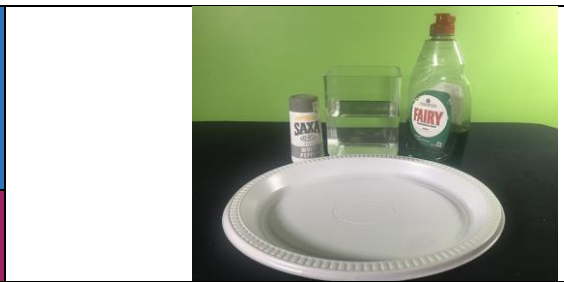


# Science Experiments: Chemistry

## Pepper & Surface Tension



### Materials:

- white pepper
- one white plate
- clear water
- detergent
- a mess bucket and cleaning materials

### Experiment:

1. Pour water into a shallow plate.
2. Sprinkle white pepper over the surface of the water.
3. Add a drop of detergent into the centre of the plate and watch the pepper!
4. Things you could change to experiment further:
  - Hot vs. cold water
  - What happens when you use different liquids?
  - Different size granules on top of the water

### What is happening?

The top surface of all liquids have what is called surface tension. Because of this surface tension, liquid surfaces act like a kind of 'skin'. This 'skin' can support small insects and materials on their surface.

The drop of detergent reduces the water surface tension of the water in the centre of the plate, but doesn't affect the surface tension at the edge of the plate. As a result the pepper is pulled outwards to the edge of the plate where the water has a higher surface tension. Put simply, the water surface was pulled outwards!

