

THE BEANEY
HOUSE OF ART
& KNOWLEDGE

Make Your Own Microscope

Take inspiration from our Interactive Microscope and ask you to take an imaginary journey with us to a microscopic land!



What is a Microscope?

A microscope is a piece of equipment that is used to make small things look **bigger**!

‘Micro’ means small (like microorganisms or micro-pig). ‘Scope’ is the suffix (end of the word) used to describe objects to do with viewing or seeing something (like a telescope, or kaleidoscope).

IT'S TIME TO MAKE YOUR OWN MICROSCOPE!

You will need:

- A clear plastic cup
- Some cling film
- A elastic band
- Water
- Something to MAGNIFY



Don't worry if you don't have these objects, try and reuse something instead! For example try a hair band if you don't have an elastic band.

This activity is best done outside or somewhere you don't mind getting a little bit wet!

Step 1: Find something to MAGNIFY!

This can be something you find in the garden, or around your home! Try looking at different things made of different materials. It needs to be small enough to fit inside your plastic cup. When you have found a few things to look at, put one in the bottom of the cup.

Take a look at the things we have under the microscope at The Beaney on the next page. These might give you some ideas. **Remember to let an adult know what you are doing and to ask for permission to use anything you need.**

Step 2: Assemble your microscope

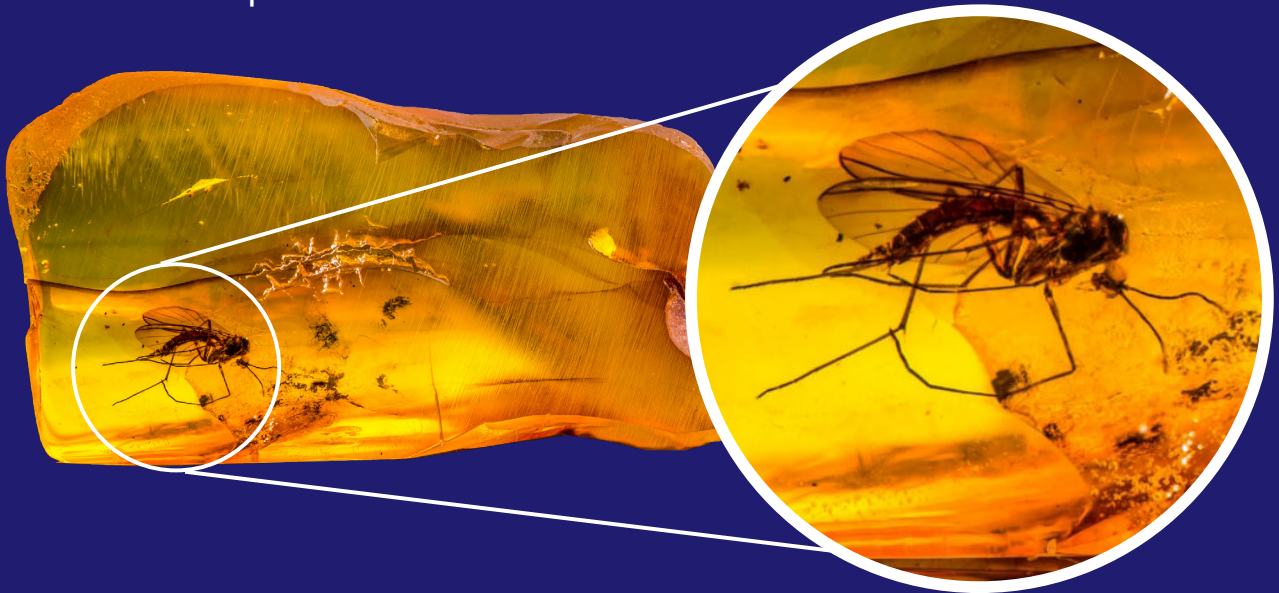
Place a piece of cling film over the top of your cup and secure it in place with the elastic band. Leave some room with the cling film, don't stretch it smooth. Place a few drops of water on top of the cling film. Ideally there should be a little pool of water on top.

Step 3: Have a look!

