

Another Property Of Water - Cohesion

Focus

Water is a really strange substance. We all know that moving water can form waves. On the other hand, calm sheets of water are as smooth as a mirror. . It comes in different shapes, for example: as a drop, as a spout...Water doesn't always behave the way we expect it.

a) Pinching Water

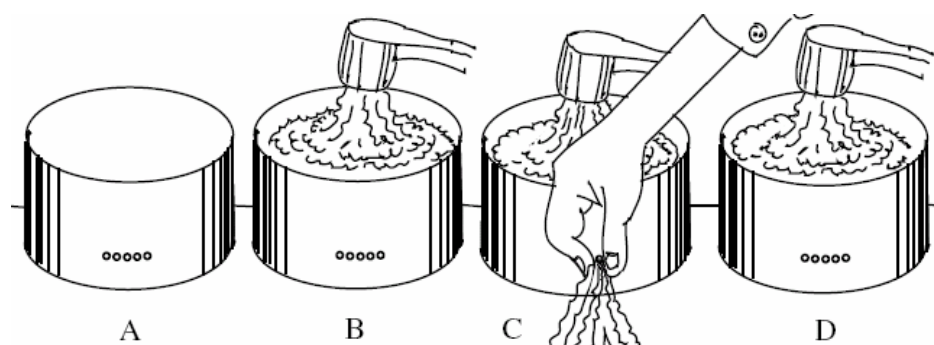
By playing with the water in this example you will make an interesting discovery about a property called cohesion.

Materials

- 1 plastic cup or jug,
- sink with a tap,
- drill or nail punch

Preparation

- Drill holes at intervals of half a centimetre into the walls of the cup or jug or tin! The holes should be close to the bottom (A).



Procedure

- Fill the tin with water and put it under the tap.
- Draw your observation into illustration (B)!
- Carefully pinch the water that is flowing out with your hand (C)!
- Take away your hand carefully!
- Draw your observation into illustration (D)!

Results

- Describe your observations: What happened to the shape of the water stream?
- Draw before and after pictures

Conclusion

- Try to explain your observations: Why did the water change its shape?
- Compare your explanations with those of your classmates! Are there any differences?

b) Coins in a Water Glass

By carrying out the following experiment, you can discover more about two special properties of water - cohesion and adhesion.

Materials

- A clean, dry drinking-glass,
- Several coins (for example, 10 or 20 cent pieces)

Procedure

- Fill a dry glass up to the brim with tap water, but without water over flowing!
- Put the coins carefully, one after another, into the glass!



Results

- What do you observe during this experiment?
- Try to explain your observation:

EXTENSION

- Using a coin and a small dropper, record how many drops of water you can sit on the coin, without a drop going over the edge.
- Is the same thing happening here as in the first experiment?
- Consider as a class where the observed properties of water are helpful and where they are a problem!
- Find a way to show others about what you have learnt; a poster, booklet, poem or song....