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| **Investigating Science Summary Scaffold - Module 6** |
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| **Inquiry Question 1: How does technology enhance and/or limit scientific investigation?** |
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| Identify the variables and how you measured them quantitatively in an experiment you conducted to test the effect of temperature on reaction rate |
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| Describe the relationship between temperature and reaction rate shown in your data |
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| Evaluate the limitations of the technology used in the temperature v reaction rate investigation |
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| Identify the variables and how you measured them quantitatively in an experiment you conducted to test the effect of pressure on gas volume |
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| Describe the relationship between pressure and gas volume shown in your data |
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| Evaluate the limitations of the technology used in the investigation used in the pressure v gas volume investigation |
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| Identify the variables and how you measured them quantitatively in an experiment you conducted to test the effect of temperature on the volume of gas |
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| Describe the relationship between temperature and volume of a gas shown in your data |
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| Evaluate the limitations of the technology used in the temperature v gas volume investigation |
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| Identify the variables and how you measured them quantitatively in an experiment you conducted to test the effect of speed on distance travelled |
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| Describe the relationship between speed and distance travelled shown in your data |
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| Evaluate the limitations of the technology used in the investigation used in the speed v distance travelled investigation |
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| With reference to the uncertainty of measurement, compare the accuracy of an analogue and digital technology used in one of the investigations listed |
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| 1. attach a chemical SDS of your choosing and highlight the important information found in the SDS  2. complete an industry standard risk assessment for one of the investigations listed  3. tabulate the types of errors that can occur in an investigation, their causes and an example |
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| **Inquiry Question 2: How have developments in technology led to advances in scientific theories and laws, that in turn drive the need for further developments in technology?** |
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| Evaluate the impact of computer simulations and models of the Earth’s geological history |
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| Assess the impact of X-Ray diffraction on the discovery of DNA |
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| Assess the impact of technology to detect radioactivity and the development of atomic theory |
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| Assess the impact of the Hadron Collider on the discovery of the Higgs Boson |
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| Assess the impact of knowledge about radioactive decay and radioactivity on the development of radiotherapy and nuclear bombs |
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| Assess the impact of the laws of refraction and reflection on the development of the microscope and telescope |
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| Describe examples of materials made from plants by ATSI peoples |
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| Describe examples of plants used for medicinal purposes by ATSI People |
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| Assess the impact of Newton’s laws on the development of technology to build buildings capable of withstanding Earthquakes |
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| Outline ethical factors that need to be considered by pharmaceutical companies before bioharvesting native plants and using Indigenous knowledge about plants to develop new pharmaceuticals |
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| Compare and contrast the ethical treatment of ATSI knowledge in the commercialisation of Tea Tree and Sandalwood plants for medicinal purposes |