

Books reviewed: elementary microscopy

P J Evennett & C Hammond – *The beginner's microscope*. Oxford: Royal Microscopical Society, 2015. Pbk, pp.26. ISBN 978-0-9502463-9-0. Supplied gratis to schools by the Society.

The Society has a programme whereby it subsidises the provision of RMS-approved microscopes to primary schools. This booklet has been written to help pupils to get the best out of these instruments. It begins by talking about magnification, resolving power, and field of view (the instruments magnify 20x). There's a bit of history (Hooke to the fore), and something on the use of the instruments in the modern world. This includes amateurs using microscopes at home, because they reveal how tiny things can be beautiful and interesting.

Then the child is taken outside into field and wood and garden, and around the home as well, and shown how to look at what they find, and how to make a record of their discoveries – much as shown on the cover. A note to primary school teachers explains how the purchase scheme works, how to buy suitable microscopes, and tells of the RMS Microscope Activity Kits, available on loan for a term entirely free of charges.

The page on magnification uses closer and closer approach to a newspaper to see the print get bigger, but fuzzy as well – a lens comes in here! It is rightly stressed that fineness of detail shown is at least as important – all at a level for a seven-year-old. Details are given of RMS-approved stands – the binocular is favoured. The image is seen right way up and right way round, and very little has to be done to look at many things with them. Using a table to support the device at the comfortable height for the viewer is the first thing to be sorted, and then advice on focusing and avoiding dropping it follows.

Making simple specimen supports is covered in ample detail for a beginner, and writing on the mounts what they are and where they came from! Making a 'pooter' to catch small insects is very clearly illustrated, and then plenty of pages



are given over to what might be found. These start with 'minibeasts', their finding and handling, and with good colour illustrations. Plants are next – nettle leaves and their stings of course, but much else besides. Other smaller plants may be new to many youngsters, and so too may be the contents of freshwater and seawater.

Indoor specimens from kitchen cupboard are dealt with, but so also are printing, phone screens, fabrics, and sands. All this has taken place under reflected light – the natural way for children to look at the world around them. Then the use of transmitted light is covered, especially for pond life. Making notes and drawing, and use of mobile phones with microscopes end the basic discussion, but more advanced stands for secondary schools are mentioned, with darkground lighting and polarised light to extend the range of what can be seen. A short

bibliography follows, notes on some local microscope societies, and useful addresses.

The two authors are second to none in their knowledge of the theory and practice of the microscope, and in this admirable booklet they show that they have great didactic skills as well. They and the RMS are to be congratulated on

making available this introduction for the young. Many Quekett members work with younger people to introduce them to the world of the small, and they need to know that this publication is available to schools.

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