



Universität  
Basel

Swiss Nanoscience Institute



## Sugar art

Are you ready to create a truly special work of art? Let's go!

### What you'll need

- 1 shallow white plate
- sugar cubes
- food dye
- water
- a toothpick (optional)

### Instructions

- Pour a little water onto the plate – just enough to cover the bottom.
- Place a sugar cube in the middle of the plate.
- Squeeze some food dye onto the sugar cube. You can use different colors – either on top of or next to each other.
- Watch what happens.
- Taste the water near the sugar cube and at the edge of the plate.
- After a while, you can use a toothpick to put the finishing touches on your artwork.

### What happens and how does it work?

- As the sugar cube gets wet, the food dye quickly starts to spread – first through the sugar, and then into the water.
- To begin with, the water tastes slightly sweet close to the sugar cube, but not at the edge of the plate. After some time, all of the water tastes sweet.
- The longer you wait, the further the dye spreads across the plate.
- The process whereby particles (in this case dye and sugar) spread through another substance of their own accord is known as diffusion.
- Diffusion occurs because particles in liquids and gases are in constant motion. As a result of this motion, differences in concentration are evened out, and the substances are mixed together.
- Helping things along with your toothpick can make the painting even more intricate, as well as speeding up the mixing process.

