Completing the Science in Society Investigation

Over the course of three weeks, students will be engaged in three activities that contribute to the generation of their evidence of learning and achievement in the Science in Society Investigation:

A. Initiating research   B. Communicating findings

C. Evaluating the information to respond to the chosen research question

Students must work *underlined individually* to conduct this investigation but they should be encouraged to discuss, in small groups, various aspects of their investigation.

A. Initiating Research

1. Choose the topic

The SSI requires students to investigate a scientific topic or issue and its impact (positive or negative) on society and/or the environment. The chosen topic may be directly related to specific course content or students may decide to study an issue of personal or local relevance, provided it is related to the areas outlined below. It is important that the topic chosen can be researched, has a sound base of scientific understanding and ideas, and can be turned into a question. In many SSIs there may be two or more views of the topic or issue, and students should be encouraged to consider more than one point of view. The chosen topics should relate to the following areas:

A technological application of science	An application of science that has an effect on human health
An application of science that has an effect on the environment	An application of science that has an effect on society

2. Decide the specific research question

Research should be focused on a response to a clearly-defined research question. To help students develop their research question, they could:

- Decide what they want to know about the chosen topic
- Turn what they want to know into a question
- Check to make sure that the question can be answered - that it's not too broad or too narrow.
- Gather and record research information

B. Communicating Findings

- Gather data/information from the internet, newspapers, science journals/magazines, surveys, investigations, etc.

- Select information (e.g. written text, audio/visual recording, interview notes, charts, tables, survey responses, observations, diagrams) relevant to developing a response to the stated research question

- Record the source of all the information gathered in order to assess its reliability and quality (relevance, accuracy and bias) and to ensure that the sources of information used can be referenced in their report

- Position the topic as science in society and discuss the impact of the topic on society and/or the environment, and/or its personal or local relevance

- Explain, in the student's own words, scientific knowledge and ideas relevant to their topic

- Explain in their own words different viewpoints and sides of the argument

Information should not be taken verbatim from sources; it is important for students to be able to explain the information in their own words to demonstrate their personal understanding of the knowledge and ideas relevant to the chosen topic.

C. Evaluating the Information to Respond to the Chosen Research Question

The following steps can support students in developing a personal opinion that is justified on the basis of the selected information:

- Check which sources agree/disagree with each other

- Consider the information from different points of view

- Make judgements about how the information supports, or does not support, a particular response to the research question.

Students must work *individually* to compile the report of their investigation. Students will report their research and findings in a format of their choice. If a typed or hand-written report is the format of their choice, the total length of a written report would typically be in the 650-800 words range (excluding reference list and research notes), but this should not be regarded as a rigid requirement.

When planning the content of their report, students should be familiar with the Features of Quality used to judge the level of achievement which will be awarded to their work.