

## Floating biodiversity

### What you need

Dry erase markers

Cold water

White plate

### What to do

1. With the dry erase markers draw flowers, butterflies, bees and more on a white plate. Try to avoid any small structures and don't leave wide gaps the different parts of one image. The antennae of a butterfly, for example, might be tricky and shouldn't be too thin. Also avoid overcrowding your plate with too many images.
2. Let the images dry for a few minutes.
3. Pour water onto your plate. Best to pour from the side and not on top of any of your images.
4. Watch how one after another slowly peels of plate and starts floating on the surface of the water. Can you make the butterflies land on the flowers?



*Use dry erase markers to draw on a plate, then carefully pour some cold water and watch how the images start to float.*

### How it works

Your flowers and butterflies might be floating biodiversity – but when you look closer it is actually the chemistry of dry erase markers that makes your images move on the surface of the water. You might also notice that some colours work better than others.

The reason is the slightly different amount of ingredients in the ink: they all contain pigments (colour) which are dissolved in a solvent, usually an alcohol type of solvent. In addition, they contain a polymer (a chemical substance) that makes it possible to erase the ink. It is the polymer that allows the ink to be easily erased from a smooth surface such as a whiteboard and also to become a kind of film that can then float on the surface of water.