



YEAR 12 Investigating Science

Assessment Task 2

Due Date: Friday 8 th March 2019	Assessment Name: Literature Review Science and Technology
Mark: /30	Weighting: 15%

INS12-7 communicates scientific understanding using suitable language and terminology for a specific audience or purpose

INS12-13 describes and **explains** how science drives the development of technologies

INS12-15 evaluates the implications of ethical, social, economic and political influences on science

SCLS6-12 investigates technologies used in science

Describes: provides characteristics and features.

Explains: Relate cause and effect; make the relationships between things evident; provide why and/or how.

Evaluates: Make a judgement based on criteria; determine the value of.

TASK DESCRIPTION:

Select an aspect of modern technology (a device, appliance, medical breakthrough, genetically engineered organism etc) and trace its development over an extended period of time. You should focus on **scientific developments that led to new technologies** and how these new technologies were incorporated into the technology you are discussing. Only one person per technology.

Marking Guidelines

11/12-7 communicates scientific understanding using suitable language and terminology for a specific audience or purpose

	Communicates scientific understanding using suitable language and terminology for a specific audience or purpose.
A (9-10)	Information is communicated using suitable language (including an extensive use of scientific terminology) with appropriate explanations where needed, depending on the intended audience.
B (7-8)	Information is communicated using suitable language (including the use of some scientific terminology) with appropriate explanations where needed, depending on the intended audience.
C (5-6)	Information is communicated using suitable language (including little use of scientific terminology) with appropriate explanations where needed, depending on the intended audience.
D (3-4)	Information is communicated but uses language that is too complex or too simple for the intended audience. There is some use of scientific terminology but without appropriate explanations and the presentation does not allow for a particular audience.
E (0-2)	Information is communicated poorly, with little regard for the audience. The scientific terminology (if used) is beyond the understanding of the presenter and is not explained.

INS12-13 describes and explains how science drives the development of technologies

A (9-10)	Provides a detailed description of the scientific principles behind the chosen technology. Describes the scientific discoveries that have led to the development of the technology. Uses a chronology to explain in detail how scientific breakthroughs have been incorporated into the device and have led to developments in that technology. Clearly explains how the scientific discoveries have driven improvements in the technology.
B (7-8)	Provides a description of the scientific principles behind the chosen technology. Describes the scientific discoveries that have led to the development of the technology. Uses a chronology to explain how scientific breakthroughs have been incorporated into the device and have led to developments in that technology. Explains how the scientific discoveries have driven improvements in the technology.
C (5-6)	Provides an outline of the scientific principles behind the chosen technology. Describes some scientific discoveries that have led to the development of the technology or outlines how a scientific discovery, related to the technology, was made. Explains how a scientific breakthrough has been incorporated into the device and has led to a development in that technology or outlines improvements in the technology in a chronological manner. Explains how a scientific discovery has driven improvements in the technology.
D (3-4)	Provides an outline of some aspects of the scientific principles behind the chosen technology or describes some aspects of the scientific discovery behind the technology. Describes how a scientific discovery has been used to make or improve a technology. Gives a chronological development of the technology.
E (0-2)	Gives a chronological development of the technology. Indicates some aspect of how scientific knowledge has been used in the technology.

INS12-15 evaluates the implications of ethical, social, economic and political influences on science

