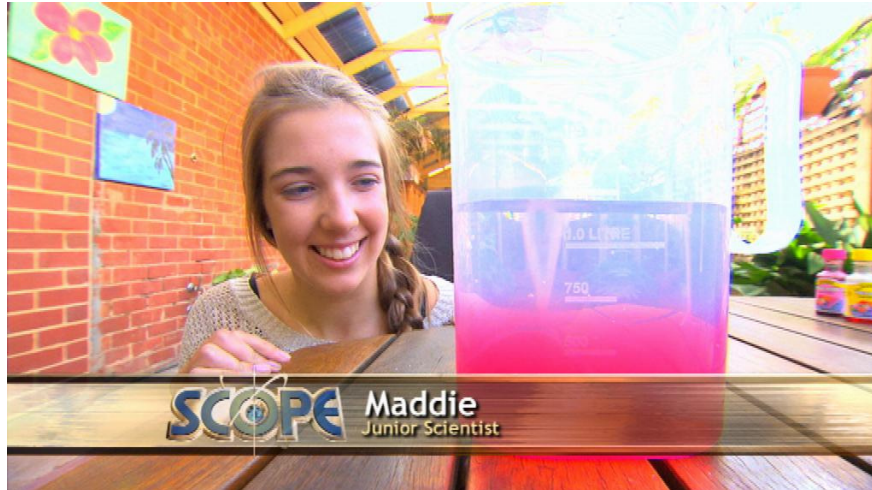


Salinity

On SCOPE's Science in the Ocean episode, Maddie experimented with salinity. Here's how you can try it at home!



What you need:

- Tap water
- Large container
- Jug
- Food colouring
- Salt
- Spoon
- Egg
- Potato
- Apple
- Pen
- Paper



What to do:

1. Pour some tap water into a large container.
2. In a jug, mix some water, food colouring and lots of salt.
3. Tilt the large container and gently pour the mixture in.
You will notice the mixture settles to the bottom, while the tap water layers on top.
4. Try making another layer by using even saltier water and another colour.
5. For part two, fill a large container with tap-water and place your objects inside.
6. Make a note of whether they sink or float.
7. Start adding your salt one teaspoon at a time, stirring thoroughly each time.
8. When your objects start floating, make a note of how many teaspoons of salt it took to make this happen!

What's happening:

The salty water forms separate layers because when the salt dissolves in the water it makes it more heavy, or dense, than normal tap water. The heavier water sinks to the bottom and if it isn't stirred up, it will sit there. In the ocean, there are currents that mix the water around, although there are still some areas that are saltier than others

For Maddie, it took seven spoons of salt to float the egg, and eight spoons to float the potato. When you try it out at home, it will depend on how much water you start off with, and what sort of objects you are floating. At the start of this experiment, the objects are heavier than the water, so they sink. But as you add salt, the water becomes heavier than the objects, so they float upwards. You can also think of this as the salt water sinking beneath your objects. This is the same reason why it is easier to float in the ocean than in fresh water.

