

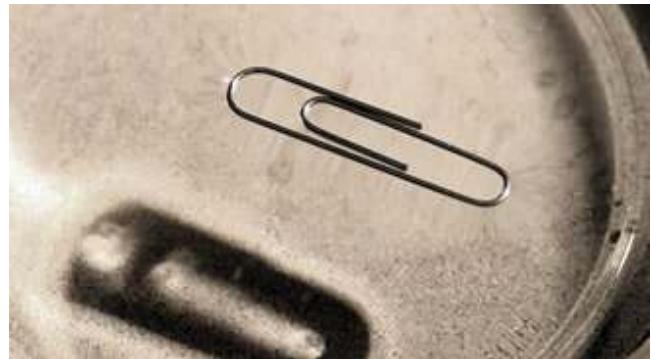
Make a Paper Clip Float

YOU WILL NEED:

- Clean, dry paper clips
- Tissue paper
- A bowl of water
- Pencil with eraser



WHAT TO DO:



1. Fill the bowl with water.
2. Try to make the paper clip float ... not much luck, huh?
3. Tear a piece of the tissue paper about half the size of a £5 note.
4. GENTLY drop the tissue flat onto the surface of the water.
5. GENTLY place the dry paper clip flat onto the tissue (try not to touch the water or the tissue).
6. Use the eraser end of the pencil to carefully poke the tissue (not the paper clip) until the tissue sinks. With some luck the tissue will sink leaving the paper clip floating!

HOW DOES IT WORK?

How is this possible? With a little thing we scientists call SURFACE TENSION. Basically it means that there is a sort of skin on the surface of water where the water molecules hold on tight together. If the conditions are right, they can hold tight enough to support your paper clip. The paperclip is not truly floating, it is being held up by the surface tension. Many insects, such as water striders, use this "skin" to walk across the surface of a stream.

MAKE IT AN EXPERIMENT

The project above is a DEMONSTRATION. To make it a true experiment, you can try to answer these questions:

1. How many paperclips can the surface tension hold?
2. Does the shape of the paperclip affect its floating ability?
3. What liquids have the strongest surface tension?
4. Can the surface tension of water be made stronger? (try sprinkling baby powder on the surface)

The school website www.alston.lancsngfl.ac.uk has a link to the video mentioned above.

There is a great tip to get the paper clip floating without the tissue paper!

Science
 Bob