacher Tip
Use teaspoons and a measuring cup to measure out the same quantities, so that students can taste the differences in salt:
- A. 1mg/L ~ 0 tsp. of salt in 4 ¼ cups of water
- B. 250 mg/L ~ 1/19 tsp. salt in 4 ¼ measuring cups of water
- C. 1000 mg/L ~ 1/4 tsp. salt in 4 ¼ measuring cups of water
- D. 3000 mg/L ~ 5/8 tsp. salt in 4 ¼ measuring cups of water
- E. 10,000 mg/L ~ 2 and 1/8 tsp. salt in 4 ¼ measuring cups of water
- F. 35,0000 mg/L ~ 7 and 1/3 tsp. salt in 4 ¼ measuring cups of water