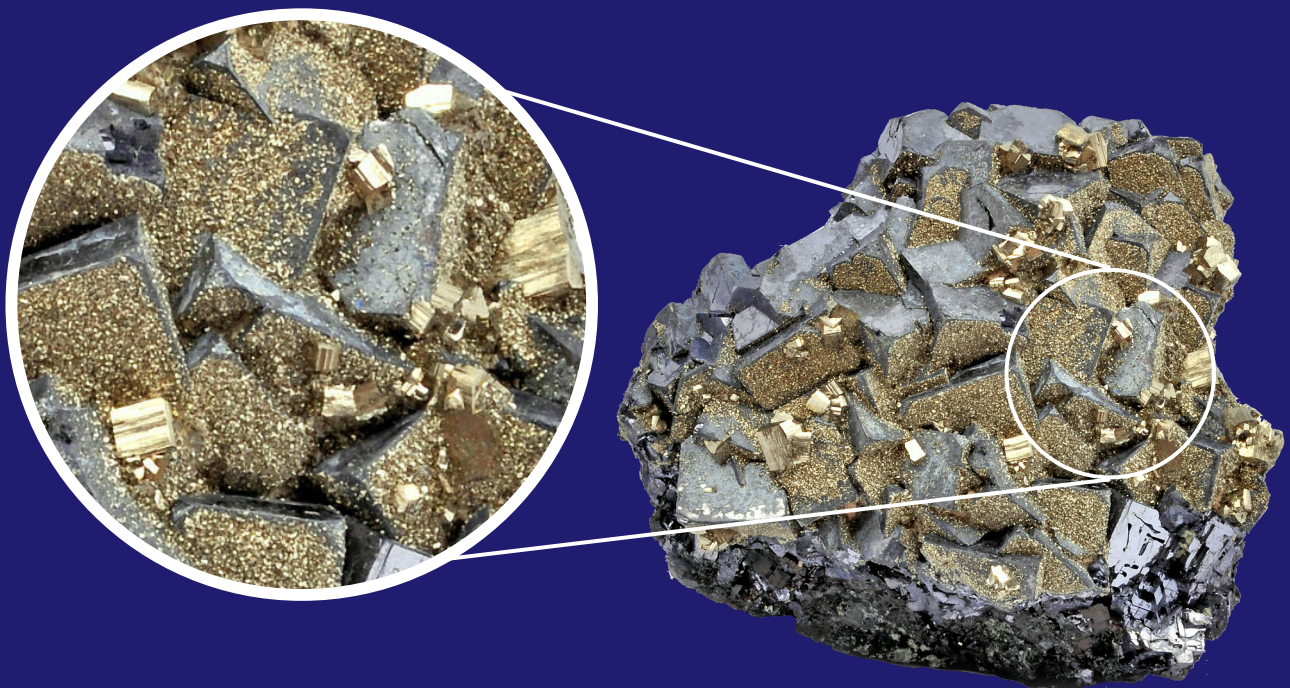
Look at your object through the water, does it look bigger? The water acts like the lens to magnify (make larger) the thing in the bottom of the cup!

What's under the microscope at The Beaney?

There are lots of different things under our microscope at The Beaney. Here are a few examples:



