**GCSE AQA Physics – Specification Plan**

1. **Development of Scientific Thinking**

|  |  |
| --- | --- |
| **Students should be able to:** | **Examples of what students could be asked to do in an exam** |
| WS 1.1 Understand how scientific methods and theories develop over time. | Give examples to show how scientific methods and theories have changed over time.  Explain, with an example, why new data from experiments or observations led to changes in models or theories.  Decide whether or not given data supports a particular theory. |

|  |  |
| --- | --- |
| WS 1.3 Appreciate the power and limitations of science and consider any ethical issues which may arise. | Explain why data is needed to answer scientific questions, and why it may be uncertain, incomplete or not available.  Outline a simple ethical argument about the rights and wrongs of a new technology. |
| WS 1.4 Explain everyday and technological applications of science; evaluate associated personal, social, economic and environmental implications; and make decisions based on the evaluation of evidence and arguments. | Describe and explain specified examples of the technological applications of science.  Describe and evaluate, with the help of data, methods that can be used to tackle problems caused by human impacts on the environment. |
| WS 1.5 Evaluate risks both in practical science and the wider societal context, including perception of risk in relation to data and consequences. | Give examples to show that there are hazards associated with science-based technologies which have to be considered alongside the benefits.  Suggest reasons why the perception of risk is often very different from the measured risk (eg voluntary vs imposed risks, familiar vs unfamiliar risks, visible vs invisible hazards). |
| WS 1.6 Recognise the importance of peer review of results and of communicating results to a range of audiences. | Explain that the process of peer review helps to detect false claims and to establish a consensus about which claims should be regarded as valid.  Explain that reports of scientific developments in the popular media are not subject to peer review and may be oversimplified, inaccurate or biased. |

**4.1.3 National and global energy resources**

**Table

Description automatically generated**

**Table

Description automatically generated with medium confidence**

**Graphical user interface, text, application

Description automatically generated**

**Table

Description automatically generated**

**4.4.2 Atoms and nuclear radiation**

**Table

Description automatically generated**

**Graphical user interface, text, application

Description automatically generated**

**A picture containing table

Description automatically generated**

**Table

Description automatically generated with medium confidence**

**Text

Description automatically generated with medium confidence**

**Graphical user interface, text, application

Description automatically generated**

**Table

Description automatically generated**

**Graphical user interface, text, application

Description automatically generated**

**Graphical user interface, text, application

Description automatically generated**

**Text, application

Description automatically generated with medium confidence**

**A picture containing table

Description automatically generated**