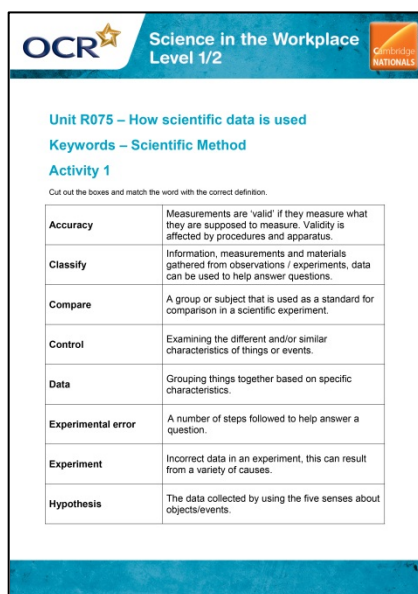


## Unit R075 – How scientific data is used

### Keywords – Scientific Method

#### *Instructions and answers for teachers*

The activities below cover LO4: Be able to communicate scientific information



**Unit R075 – How scientific data is used**  
**Keywords – Scientific Method**  
**Activity 1**

Cut out the boxes and match the word with the correct definition.

<b>Accuracy</b>	Measurements are 'valid' if they measure what they are supposed to measure. Validity is affected by procedures and apparatus.
<b>Classify</b>	Information, measurements and materials gathered from observations / experiments, data can be used to help answer questions.
<b>Compare</b>	A group or subject that is used as a standard for comparison in a scientific experiment.
<b>Control</b>	Examining the different and/or similar characteristics of things or events.
<b>Data</b>	Grouping things together based on specific characteristics.
<b>Experimental error</b>	A number of steps followed to help answer a question.
<b>Experiment</b>	Incorrect data in an experiment, this can result from a variety of causes.
<b>Hypothesis</b>	The data collected by using the five senses about objects/events.

Associated files:

Units Card Sort (activity)

Activity 1 – approx. 30 mins



*This activity offers an opportunity for English skills development.*

In this activity learners complete a card match exercise containing all the correct and relevant words they should use in their scientific write ups and reports.

## Activity 1

<b>Accuracy</b>	A measurement of how close the reading is to the true value
<b>Classify</b>	Grouping things together based on specific characteristics.
<b>Compare</b>	Examining the different and/or similar characteristics of things or events.
<b>Control</b>	A group or subject that is used as a standard for comparison in a scientific experiment.
<b>Data</b>	Information, measurements and materials gathered from observations/experiments, data can be used to help answer questions.
<b>Experimental error</b>	Incorrect data in an experiment, this can result from a variety of causes.
<b>Experiment</b>	A test using observations and variables to discover answers to questions, and/or to check a hypothesis.
<b>Hypothesis</b>	A testable explanation for observations and questions.
<b>Methods</b>	An ordered series of steps followed to help answer a question.
<b>Observation</b>	The data collected by using the five senses about objects/events.
<b>Precision</b>	The closeness between measured values obtained by repeated measurements.
<b>Prediction</b>	A statement made about the expected outcome of an experiment based on past experiences/observations.
<b>Procedure</b>	A number of steps followed to help answer a question.

<b>Qualitative data</b>	Data that is based on observable characteristics of things/events.
<b>Quantitative data</b>	Data that is based on measurable features of things/events such as mass, volume, length, and quantity.
<b>Repeatability</b>	A measurement is repeatable if the same/similar results can be obtained when repeating the measurements under the same conditions.
<b>Scientific theory</b>	An explanation for patterns in nature that is supported by scientific evidence which is based on data collected using scientific methods.
<b>Validity</b>	Measurements are 'valid' if they measure what they are supposed to measure. Validity is affected by procedures and apparatus.
<b>Variation</b>	Differences between objects, organisms or events that are all of the same basic type eg members of the same species.
<b>Variable</b>	Something that can affect something being tested, and is therefore a factor that may change in an experiment.
<b>Variable, control</b>	A factor that is controlled/kept the same in an experiment.
<b>Variable, dependent</b>	A factor that is measured in an experiment.
<b>Variable, independent</b>	A factor that can be changed in an experiment by the scientist.

To give us feedback on, or ideas about the OCR resources you have used, email [resourcesfeedback@ocr.org.uk](mailto:resourcesfeedback@ocr.org.uk)

**OCR Resources: the small print**

OCR's resources are provided to support the teaching of OCR specifications, but in no way constitute an endorsed teaching method that is required by the Board, and the decision to use them lies with the individual teacher. Whilst every effort is made to ensure the accuracy of the content, OCR cannot be held responsible for any errors or omissions within these resources.

© OCR 2013 - This resource may be freely copied and distributed, as long as the OCR logo and this message remain intact and OCR is acknowledged as the originator of this work.

OCR acknowledges the use of the following content:  
English icon: AirOne/Shutterstock.com