

A solid piece of metal swimming on the water? Let it sink!

Material:



paperclip, cup, water, dish soap

Instruction:

1. Fill water in the cup.

2. Put the paperclip carefully on the water. (Take care that the paperclip is horizontal.)



3) Fill carefully three drops of dish soap in the cup



What happens with the paperclip?

Explanation:

If you look at the area around the paperclip in the cup, without dish soap, the surface looks like a skin. This effect is called surface tension. Water consists of many molecules. Every molecule s

influences the
molecules
next to it. They push and pull their neighbors. This forces are constant. Because of these constant forces, the gap between the
molecules
is always the same. They are like humans, who are standing next to each other and taking each others hands. On this chain of humans or water
molecules
you can lay everything, which is not too heavy to destroy the chain. The second step shows that dish soap destroys the surface tension. Dish soap consists if many molecules, too. These
molecules
like water-molecules. Therefore they take place between the water-molecules and destroy the chain of water-molecules, which are not connected anymore. In order to use the image of a human chain, you can compare the dish-soap-molecules to foreigners, who huge the humans, who are the building blocks of the chain. Those people are not able to take each others hands anymore, because of being hugged and because of the foreigners between them.

