

El Niño Tuna Crabs

Experiment with the effect of blowing wind and sun warming on ocean currents

Lab Steps: Create El Nino weather conditions in your test tube

1. Color warm water red and cold water blue.
2. Partially fill your test tube with warm water.
3. Use your pipette to place cold water underneath warm water. Squeeze very slowly so the colors don't mix.

Create normal weather conditions

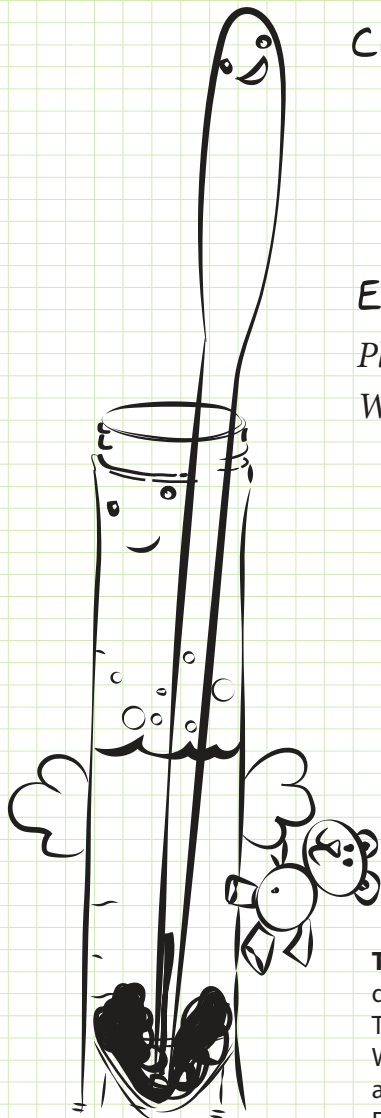
4. Keep adding water to the test tube keeping colors separate until water level is near the top.
5. Blow across the surface of the water to create upwelling currents. Watch the colors mix as you blow.

Experiment more with warm and cold water.

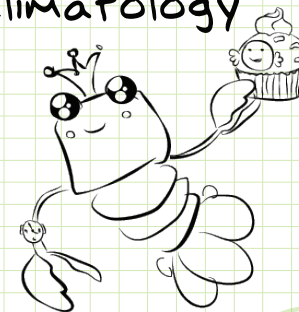
Place different colors on top, underneath, and in the middle of one another.

What were your most important discoveries?

Thinking and Discussion: Buoyancy is the word used to describe how things float because of density differences in matter, for example, hot air in a hot air balloon causes the balloon to float. The hot air expands and floats on the colder, denser air. The same thing happens with water. When the sun heats surface water, warm water lenses form on top of cold water. Mixing of the hot and cold water does not happen unless there is something to stir it up like wind or ocean currents. El Niño happens when the wind stops blowing at the equator, allowing the surface temperature of the oceans to heat up. The warm ocean causes animals to migrate to cooler waters.



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POCKETPets

Marine

Pelagic
(Open Ocean)

Tuni
Tuna Crab

Diet: Plankton
Size: 10 cm

I am a floating crab. Since I am a Pelagic animal, I drift in the blue water of the open sea. Since I am not a good swimmer, the wind and currents carry me where they want. I am not camouflaged and have no defense, and I never have shelter. My species' strategy for survival is safety in numbers. When we come to the ocean there are so many of us that predators can eat their fill and there are still millions of us still living in the waters.

Special Ability: Crab Swarm

