

ICS "ROMUALDO TRIFONE"
Montecorvino Rovella – Italy
Erasmus+ Project: SDGs Action!



Capillary

Capillarity is a property of water that not all liquids possess. It is the phenomenon by which substances, such as water, are able to rise up through very small tubes, called capillaries.

Target: to understand by which mechanism the water rises from the roots to the leaves

Experiment n. 1 e n. 2 (together)

Materials: Celery stalk, glass, water, red dye, transparent straw

Procedure

- Pour the water into the glass
- Add the dye.
- Dip the celery stalk into the glass
- Dip the transparent straw into the colored water
- What's up?

Observation:

The colored water rises along the walls of the tube, as if it were sucked and against the force of gravity. This phenomenon is capillarity.

Conclusion

After waiting a few hours, the same thing will happen to the celery stalk: it will partially color by the dye. It will happen because in every plant, from roots to leaves, there are small tubes in which the water can flow and rise: it is the phenomenon of capillarity.

Experiment n. 3

Materials: three glasses of water, three different colored dyes (for example red, blue, and green or yellow), paper towels

Procedure

- Pour a different colorant into each glass
- Take a strip of absorbent paper and insert it between the first



- Repeat the operation between the second and third glass, making sure that the ends of the paper are immersed inside the glasses.
- Wait a few minutes. What is going on?



Conclusion

The colored water rises upwards, coloring the absorbent paper with the same shades of the colors dissolved in the liquid. This happens thanks to the phenomenon of capillarity.

Experiment n. 4

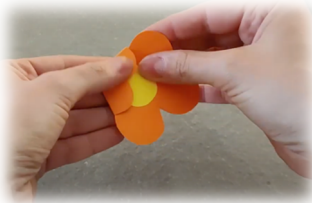
Materials: a tray, water, a pencil, a sheet of paper, a pair of scissors

Procedure



- Draw a flower with rather large petals on the paper
- Cut out the flower

- Fold the petals towards the center



- Pour some water into the tray



- Place the flower on the surface of the water.
- Wait a few seconds. What's happening?



Conclusion

It is possible to observe that the petals of the flower open. The water penetrates by capillarity into the small empty spaces present between the fibers of the paper, the paper swells and consequently the folds relax making the flower "blossom".