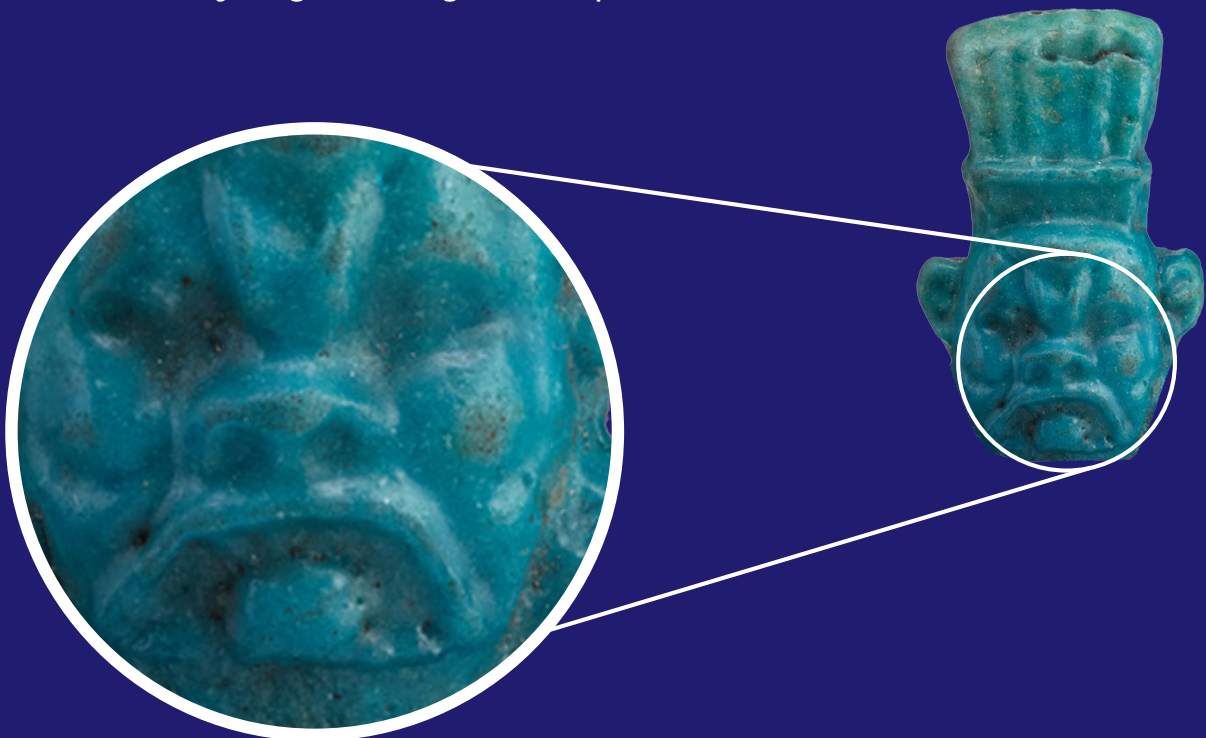
This object when magnified reveals a small insect trapped in amber. Amber is fossilised tree resin. So the small critters trapped inside can sometimes be millions of years old!



Another item under the microscope is the mineral 'pyrite', often called fool's gold. It is called this as it has a similar colour to real gold, and in tiny quantities can trick people into thinking that it's genuine gold!



There is also a wasp under the microscope! There are many different kinds of wasps all over the world, and not all of them sting. When viewing insects under the microscope you can see features not visible to the naked eye such as hairs. Our specimens were carefully collected by experts and we don't recommend you go looking for wasps.



We sometimes look at our ancient Egyptian amulets under the microscope. Some of them have hieroglyphics on the back, which could be the name of the person who owned them. It seems that amulets may sometimes have been used for making wax seals.

Why stop there?

Many different people use microscopes, especially scientists! There are many different types of scientists, such as:

Biologists: they look at life and living things, like plants.

Forensics: look at tiny pieces of evidence from crimes, like hairs.

Geologists: look at rocks to find out about the earth.

Why not examine lots of things and keep a log about what you find?

You can use this template to record information about each object you look at through your microscope. You can print it out, or copy it by hand into a notebook.

Name of object:

.....
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Materials it is made from:

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Colours you can see:

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What it looks like:

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Drawing of object:

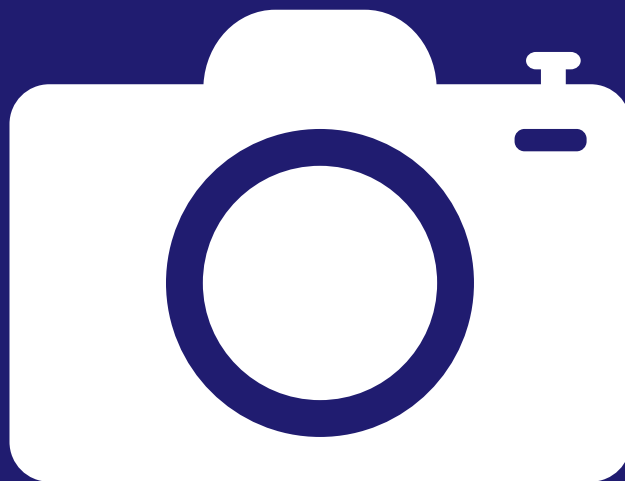
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CONGRATULATIONS!

You're now an expert microscopist!

We'd love to see your microscope and log books!

Be sure to take a few photos and share them with us.



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