

Features of Quality for the Extended Experimental Investigation

Exceptional

Investigating

- Forms a testable hypothesis or prediction with justification
- Describes considerations related to reliability and fairness
- Outlines appropriate safety considerations, and describes the method used to accurately collect and record good quality, reliable data in a manner that could be easily repeated
- Uses an innovative approach that truly enhances the work
- Records a sufficient amount of good quality data

Communicating

- Presents data in the most appropriate way using relevant scientific terminology and informative representations; calculations, if any, are performed to a high degree of accuracy
- Describes the relationships between the variables

Knowledge and understanding

- Provides a justified conclusion supported by the data; identifies and explains any anomalous data
- Uses relevant science knowledge to assess and describe whether the hypothesis has/has not been supported
- Describes in detail the strengths and weaknesses of their own investigations, including appropriate improvements and or refinements, or explains fully why no further improvements could reasonably be achieved

Above expectations

- Forms a testable hypothesis or prediction with justification
- Identifies the variable to be measured and the variable to be changed
- Outlines appropriate safety considerations, and describes the method and equipment used to collect and record data
- Records a sufficient amount of good quality data

- Displays data neatly and accurately, using relevant scientific terminology and informative representations; calculations, if any, are performed to a high degree of accuracy
- Describes the relationships between the variables

- Draws a conclusion consistent with the data and comments on whether the conclusion supports the hypothesis
- Identifies the strengths and weaknesses of the investigation and suggests appropriate improvements, or explains why the procedures were of sufficient quality

In line with expectations

- With limited guidance, forms a testable hypothesis/prediction
- Describes a safe method used to collect data-some of the steps are understandable but lack some detail
- Records raw/primary data
- Displays data on simple tables, charts or graphs, allowing for some errors in scaling or plotting
- States a relationship between the variables
- Draws a conclusion based on data collected, identifies some features of the investigation that could be improved and suggests improvements

Yet to meet expectations

- Uses a given investigation question
- Is directed in using equipment to collect and record data
- Data collection method described is not repeatable
- Displays data on incomplete tables, charts or graphs, allowing for significant errors in scaling or plotting
- Comments on the investigation without making a conclusion/refinement to the investigation