

Using Standard Units in Measurement

Objectives:

Pupils will be able to understand the need for using standard units in measurement.

Dimension : Measures

Key Stage 1 (Primary 1 - 3)

Description of Exemplar :

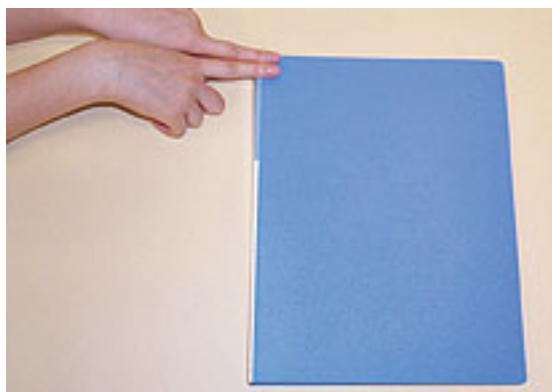
This exemplar aims at developing pupils' understanding of the use of standard units in measuring the length of an object. Instead of conducting the lessons in the traditional way (i. e. relying on teachers' exposition and pupils' rote learning), the exemplar focuses on pupils' hands-on experience for getting a better understanding of the concept of standard units and their use in measuring.

In this exemplar, pupils are asked to measure the lengths of different objects, such as the length of their desks, their chairs and their mathematics textbooks, using their hands as measuring tools.

Pupils need some creativity to determine which part(s) of their hands could be used, for example, their hand-spans, finger widths and finger lengths. Pupils begin measuring with their "ever-ready ruler".



Measuring using hand-span



Measuring using finger width

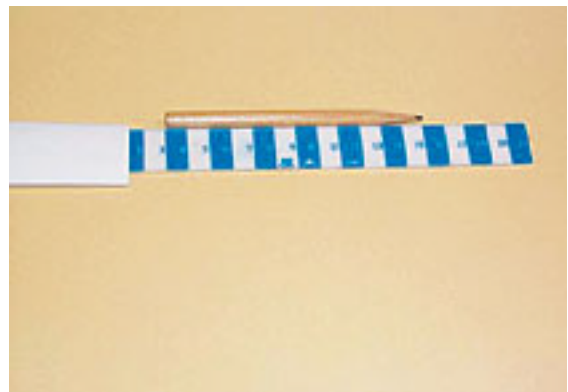
Pupils are expected to report their results to the class. They are encouraged to compare their results and discuss critically why there are differences. This will lead to discussion on how to tell the lengths of objects and how to compare lengths using a common unit.

After thorough discussion, "centimetre" will be introduced and pupils begin measuring lengths again in centimetres. It is advisable to request pupils to make a rough estimation of the lengths of objects before making real measurements, so that pupils can develop a stronger sense of the concept of length.

To further consolidate pupils' understanding of the use of rulers to measure lengths, they can discuss why there is a "0" mark on the ruler and how to measure if the "0" mark is missing.



Measuring using a standard unit



Measuring using a ruler with the "0" mark missing