



Boorowa Central School

Excellence through Respect, Responsibility and Participation

Assessment Task Feedback

Student: _____

Task: _____

Teacher Feedback

STRENGTHS

-
-
-
-

AREAS TO STRENGTHEN

-
-
-
-
-

WHAT OTHER THINGS I COULD HAVE DONE - Student Response

-
-
-
-

Teacher Comment

MARK



EFFORT

NAME

Didn't try very hard and gave up	Put in a bit of effort	Worked OK but could have done more	Worked very well	Pleased with my effort
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DIFFICULTY OF THE TASK

Too hard	Hard	Some parts were hard but achievable	OK	Easy
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Assessment Task Notification

All tasks should be clearly outlined in the notice and give information pertaining to the nature of the task, the outcomes being assessed and the marking schedule giving individual component weightings.

Teacher: Mr Corcoran	Course: Inv. Science
Task and Number: Task 1 -Testing Claims Report	Task Weighting: 20%
Date Issued: 7/11/2019	Date Due: Tuesday 10 th December 2019
Syllabus component: Module 7 – Fact or Fallacy	

Syllabus outcomes being assessed:

- › develops and evaluates questions and hypotheses for scientific investigation INS11/12-1
- › selects and processes appropriate qualitative and quantitative data and information using a range of appropriate media INS11/12-4
- › analyses and evaluates primary and secondary data and information INS11/12-5
- › solves scientific problems using primary and secondary data, critical thinking skills and scientific processes INS11/12-6
- › communicates scientific understanding using suitable language and terminology for a specific audience or purpose INS11/12-7
- › uses evidence-based analysis in a scientific investigation to support or refute a hypothesis INS12-14

Description of task:

Make a poster about the issue you have chosen, with a 2-page summary of the “debate”, analysis of an experiment employed to support the issue, analysis of a peer review experiment on this issue, The poster should be an summary of the issue without overloading your information from the report, the poster should be entertaining and inform the reader of the issue and how it has been portrayed in a misleading way.

1. Examine a contemporary scientific debate (GM food, water filtration, lemon detox, iridology, astrology, numerology, marijuana use, cancer cure conspiracy etc) and how it is portrayed in the mainstream media, including
 - accuracy of information
 - validity of data
 - reliability of information sources
2. On your poster, give an example of an **experiment** completed on your topic that the claim is based on as seen in the media.

Analyse this experiment in terms of

- validity of the experimental design
 - reliability of the data obtained
 - accuracy of the procedure, including random and systematic error
 - How could this experiment be improved with the use of placebos, double-blind trials and control groups to draw valid conclusions.
 - What is the impact of emotive advertising/techniques with this evidence-based claim
3. Compare the difference in reporting between a peer-reviewed journal article and a scientific article published in popular media, such as by;
 4. Using a data set given in popular media for this example, evaluate the impact that sample selection and sample sizes can have on the results of an investigation.



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5. Evaluating the impact of societal and economic influences on the collection and interpretation of data in your example
6. Evaluating how evidence for correlation and causation has been used to support a claim.
7. Analyse whether the halo effect, celebrity endorsement and/or brand popularity had an impact in advertising claims
8. Discuss the impact of fake science journals on the public perception of science, by conducting a survey about the issue you have chosen.
9. Were any argument fallacies committed in the popular media portrayal.

Submission of Task requirements:

Hard Copy submitted with your poster

Note: If a student is absent for an assessment task or fails to submit a task when it is due, then a medical certificate or other acceptable explanation must be presented on the first day the student returns to school or a zero mark is awarded.



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Assessment Task - Marking Criteria

