Sciences

Criterion A: Knowing and understanding

Achievement levels	Descriptors		
	MYP 1	**MYP 2-3**	**MYP 4-5**
7-8	The student is able to: □ **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**	The student is able to: □ **describe** scientific knowledge □ apply scientific knowledge and understanding to **solve problems** set in **familiar and unfamiliar situations** □ **analyze** information to make **scientifically supported judgments**	The student is able to: □ **explain** scientific knowledge □ apply scientific knowledge and understanding to **solve problems** set in **familiar and unfamiliar situations** □ **analyze** and **evaluate** information to make **scientifically supported judgments**
5-6	The student is able to: □ **state** scientific knowledge □ **apply** scientific knowledge and understanding to **solve problems** set in **familiar situations** □ **apply** information to **make scientifically supported judgments**	The student is able to: □ **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**	The student is able to: □ **describe** scientific knowledge □ apply scientific knowledge and understanding to **solve problems** set in **familiar situations** and **suggest solutions** to problems set in **unfamiliar situations** □ **analyze** information to make **scientifically supported judgments**
3-4	The student is able to: □ **recall** scientific knowledge □ **apply** scientific knowledge and understanding to **suggest solutions** to problems set in **familiar situations** □ **apply** information to **make judgments**	The student is able to: □ **state** scientific knowledge □ apply scientific knowledge and understanding to **solve problems** set in **familiar situations** □ **apply** information to make **scientifically supported judgments**	The student is able to: □ **explain** scientific knowledge □ apply scientific knowledge and understanding to **solve problems** set in **familiar situations** □ **interpret** information to make **scientifically supported judgments**
1-2	The student is able to: □ **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**	The student is able to: □ **recall** scientific knowledge □ apply scientific knowledge and understanding to **suggest solutions** to problems set in **familiar situations** □ **apply** information to make **judgments**	The student is able to: □ **state** scientific knowledge □ apply scientific knowledge and understanding to **suggest solutions** to problems set in **familiar situations** □ **interpret** information to make **judgments**
0	The student's work does not reach a standard described by any of the descriptors above.		

Criterion B: Inquiring and designing

Achievement levels	Descriptors		
	MYP 1	**MYP 2-3**	**MYP 4-5**
7-8	The student is able to: □ **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 he or she **selects appropriate materials and equipment**	The student is able to: □ **describe** a problem or question to be tested by a scientific investigation □ **outline and explain** a testable hypothesis **using scientific reasoning** □ **describe** how to manipulate the variables, and **describe** how **sufficient, relevant data** will be collected □ design a **complete and safe** method in which he or she **selects appropriate materials and equipment**	The student is able to: □ **explain** a problem or question to be tested by a scientific investigation □ **formulate and explain** a testable hypothesis **using correct scientific reasoning** □ **explain** how to manipulate the variables, and **explain** how **sufficient, relevant data** will be collected □ design a **logical, complete and safe** method in which he or she **selects appropriate materials and equipment**
5-6	The student is able to: □ **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 he or she **selects appropriate materials and equipment**	The student is able to: □ **outline** a problem or question to be tested by a scientific investigation □ **outline and explain** a testable hypothesis **using scientific reasoning** □ **outline** how to manipulate the variables, and **outline** how **sufficient**, **relevant data** will be collected □ design a **complete and safe** method in which he or she **selects appropriate materials and equipment**	The student is able to: □ **describe** a problem or question to be tested by a scientific investigation □ **formulate and explain** a testable hypothesis **using scientific reasoning** □ **describe** how to manipulate the variables, and **describe** how **sufficient, relevant data** will be collected □ design a **complete and safe** method in which he or she **selects appropriate materials and equipment**
3-4	The student is able to: □ **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 he or she **selects materials and equipment**	The student is able to: □ **state** a problem or question to be tested by a scientific investigation □ **outline** a testable hypothesis **using scientific reasoning** □ **outline** how to manipulate the variables, and **state** how **relevant data** will be collected □ design **safe** method in which he or she **selects materials and equipment**	The student is able to: □ **outline** a problem or question to be tested by a scientific investigation □ **formulate** a testable hypothesis **using scientific reasoning** □ **outline** how to manipulate the variables, and **outline** how **relevant data** will be collected □ design **safe** method in which he or she **selects materials and equipment**
1-2	The student is able to: □ **select** a problem or question to be tested by a scientific investigation □ **select** a testable prediction	The student is able to: □ **state** a problem or question to be tested by a scientific investigation**, with limited success** □ **state** a testable hypothesis	The student is able to: □ **state** a problem or question to be tested by a scientific investigation

	state a variable design a **method with limited success**	**state** the variables design a method, **with limited success**	**outline** a testable hypothesis **outline** the variables design a method, **with limited success**
0	The student's work does not reach a standard described by any of the descriptors above.		

