

‘What do you see?’ Instructions for Teachers

Goal: This lesson shows the limit of observation with the naked eye, and the increased detail possible with good lighting and a little magnification. The concept of an informational sketch* is introduced.

First, all students should have built a *Paper Cup Microscope* and have access to a light source.

You should have at least ten samples of two different items to study under the microscope. Dead bees and flies are excellent samples, but you have to plan ahead for your supply! Worn pennies, scraps of newspaper, and pieces of feather are also good low magnification subjects.

The first sketches should be done in ten minutes or less. Labels are helpful, but not a requirement. Advanced students might use their rulers.

The second sketches should be done in fifteen minutes or so. More time will encourage the perfectionists bore the speed demons!

Students should debrief themselves on the differences between sketches and be able to discuss what they saw with the entire class. It might be worth brainstorming other uses for the microscope and what features might be useful in a more powerful scope.

*An informational sketch is not always a work of art! The sketch highlights main features of the subject being observed and some details which would allow another person to get the gist of what was observed. Color, patterns, gross anatomy, and relative size are important. Colored pencils can be helpful in illustrating sketches – they are preferable to markers or pens because they don’t bleed over details.