

## Definitions and Concepts for OCR (B) Chemistry GCSE

### Topic 7: Ideas About Science

*Definitions in **bold** are for higher tier only*

*Definitions marked by '\*\*' are for separate sciences only*

**Accuracy** - How close the measurement is to the true value.

**Cause-effect link** - A relationship between two variables whereby a change in one causes a change in the other.

**Controlled variable** - A variable that remains constant throughout the experiment.

**Correlation** - The relationship between 2 variables. Correlation does not necessarily mean a change in one variable is causing a change in the other - it is not the same as a cause-effect link.

**Extrapolation** - The extension of a graph, curve, or line following the trend of the data.

**Hazard** - Something that may cause harm. For example, a chemical that causes burning if it comes into contact with the skin is a hazard.

**Hypothesis** - A tentative explanation for an observed phenomenon. It is used to make a prediction about how, in a particular experimental context, a change in a factor will affect the outcome. †

**Interpolation** - The estimation of unknown data within a range of known values.

**Outlier** - A data point that is significantly different to the rest of the data set. An outlier should be treated as data, unless there is a clear reason to reject it.

**Peer review** - The evaluation of new scientific claims by other scientists in the same field to ensure it is valid, original and of high quality.

**Perceived risk** - Refers to people's perception of a particular risk.

**Precision** - Refers to the measurement being the same, or very similar, each time the experiment is carried out.

**Prediction** - A guess as to what might happen based on what is observed.

**Random error** - An error in measurement caused by an unpredictable or unknown change.

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**Range bars** - They are drawn at each point in a graph indicating the highest and lowest measurements of repeats of each mean.

**Reliability** - A measure of the consistency of the results. If an experiment is reliable the same result is found after each repeat.

**Repeatability** - The closeness of measurements to the original result if they were to be repeated again under the same conditions by the same person.

**Reproducibility** - The closeness of measurements to the original result if they were to be repeated again under different conditions by a different person.

**Risk** - The possibility that an individual may be harmed by the hazards identified in an experiment.

**Scientific theory** - A general explanation that applies to a large number of situations or examples (perhaps to all possible ones), which has been tested and used successfully, and is widely accepted by scientists. †

**Standard units** - A system of measurement that is agreed upon internationally.

**Systematic error** - An error in measurement caused by a recurring error in the environment or experiment. This means the measured value will always be different to the true value.

**Validity** - Refers to how well the measurement reflects reality.

† Definition taken from: [OCR Gateway Science Chemistry \(B\) Specification \(J257\) V3.2 \(April 2020\)](#)

