**06 – SCIENCE AS A HUMAN ENDEAVOUR *Learning Intentions***

| **I understand and can explain, with examples, that…** | **What this means…** | **Mastery Check** |
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| **6.1 – Communication and Collaboration** |  |  |
| **6.1.1** Science is a global enterprise that relies on clear communication, international conventions, and review and verification of results. | * *Science is a worldwide body of knowledge and process* * *Globally, people need to be able to share info and findings to help each other* * *Science needs a language and rules etc that are understood everywhere* * *Findings need to be reviewed and verified by others in other countries* |  |
| **6.1.2** Collaboration between scientists, governments, and other agencies is often required in scientific research and enterprise. | * *Science only works when there is joint effort and sharing between labs and scientists and governments from all over the world* |  |
| **6.2 – Development** |  |  |
| **6.2.1** Development of complex scientific models and/or theories often requires a wide range of evidence from many sources and across disciplines. | * *To make sophisticated science theories and models you need a lot of evidence collected from many places and from various areas of research and study (e.g. biology + psychology + nanoscience)* |  |
| **6.2.2** New technologies improve the efficiency of scientific procedures and data collection and analysis. This can reveal new evidence that may modify or replace models, theories, and processes. | * *Science should keep improving in its ability to help and explain – and new technology development is key to this (e.g. better instruments, etc).* * *New findings keep updating and refining theories and ways of doing things* |  |
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| **6.3 – Influence** |  |  |
| **6.3.1** Advances in scientific understanding in one field can influence and be influenced by other areas of science, technology, engineering, and mathematics. | * *All the different fields of knowledge can feed into the other ones – when discoveries and improvements are made in one area this may help develop another area* |  |
| **6.3.2** The acceptance and use of scientific knowledge can be influenced by social, economic, cultural, and ethical considerations. | * *Science is viewed and used differently by people around the world because of what they are like and where they come from* * *People’s philosophical differences and circumstances will impact how scientific processes and knowledge is used and treated* |  |
| **6.4 – Application and Limitation** |  |  |
| **6.4.1** Scientific knowledge, understanding, and inquiry can enable scientists to develop solutions, make discoveries, design action for sustainability, evaluate economic, social, cultural, and environmental impacts, offer valid explanations, and make reliable predictions. | * *Science can be used to solve all sorts of problems* * *It can be used to make great discoveries* * *It can be used to help make decisions to help us live sustainably* * *It can be used to find out and modify our impact a wide range of things* * *It can be used to help explain things and to predict what might happen (in lots of applications)* |  |
| **6.4.2** The use of scientific knowledge may have beneficial or unexpected consequences; this requires monitoring, assessment, and evaluation of risk, and provides opportunities for innovation. | * *We don’t always know what impact science developments will have, either positively or negatively (things we didn’t expect)* * *Since this is the case we need to keep assessing and evaluating to keep innovating for good* |  |
| **6.4.3** Science informs public debate and is in turn influenced by public debate; at times, there may be complex, unanticipated variables or insufficient data that may limit possible conclusions. | * *Science influences how people think about issues* * *Science is influenced by how people think about issues* * *Science is sometimes limited because there is too much complexity or because there are things we just don’t know* |  |