#### First Exam May 2016

Name of Student Investigation
Circle the best-fit indicator level for each descriptor.

#### Personal Engagement @ total \_\_\_\_ / 2

This criterion assesses the extent to which the student engages with the exploration and makes it their own. Personal engagement may be recognized in different attributes and skills. These could include addressing personal interests or showing evidence of independent thinking, creativity or initiative in the designing, implementation or presentation of the investigation.

Descriptor	0	1	2		
evidence of personal engagement with exploration	standard not reached	limited with little independent thinking, initiative or insight	clear with significant independent thinking, initiative or creativity		
justification given for choosing the research question and/or the topic under investigation	standard not reached	does not demonstrate personal significance, interest or curiosity	demonstrates personal significance, interest or curiosity		
evidence of personal input and initiative in the designing, implementation or presentation of the investigation	standard not reached	little evidence	evidence		

# Exploration @ total \_\_\_\_ / 6

This criterion assesses the extent to which the student establishes the scientific context for the work, states a clear and focused research question and uses concepts and techniques appropriate to the Diploma Programme level. Where appropriate, this criterion also assesses awareness of safety, environmental, and ethical considerations.

Descriptor	0	1	2	3	4	5	6
topic of the investigation is identified and relevant research question described	standard not reached	some relevance is stated but it is not focused		relevant but not fully focused		relevant, fully focused and clearly described	
background information provided for the investigation	standard not reached	superficial or of limited relevance and does not aid the understanding of the context of the investigation		mainly appropriate and relevant and aids the under- standing of the context of the investigation		entirely appropriate and relevant and enhances the understanding of the context of the investigation	
appropriate of methodology of the investigation, consideration of factors for reliability and sufficiency of data	standard not reached	limited to research question, few if any factors considered		mainly appropriate but some limits on significant factors		highly appropria nearly all are consi	
evidence of awareness of the significant safety, ethical or environmental issues that are relevant to the methodology of the investigation	standard not reached	limited a	wareness	some aw	areness	full awar	eness

# Analysis @ total \_\_\_\_ / 6

This criterion assesses the extent to which the student's report provides evidence that the student has selected, recorded, processed and interpreted the data in ways that are relevant to the research question and can support a conclusion.

Descriptor	0	1	2	3	4	5	6
raw data	standard not reached	insufficient to support a valid conclusion		relevant but incomplete. Could support a simple or partially valid conclusion		sufficient; could support a detailed and valid conclusion	
data processing, accuracy and consistent with data	standard not reached	some basic but too inaccurate or insufficient to lead to a valid conclusion		appropriate and sufficient raw data carried out that could lead to a conclusion but with significant inaccuracies and inconsistencies in processing		appropriate and sufficient data processing with accuracy so as to enable a conclusion to the research question to be drawn that is fully consistent with the experimental data	
impact of uncertainties on the analysis	standard not reached	little evid impact of uncertain		some evi the impa uncertain	ct of	full and appropria evidence impact of uncertain	of the
interpretation of processed data	standard not reached	incorrect insufficie interpret may lead invalid or incomple conclusio	nt ation that to an very te	broadly v interpret leading to incomple limited co	ation o an te or	correct interpret allowing complete and detai conclusio	a ely valid iled

# Evaluation @ total \_\_\_\_ / 6

This criterion assess the extend to which the student's report provides evidence of evaluation of the investigation and the results with regard to the research question and the accepted scientific context.

Descriptor	0	1	2	3	4	5	6
Conclusion statement	standard not reached	outlined but not relevant to the research question or not supported by the data presented		described, relevant to the research question and supported by the data presented		described in detail and justified, entirely relevant to the research question and fully supported by the data presented	
Conclusion and accepted theory	standard not reached	superficially compared to the accepted scientific context		some relevant comparison to accepted scientific context		correctly described and justified through relevant comparison to the accepted scientific context	
Strengths and weaknesses of the investigation, such as limitations of the data and sources of error, are discussed and provide evidence to a clear understanding of the methodological issues involved in establishing the conclusion	standard not reached	restricted to an account of the practical or procedural issues faced issues		described and provide evidence of some awareness of the methodological issues involved in establishing the conclusion		discussed and provide evidence of a clear understanding of the methodological issues involved in establishing the conclusion	
Realistic and relevant suggestions for the improvement and extension of the investigation	standard not reached	very few	outlined	some des	cribed	are discu	ssed

# Communication @ total \_\_\_\_ / 4

This criterion assesses whether the investigation is presented and reported in a way that supports effective communication of the focus, process and outcomes.

Descriptor	0	1	2	3	4	
Presentation of the investigation	standard not reached	unclear, ma difficult to u the focus, p outcomes	understand	clear, any errors do not hamper understanding of the focus, process and outcomes		
Report structure	standard not reached	not well strais unclear: to necessary in on focus, producomes is is presented incoherent disorganized.	nformation rocess and s missing or d in an or	well structured and clear: the necessary information on focus, process and outcomes is present and presented in a coherent way		
Report relevance	standard not reached	the understanding of the focus, process and outcomes of the investigation is obscured by the presence of inappropriate or irrelevant information		relevant and concise thereby facilitating a ready understanding of the focus, process and outcomes of the investigation		
Terminology	standard not reached	there are many errors in the use of subject specific terminology and conventions		the use of s specific terr and conven appropriate correct; any not hamper standing	ninology tions are and errors do	