Criterion C: Processing and evaluating

Achievement levels	Descriptors		
	MYP 1	**MYP 2-3**	**MYP 4-5**
7-8	The student is able to: □ **correctly collect, organize, transform and present** data in numerical and/or visual forms □ **accurately interpret** data and **outline** results **using correct scientific reasoning** □ **discuss** the validity of a prediction based on the outcome of a scientific investigation □ **discuss** the validity of the method based on the outcome of a scientific investigation □ **describe** improvements or extensions to the method that would benefit the scientific investigation	The student is able to: □ **correctly collect, organize, transform and present** data in numerical and/or visual forms □ **accurately interpret** data and **describe** results **using correct scientific reasoning** □ **discuss** the validity of a hypothesis based on the outcome of a scientific investigation □ **discuss** the validity of the method based on the outcome of a scientific investigation □ **describe** improvements or extensions to the method that would benefit the scientific investigation	The student is able to: □ **correctly collect, organize, transform and present** data in numerical and/or visual forms □ **accurately interpret** data and **explain** results **using correct scientific reasoning** □ **evaluate** the validity of a hypothesis based on the outcome of a scientific investigation □ **evaluate** the validity of the method based on the outcome of a scientific investigation □ **explain** improvements or extensions to the method that would benefit the scientific investigation
5-6	The student is able to: □ **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 is able to: □ **correctly collect, organize, and present** data in numerical and/or visual forms □ **accurately interpret** data and **describe** results **using scientific reasoning** □ **outline** the validity of a hypothesis 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 is able to: □ **correctly collect, organize and present** data in numerical and/or visual forms □ **accurately interpret** data and **explain** results **using scientific reasoning** □ **discuss** the validity of a hypothesis based on the outcome of a scientific investigation □ **discuss** the validity of the method based on the outcome of a scientific investigation □ **describe** improvements or extensions to the method that would benefit the scientific investigation
3-4	The student is able to: □ **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	The student is able to: □ **correctly collect and present** data in numerical and/or visual forms □ **accurately interpret** data and **describe** results □ **state** the validity of a hypothesis based on the outcome of a scientific investigation □ **state** the validity of the method based on the	The student is able to: □ **correctly collect and present** data in numerical and/or visual forms □ **accurately interpret** data and **explain** results □ **outline** the validity of a hypothesis based on the outcome of a scientific investigation □ **outline** 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	outcome of a scientific investigation □ **state** improvements or extensions to the method that would benefit the scientific investigation	outcome of a scientific investigation □ **outline** improvements or extensions to the method that would benefit the scientific investigation
1-2	The student is able to: □ **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**	The student is able to: □ **collect and present** data in numerical and/or visual forms □ **accurately interpret** data □ **state** the validity of a hypothesis with **limited reference** to a scientific investigation □ **state** the validity of the method with **limited reference** to a scientific investigation □ **state limited** improvements or extensions to the method	The student is able to: □ **collect and present** data in numerical and/or visual forms □ **interpret** data □ **state** the validity of a hypothesis 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
0	The student's work does not reach a standard described by any of the descriptors above.		

Criterion D: Reflecting on the impacts of science

Achievement levels	Descriptors		
	MYP 1	**MYP 2-3**	**MYP 4-5**
7-8	The student is able to: □ **summarize** the ways in which science is **applied and** used to address a specific problem or issue □ **describe and summarize** the implications of using science **and its application** to solve a specific problem or issue, interacting with a factor □ **consistently apply** scientific language to communicate understanding **clearly and precisely** □ document sources **completely**	The student is able to: □ **describe** the ways in which science is **applied and** used to address a specific problem or issue □ **discuss and analyze** the implications of using science **and its application** to solve a specific problem or issue, interacting with a factor □ **consistently apply** scientific language to communicate understanding **clearly and precisely** □ document sources **completely**	The student is able to: □ **explain** the ways in which science is applied and used to address a specific problem or issue □ **discuss and evaluate** the implications of using science and its application to solve a specific problem or issue, interacting with a factor □ **consistently apply** scientific language to communicate understanding **clearly and precisely** □ document sources **completely**
5-6	The student is able to: □ **outline** the ways in which science is used to address a specific problem or issue □ **outline** the implications of using science to solve a specific problem or issue, interacting with a factor □ **usually apply** scientific language to communicate understanding **clearly and precisely** □ **usually** document sources correctly	The student is able to: □ **summarize** the ways in which science is **applied and** used to address a specific problem or issue □ **describe** the implications of using science **and its application** to solve a specific problem or issue, interacting with a factor □ **usually apply** scientific language to communicate understanding **clearly and precisely** □ **usually** document sources **correctly**	The student is able to: □ **describe** the ways in which science is applied and used to address a specific problem or issue □ **discuss** the implications of using science and its application to solve a specific problem or issue, interacting with a factor □ **usually apply** scientific language to communicate understanding **clearly and precisely** □ **usually** document sources correctly
3-4	The student is able to: □ **state** the ways in which science is used to address a specific problem or issue □ **state** the implications of using science to solve a specific problem or issue, interacting with a factor □ **sometimes apply** scientific language to communicate understanding □ **sometimes** document sources correctly	The student is able to: □ **outline** the ways in which science is used to address a specific problem or issue □ **outline** the implications of using science **t**o solve a specific problem or issue, interacting with a factor □ **sometimes apply** scientific language to communicate understanding □ **sometimes** document sources **correctly**	The student is able to: □ **summarize** the ways in which science is applied and used to address a specific problem or issue □ **describe** the implications of using science and its application to solve a specific problem or issue, interacting with a factor □ **sometimes apply** scientific language to communicate understanding □ **sometimes** document sources correctly
1-2	The student is able to: □ **state** the ways in which science is used to address a specific problem or issue, **with limited success**	The student is able to: □ **state** the ways in which science is used to address a specific problem or issue	The student is able to: □ **outline** the ways in which science is used to address a specific problem or issue

	□ **state** the implications of using science to solve a specific problem or issue, interacting with a factor, **with limited success** □ **apply** scientific language to communicate understanding, **with limited success** □ document sources, **with limited success**	□ **state** the implications of using science **t**o solve a specific problem or issue, interacting with a factor □ **apply** scientific language to communicate understanding, but does so **with limited success** □ document sources, **with limited success**	□ **outline** the ways in which science is used to address a specific problem or issue □ **sometimes apply** scientific language to communicate understanding but does so **with limited success** □ document sources**, with limited success**
0	The student's work does not reach a standard described by any of the descriptors above.		