A (9-10)	<p>Identifies each of the two (or more) areas that will be addressed. Describes the main features of each of the areas in relation to the science behind the technology (these will be the criteria on which you will make your evaluation). Explains in detail how each of these features has had an influence on the progress of the science behind the technology. Critically analyses what the effect of each feature has been (positive or negative, big or small). Evaluates (overall what have been the implications and to what extent have they enhanced or held back the science, judging on the relative effects of each of the features) the influence that each of the areas has had on the development of the science behind the technology.</p>
B (7-8)	<p>Identifies each of the two areas that will be addressed. Describes the main features of each of the areas in relation to the science behind the technology (these will be the criteria on which you will make your evaluation). Explains how each of these features has had an influence on the progress of the science behind the technology. Critically analyses what the effect of some of the features has been (positive or negative, big or small). Writes an explicit conclusion without specifically giving an evaluation. OR</p> <p>Identifies one area that will be addressed. Describes the main features of the area in relation to the science behind the technology (these will be the criteria on which you will make your evaluation). Explains in detail how each of these features has had an influence on the progress of the science behind the technology. Critically analyses what the effect of each feature has been (positive or negative, big or small). Evaluates (overall what have been the implications and to what extent have they enhanced or held back the science, judging on the relative effects of each of the features) the influence that the area has had on the development of the science behind the technology.</p>
C (5-6)	<p>Identifies each of the two areas that will be addressed. Describes some features of each of the areas in relation to the science behind the technology (these will be the criteria on which you will make your evaluation). Explains how some of these features have had an influence on the progress of the science behind the technology. Gives an indication of the magnitude of the effect of the feature. Writes an explicit conclusion without specifically giving an evaluation. OR</p> <p>Identifies one area that will be addressed. Describes the main features of that area in relation to the science behind the technology (these will be the criteria on which you will make your evaluation). Explains how each of these features has had an influence on the progress of the science behind the technology. Critically analyses what the effect of some of the features has been (positive or negative, big or small). Writes an explicit conclusion without specifically giving an evaluation.</p>
D (3-4)	<p>Identifies each of the two areas that will be addressed. Describes the main features of each of the areas in relation to the science behind the technology (these will be the criteria on which you will make your evaluation). Explains how each of these features has had an influence on the progress of the science behind the technology. Writes an explicit conclusion without specifically giving an evaluation. OR</p> <p>Identifies the area that will be addressed. Describes some features of the area in relation to the science behind the technology (these will be the criteria on which you will make your evaluation). Explains how some of these features have had an influence on the progress of the science behind the technology. Gives an indication of the magnitude of the effect of the feature. Writes an explicit conclusion without specifically giving an evaluation.</p>
E (0-2)	<p>Identifies each of the two areas that will be addressed. Describes the main features of each of the areas in relation to the science behind the technology (these will be the criteria on which you will make your evaluation). Explains how each of these features has had an influence on the progress of the science behind the technology. OR</p> <p>Identifies one area that will be addressed. Describes the main features of the area in relation to the science behind the technology (these will be the criteria on which you will make your evaluation). Explains how each of these features has had an influence on the progress of the science behind the technology. Writes an explicit conclusion without specifically giving an evaluation.</p>

Lifeskills Marking Guidelines.

Check your assessment booklet for the PHS Assessment Policy

	SCLS6-12 investigates technologies used in science
A (9 - 10)	Shows the chronological development in detail of a specific technology or device over time. Includes extensive details about how the newer models are improvements on the older models. Provides some details about some of the science understanding that is used in the technology.
B (7 - 8)	Shows the chronological development of a specific technology or device over time. Includes some details about how the newer models are improvements on the older models. Provides some details about some of the science understanding that is used in the technology.
C (5 - 6)	Shows a few steps in the development of a technology or device over time and concluding with the most recent model. Explains some of the improvements.
D (3 - 4)	Shows a limited number of steps in the development of a technology or device over time. Describes some of the improvements.
E (0 - 2)	Shows a limited number of steps in the development of a technology or device over time. Identifies some of the improvements.

<p style="text-align: center;">Senior ALARM Steps 10 – 12</p> <p style="text-align: center;">Which verb is used in the question? Follow the steps in the column that correspond to that verb.</p>				To what extent is the impact effective?
		What is the impact? How does this relate to the set criteria/main idea?	What is the impact? How does this relate to the set criteria/main idea?	What is the impact? How does this relate to the set criteria/main idea?
		What is the function or purpose? What is the effect of component? Give evidence. 'Why' <u>may</u> need to be addressed.	What is the function or purpose? What is the effect of component? Give evidence. 'Why' <u>may</u> need to be addressed.	What is the function or purpose? What is the effect of component? Give evidence. 'Why' <u>may</u> need to be addressed.
	What are the features and characteristics?	What are the features and characteristics?	What are the <u>features</u> and characteristics?	What are the features and characteristics?
What is the main component?	What is the main component?	What is the main component?	What is the main component?	What is the main component?
IDENTIFY (Main Concept)	DESCRIBE	EXPLAIN/ANALYSE	CRITICALLY ANALYSE	EVALUATE

Designed and developed by Blaxland High's A.L.A.R.M. team