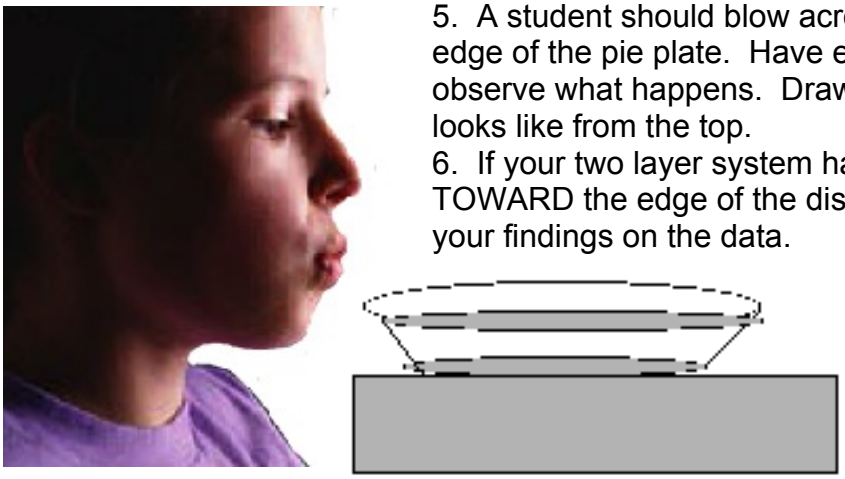
Title: El Nino in a Bowl name_____

Purpose: To model the formation of an “El Nino” weather event.

Materials: clear glass pie plate, colored, cold salty water, warm fresh water, baster, plastic beakers

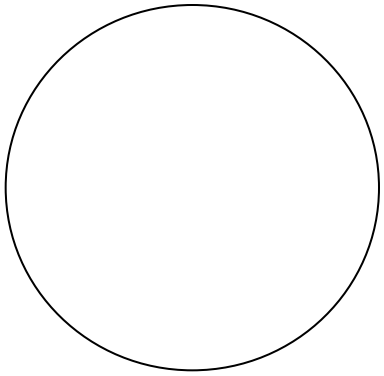
Procedure:

1. Add enough warm water to the pie plate to cover it in about 2 cm. of water.
2. Get a beaker of cold colored water. Draw up a baster full.
3. Place the tip of the baster on the bottom of the pie plate, under the warm water.
4. Slowly empty the baster into the dish. Keep adding cold water until it is as deep as the warm water. You should now have a two layer system.

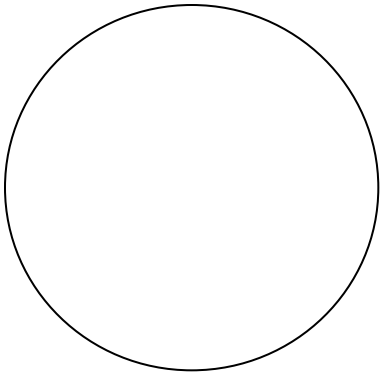


5. A student should blow across the top surface near an edge of the pie plate. Have everyone else watch and observe what happens. Draw in the data what your plate looks like from the top.
6. If your two layer system has not mixed, try blowing TOWARD the edge of the dish from the middle. Record your findings on the data.

Data: Pie plate from the top:



Blowing away from near edge



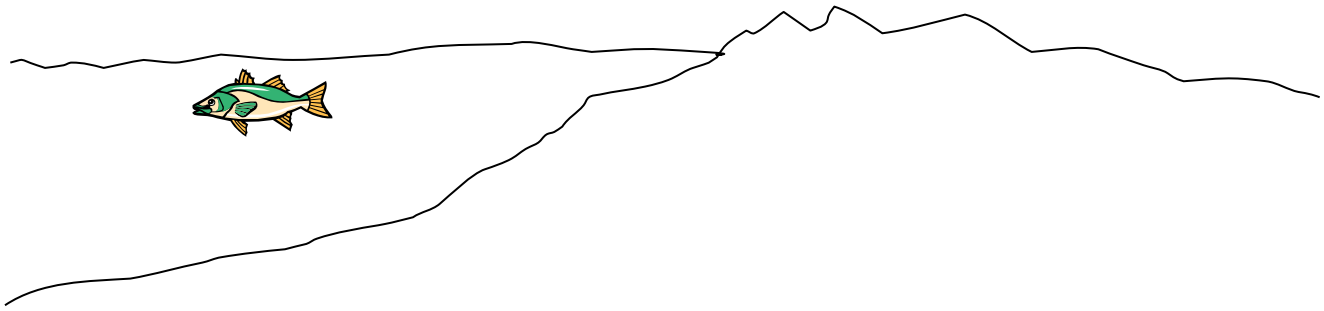
Blowing toward far edge

analysis:

1. Why is the coldest, saltiest water on the bottom of the ocean?
2. What happens to the ocean as wind blows across the surface?
3. What happens to the ocean if the wind doesn't blow?
4. Why is cold water coming to the surface important?

5. What happens to the air over warm ocean water?
6. What would that air mass do when it reaches land?

7. What can we do to stop "El Nino"?
8. Use arrows to show what happens to the ocean and atmosphere on a normal year:



Conclusion: