Assessment Task: First hand and Secondary source Investigation Task

Outcomes assessed (NESA)
- Develops and evaluates questions and hypotheses for scientific investigation INS11/12-1
- Conducts investigations to collect valid and reliable primary and secondary data and information INS11/12-3
- Analyses and evaluates primary and secondary data and information INS11/12-5
- 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

Task Description/Overview
You will be completing a First hand and Secondary source Investigation regarding ONE of the following contemporary scientific debates:

- Climate change (Is climate change actually happening?)
- Vaccinations (Do vaccinations cause health issues e.g. autism?)
- Fluoride in tap water (Is fluoride in tap water bad for us?)
- Genetically modified organisms (Are genetically modified organisms bad for our health?)

This assessment will be covering the following syllabus inquiry question from Module 7- Fact or Fallacy:

IQ4: How does the reporting of science influence the public’s understanding of the subject?

Students will:
- examine a contemporary scientific debate and how it is portrayed in the mainstream media, including but not limited to:
  - accuracy of information
  - validity of data
  - reliability of information sources
- evaluate the use and interpretation of the terms ‘theory’, ‘hypothesis’, ‘belief’ and ‘law’ in relation to media reporting of scientific developments
- compare the difference in reporting between a peer-reviewed journal article and a scientific article published in popular media
Detailed Assessment Task Description

Part 1:
Select a contemporary scientific debate/inquiry question. (1 mark)
Options:
- Climate change (Is climate change actually happening?)
- Vaccinations (Do vaccinations cause health issues e.g. autism?)
- Fluoride in tap water (Is fluoride in tap water bad for us?)
- Genetically modified organisms (Are genetically modified organisms bad for our health?)

Part 2: Secondary data collection:
a) Examine 4 secondary sources that show support for, and against, your selected issue.
b) Compare the reporting between a peer-reviewed journal article and a scientific article published in popular media. Use a table to present your comparison.

Part 3: Primary data collection :
Design a questionnaire to collect primary data on what people think/feel about the issue you have chosen.

Part 4: Opinion and conclusion:
a) State your own position on the issue and justify your stance (why do you have this opinion).
b) Write a conclusion that supports or refutes your hypothesis.

Part 5: Bibliography:
Include a bibliography. Use the school referencing system (go to school website to review how to write a bibliography).

Total marks: 60 marks

This task is to be submitted electronically via Canvas on the 1st July 2020 by 3:00pm.

Canvas Assignment: First hand and Secondary source Investigation Task

<table>
<thead>
<tr>
<th>Assessment Criteria</th>
<th>Description</th>
<th>Mark Range</th>
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<tbody>
<tr>
<td>Outstanding (O)</td>
<td>The student has an extensive knowledge and understanding of the content and can readily apply this knowledge. In addition, the student has achieved a very high level of competence in the processes and skills and can apply these skills to new situations.</td>
<td>79.5-100</td>
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<tr>
<td>High (H)</td>
<td>The student has a thorough knowledge and understanding of the content and a high level of competence in the processes and skills. In addition, the student is able to apply this knowledge and these skills to most situations.</td>
<td>69.5-79</td>
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<tr>
<td>Sound (S)</td>
<td>The student has a sound knowledge and understanding of the content and has achieved a good level of competence in the processes and skills.</td>
<td>49.5-69</td>
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<tr>
<td>Basic (B)</td>
<td>The student has a basic knowledge and understanding of the content and has achieved a basic level of competence in the processes and skills.</td>
<td>19.5-49</td>
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**Limited (L)**

| The student has an elementary knowledge and understanding in a few areas of the content and still requires further work to achieve competence in the processes and skills. | 0-19 |

**Satisfactory completion of courses**

A course has been satisfactorily completed, when the student has:
- Followed the course developed/endorsed by the NSW Educational Standards Authority (NESA)
- Applied himself/herself with diligence and sustained effort to the set tasks and experiences provided in the course.
- Achieved some or all of the course outcomes