

Sciences Objectives: Year 1

Objective A: Knowing and Understanding

At the end of year 1, students should be able to:

- (i) outline scientific knowledge
- (ii) apply scientific knowledge and understanding to solve problems set in familiar situations and suggest solutions to problems set in unfamiliar situations
- (iii) interpret information to make scientifically supported judgments.

Objective B: Inquiring and Designing

At the end of year 1, students should be able to:

- (i) outline an appropriate problem or research question to be tested by a scientific investigation
- (ii) outline a testable prediction using scientific reasoning
- (iii) outline how to manipulate the variables, and outline how data will be collected
- (iv) design scientific investigations.

Objective C: Processing and Evaluating

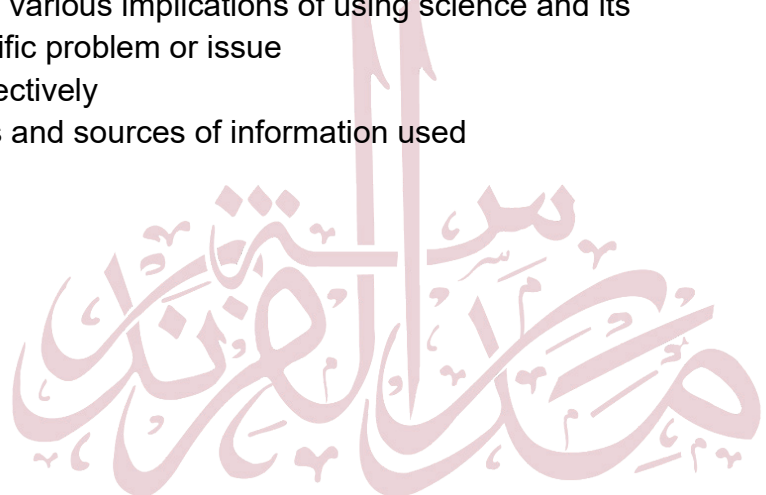
At the end of year 1, students should be able to:

- (i) present collected and transformed data
- (ii) interpret data and outline results using scientific reasoning
- (iii) discuss the validity of a prediction based on the outcome of the scientific investigation
- (iv) discuss the validity of the method
- (v) describe improvements or extensions to the method.

Objective D: Reflecting on the impacts of science

At the end of year 1, students should be able to:

- (i) summarize the ways in which science is applied and used to address a specific problem or issue
- (ii) describe and summarize the various implications of using science and its application in solving a specific problem or issue
- (iii) apply scientific language effectively
- (iv) document the work of others and sources of information used



Sciences Assessment Criteria: Year 1

Criterion A: Knowing and Understanding

Maximum: 8

Achievement level	Level descriptor
0	The student does not reach a standard described by any of the descriptors below.
1 – 2	The student: <ol style="list-style-type: none"> select scientific knowledge select scientific knowledge and understanding to suggest solutions to problems set in familiar situations apply information to make judgments, with limited success.
3 – 4	The student: <ol style="list-style-type: none"> recall scientific knowledge apply scientific knowledge and understanding to suggest solutions to problems set in familiar situations apply information to make judgments.
5 – 6	The student: <ol style="list-style-type: none"> state scientific knowledge apply scientific knowledge and understanding to solve problems set in familiar situations apply information to make scientifically supported judgments.
7 – 8	The student: <ol style="list-style-type: none"> outline scientific knowledge apply scientific knowledge and understanding to solve problems set in familiar situations and suggest solutions to problems set in unfamiliar situations interpret information to make scientifically supported judgments.

