

Science Close Up

Introduction

Measuring lenses (graticulated lenses) can be used for close observation and accurate measurement of small items. They are suitable for use in KS2 and Scottish 2nd level projects when pupils are ready to move on from magnifying glasses. It gives the opportunity to use 'real' science equipment. The lenses provide an opportunity to practise small scale measurement.

An understanding of small units of measurement (mm), reading of scales and the decimal point are needed. Many different science investigations can be carried out providing hands-on experience. Practice in measuring and analysing data is given during realistic interactive activities. A range of suggested activities follow.

Health and Safety

Teachers will carry out their own risk assessment prior to use. It is recommended that before using the lenses pupils should be made aware of a few safety aspects;-

- The lenses are made of glass and must be handled with care
- If dropped, an adult must be called to retrieve the lens and check for damage
- Any damage noticed should be reported immediately

How to use the graticulated lens



Place the lens on a flat surface on top of the item to be measured. Look through the magnifier by placing your eye directly above it. The measuring scale is in millimetres (mm).

It is suggested that some practice measurements of say line widths be attempted prior to an investigation.

Investigations

Equipment like this works best in small group activities when an adult is available to supervise and answer questions. Other pupils groups can be employed carrying out their own research, planning next steps in the investigation, writing up reports, drawing detailed labelled diagrams, drawing graphs or collating data.