

## Some things from home

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Raw sugar has been refined and re-crystallised. The process results in white sugar. The crystals have a distinctive shape.

You might also consider looking at table salt which has a slightly different crystal form.

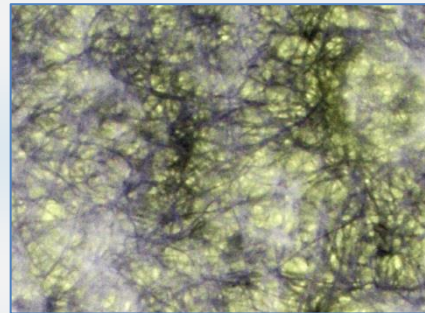


Dried Fennel (above) and Coriander (left) seeds used in cooking. Many seeds have a very distinctive shape and structure. Other seeds you might find in the kitchen spice rack:

- Poppy
- Cumin
- Black Peppercorn
- Mustard
- Star Anise

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Kitchen roll and tissues are made up of a tangle of fibres that is not too fine, nor too dense. The spaces between the fibres are the places into which water or any other spilt fluids are absorbed or more correctly 'taken up'.



To learn more about microscopes, find links to

useful websites and see great images, visit [www.quekett.org](http://www.quekett.org)

Presented by The Quekett Microscopical Club – Registered Charity No. 232476

# Things to look at with Magnifiers and Microscopes



## In nature

There are fascinating things to be seen in the garden or park. Carry a magnifier or a small portable microscope and explore.

All the images except those marked \* are easily seen with a magnifier. Those with the mark are approximately 2mm across; a small microscope will help in seeing the detail.



You may find a dead beetle. It's easy to see the large eyes, the antennae and the structure in the legs. This Wasp Beetle is also very colourful, but harmless. The body colouration mimics that of a wasp to fool predators.

Look at a wall or twig to see the lichen colonies. The round structures like little 'jam tarts', are the fruiting bodies.



Some of the sand from Saunton Beach in Devon. There are also remnants of lots of different animals, often described as microfossils.

## In nature

With a microscope there is a lot more to see but never take something rare out of the environment to examine at home.

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A feather showing the barbules which link together between the barbs of the feather to create the compact surface of the wing.



Take a closer look at the green growth between the flagstones or bricks in your drive or pathway. You could be delighted by what you find, e.g. this little 'desert island' of the small liverwort - Marchantia.

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If you come across a dead butterfly or moth then a really interesting thing to look at are the scales on their wings. These scales appear on your fingers as a light dusting. Transfer some to a slide and look at them under low-power. You can also view the scales in their intended position on the wing where they form a dense covering like overlapping roof-tiles.



## The manufactured world

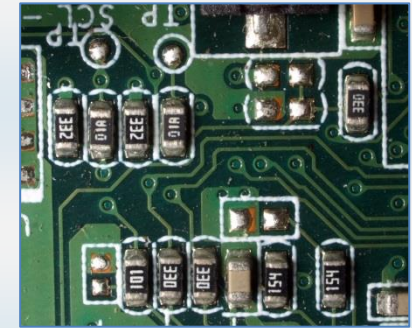
A little of 'How do they do that?'

Print colour - Printing of pictures and text in most Newspapers consists of a series of fine dots. This can be seen particularly well on this example from The Yorkshire Dales Visitors paper.



Currency Notes - have micro-writing within the design. These make it difficult for the counterfeiters, though not impossible, to reproduce fake currency. In addition, to make counterfeiting even more difficult, a whole host of other security measures are now incorporated.

Electrical and Digital devices are everywhere and if yours are like mine they have a limited lifespan before getting replaced with something more up-to-date. Before being disposed of it is worth having a closer look at circuit boards. They are reminiscent of an aerial view of a street or town complete with roads and back gardens.



Also worth investigating in this digital world are LCD screens on phones, laptops, tablets and cameras. There is an incredible diversity of design in order to achieve a colour image. The one pictured here is from an iPad.