Standard of Performance	Mark / Grade
See Attached	
Total Mark / Grade	



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Working Scientifically Skills	For the <i>Investigating Science Assessment Task 1</i> conducted, the student:				
	E (0-2)	D (3-4)	C (5-6)	B (7-8)	A(9-10)
<p>Questioning and Predicting</p> <p><i>A student develops and evaluates questions and hypotheses for scientific investigation</i> INS11/12-1</p>	<p>Attempts to develop a question and hypotheses of some relevance but has limited understanding of the limitations of science to investigate some concepts.</p>	<p>Attempts to develop inquiry questions by clearly identifying that some concepts cannot be investigated scientifically.</p>	<p>Develops inquiry questions and hypotheses by identifying concepts that can be investigated scientifically.</p>	<p>Develops inquiry questions and evaluates their relevance and whether they can be investigated scientifically.</p> <p>Recognises that new evidence may require a modification of investigations.</p>	<p>Develops and evaluates inquiry questions and hypotheses by identifying concepts that can be investigated scientifically.</p> <p>Uses new evidence to modify investigations.</p>
<p>Communicating</p> <p><i>A student communicates scientific understanding using suitable language and terminology for a specific audience or purpose.</i> INS11/12-7</p>	<p>Attempts to communicate scientific understanding in limited range of modes. (One of digital, visual, written and oral forms)</p>	<p>Communicates scientific understanding in at least two different modes.</p>	<p>Communicates scientific understanding using suitable language and terminology in a range of modes.</p>	<p>Communicates scientific understanding effectively and is able to construct evidence-based arguments and engage in peer feedback.</p>	<p>Communicates scientific understanding effectively and is able to construct evidence-based arguments and engage in peer feedback to evaluate an argument or conclusion.</p>
<p>Processing data and information</p> <p><i>A student selects and processes appropriate qualitative and quantitative data and information using a range of appropriate media.</i> INS11/12-4</p>	<p>Identifies a range of data types and presentations.</p>	<p>Selects qualitative and quantitative data and represents them using a range of formats.</p>	<p>Selects qualitative and quantitative data and selects appropriate formats to represent them.</p> <p>Evaluates and improves the quality of data.</p>	<p>Processes quantitative data by selecting effective representations for this data including calculating averages and identifying outliers.</p> <p>Seeks peer-feedback to evaluate and improve the quality of data.</p>	<p>Processes quantitative data by selecting effective representations for this data including calculating averages and identifying outliers.</p> <p>Routinely seeks peer-feedback to regularly evaluate and improve the quality of data and its representations.</p>
<p>Analysing data and information</p> <p><i>A student analyses and evaluates primary and secondary data and information</i> INS11/12-5</p>	<p>Identifies trends in data.</p> <p>Identifies that data has some limitations.</p>	<p>Analyses data to identify trends and relationships.</p> <p>Identifies that data has some limitations.</p>	<p>Analyses data to identify trends and relationships.</p> <p>Identifies sources of error, uncertainty and limitations in data.</p> <p>Assesses the relevance,</p>	<p>Analyses data sets to identify causal and correlational relationships, patterns and trends.</p> <p>Assesses data sources thoroughly and suggest improvements to data.</p>	<p>Thoroughly analyses a wide range of data sets and information.</p> <p>Assesses data sources thoroughly and suggest methods to improve data that were not possible to achieve</p>



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			accuracy, validity and reliability of data.		by the student.
	E (0-2)	D (3-4)	C (5-6)	B (7-8)	A(9-10)
Problem solving <i>A student solves scientific problems using primary and secondary data, critical thinking skills and scientific processes</i> INS11/12-6	Considers claims subjectively rather than scientifically.	Objectively and critically considers claims made.	Solves scientific problems using evidence to support critical thinking .	Evaluates processes and claims, and solves problems critically , with reference to evidence to justify reasoning. Identifies possible alternatives to explanations.	Evaluates processes and claims, and solves problems critically , with reference to evidence to justify reasoning. Discusses possible alternatives to explanations.
<i>uses evidence-based analysis in a scientific investigation to support or refute a hypothesis</i> INS12-14	Demonstrates an elementary knowledge of <i>supporting or refuting a claim</i> and understanding of course concepts, and applies some skills and processes with guidance.	Demonstrates a basic knowledge of <i>supporting or refuting a claim</i> and understanding of course concepts, and applies skills and processes in some familiar contexts.	Demonstrates sound knowledge of <i>supporting or refuting a claim</i> and understanding of course concepts, and applies skills and processes in a range of familiar contexts.	Demonstrates thorough knowledge of content and understanding of <i>supporting or refuting a claim</i> , and applies well-developed skills and processes in a variety of contexts.	Demonstrates extensive knowledge of <i>supporting or refuting a claim</i> and understanding of course concepts, and applies highly developed skills and processes in a wide variety of contexts.