

Ways to make the most of your Microscope

Curriculum Refs: Science

Our bodies:

- Take the microscope from the cradle it and let very young children look at parts of their body - hair, eyes, ears, noses, fingers and toes.
- Investigate fingerprints. Rub fingers in chalk dust then take a strip of clear sticky tape across the fingertip. Mount this strip sticky side down onto a small piece of black paper. View under the microscope.
- Use the Microscope to take photos of a tooth; then put it in coca-cola, over several hours, monitoring results.

Materials:

- Use the microscope to investigate the 'weave' of different fabrics. Look at different 'waterproof' fabrics and watch, or take a short movie, of what happens when you drop some water onto them. Do similar investigations on different kinds of paper. Draw felt pen lines on different types of paper and view. Take photos which can be exported and saved for later use in a presentation. Children could bring several pieces of clothing from home made from different fabrics, take photos of them, then compare and contrast the different fabrics and then ask questions that can be investigated
e.g.
 - which fabric is the best insulator (predict from using the close up photos and suggest reasons,
 - which would be the most waterproof (the one that we can see holes in or the one with the tight weave and very small holes?)Then carry out a fair test, see if their predictions were correct and use their photos to explain their results.
- Use the Microscope to observe solids (fine powders) that appear to behave as liquid (Yr4)
- Use the Microscope to look at moulds and yeast budding. Create a presentation to show findings of an investigation. Study crystallisation in a saturated salt solution (Year 6).
- Make a movie of ice crystals turning into liquid.
- Make a short movie, or time-lapse movie, of a sugar cube dissolving. Export the movie into a presentation package (powerpoint or keynote or your IWB software)

The Structure of the Earth:

- Compare different rocks/minerals, soil samples.
- Look at different types of crystals.
- Detective work: compare soil samples from the treads of different people's trainers. Have they been playing on the same surface? Look at similarities and differences between different specimens.

Plants:

- Investigate the different parts of flowers and leaves.
- Seed germination - Prepare cress seeds and set up a time-lapse movie to capture this.

Animals

- Look closely at insect parts - eg a spider's leg, insect eyes. Watch how tadpoles, worms and snails move.
- Watch a caterpillar eating its tea!
- Think of 10 questions about what you are looking at and find out the answers (on internet or encyclopaedias).
- Compare hair / wool from different animals.
- Look at cells and their structures (Year 7)

Lesson starters:

- Take a series of pictures of objects under the microscope and ask children to identify them.