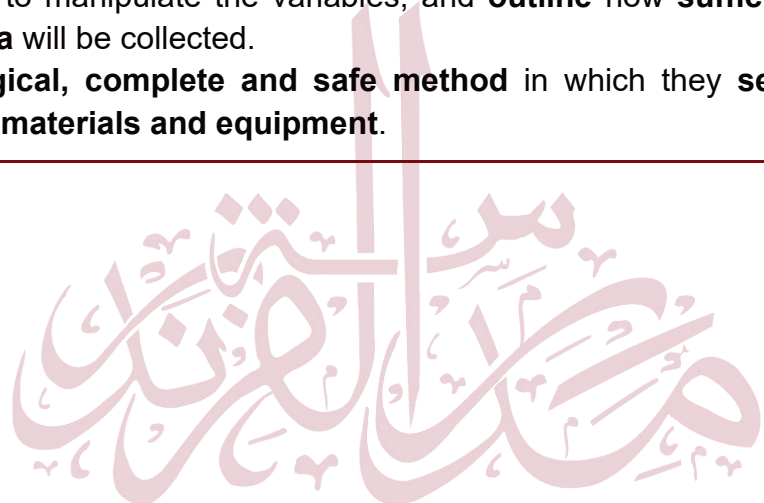


Sciences Assessment Criteria: Year 1

Criterion B: Inquiring and Designing

Maximum: 8

Achievement level	Level descriptor
0	The student does not reach a standard described by any of the descriptors below.
1 – 2	The student: <ol style="list-style-type: none"> select a problem or question to be tested by a scientific investigation select a testable prediction state a variable design a method with limited success.
3 – 4	The student: <ol style="list-style-type: none"> state a problem or question to be tested by a scientific investigation state a testable prediction state how to manipulate the variables, and state how data will be collected design a safe method in which they select materials and equipment.
5 – 6	The student: <ol style="list-style-type: none"> state a problem or question to be tested by a scientific investigation outline a testable prediction outline how to manipulate the variables, and state how relevant data will be collected design a complete and safe method in which they select appropriate materials and equipment.
7 – 8	The student: <ol style="list-style-type: none"> outline a problem or question to be tested by a scientific investigation outline a testable prediction using scientific reasoning outline how to manipulate the variables, and outline how sufficient, relevant data will be collected. design a logical, complete and safe method in which they select appropriate materials and equipment.



Sciences Assessment Criteria: Year 1

Criterion C: Processing and Evaluating

Maximum: 8

Achievement level	Level descriptor
0	The student does not reach a standard described by any of the descriptors below.
1 – 2	The student: <ol style="list-style-type: none"> collect and present data in numerical and/or visual forms interpret data state the validity of a prediction based on the outcome of a scientific investigation, with limited success state the validity of the method based on the outcome of a scientific investigation, with limited success state improvements or extensions to the method that would benefit the scientific investigation, with limited success.
3 – 4	The student: <ol style="list-style-type: none"> correctly collect and present data in numerical and/or visual forms accurately interpret data and outline results state the validity of a prediction based on the outcome of a scientific investigation state the validity of the method based on the outcome of a scientific investigation state improvements or extensions to the method that would benefit the scientific investigation.
5 – 6	The student: <ol style="list-style-type: none"> correctly collect, organize and present data in numerical and/or visual forms accurately interpret data and outline results using scientific reasoning outline the validity of a prediction based on the outcome of a scientific investigation outline the validity of the method based on the outcome of a scientific investigation outline improvements or extensions to the method that would benefit the scientific investigation.



- The student:
- 7 – 8**
- i. **correctly collect, organize, transform and present** data in numerical and/ or visual forms
 - ii. **accurately interpret data** and **outline** results **using correct scientific reasoning**
 - iii. **discuss** the validity of a prediction based on the outcome of a scientific investigation
 - iv. **discuss** the validity of the method based on the outcome of a scientific investigation
 - v. **describe** improvements or extensions to the method that would benefit the scientific investigation.

Sciences Assessment Criteria: Year 1

Criterion D: Reflecting on the impacts of science

Maximum: 8

Achievement level	Level descriptor
0	The student does not reach a standard described by any of the descriptors below.
1 – 2	<p>The student:</p> <ol style="list-style-type: none"> i. state the ways in which science is used to address a specific problem or issue ii. state the implications of using science to solve a specific problem or issue, interacting with a factor iii. apply scientific language to communicate understanding iv. document sources.
3 – 4	<p>The student:</p> <ol style="list-style-type: none"> i. state the ways in which science is used to address a specific problem or issue ii. state the implications of using science to solve a specific problem or issue, interacting with a factor iii. sometimes apply scientific language to communicate understanding iv. sometimes document sources correctly.
5 – 6	<p>The student:</p> <ol style="list-style-type: none"> i. outline the ways in which science is used to address a specific problem or issue ii. outline the implications of using science to solve a specific problem or issue, interacting with a factor iii. usually apply scientific language to communicate understanding clearly and precisely iv. usually document sources correctly.

-
- The student:
- 7 – 8
- i. **summarize** the ways in which science is applied and used to address a specific problem or issue
 - ii. **describe and summarize** the implications of using science and its application to solve a specific problem or issue, interacting with a factor
 - iii. **consistently apply** scientific language to communicate understanding **clearly and precisely**
 - iv. document sources **completely**.
-

