

LEARNING GOALS and SUCCESS CRITERIA

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| **Year:** | | **8** | **Unit:** | **Energy** | | | | |
| **Subject:** | | **Science** | **Assessment:** | **Student Experiment - Rollercoasters** | | | | |
| **LG** | **LG and SUCCESS CRITERIA** | | | | **I feel confident with this… (Date/Ref)** | **I only need a little help with this** | **I can do some of this but need a lot of help** | **I don’t know this at all-yet!** |
| **1**  3 Lessons | **SC1** | I can **identify** the different energy types in practical examples | | |  |  |  |  |
| **SC2** | I can **list** common forms of energy I engage with in my daily lives | | |  |  |  |  |
| **SC3** | I can **identify** different forms of energy and identify them as potential or kinetic | | |  |  |  |  |
| **LG1** | **Students are able to identify different forms of energy** | | |  |  |  |  |
| **2**  6 Lessons | **SC4** | I can **define** kinetic energy as the energy possessed by a moving body and give 3 examples | | |  |  |  |  |
| **SC5** | I can **define** potential energy as the energy that is stored and give an example of gravitational, chemical and elastic energy. | | |  |  |  |  |
| **SC6** | I can **describe** the role of kinetic and potential energy in an everyday simple system (e.g. mobile phone, bow and arrow) | | |  |  |  |  |
| **SC7** | I can **understand** that an object’s mass will determine the object’s kinetic energy | | |  |  |  |  |
| **SC8** | I can **understand** that an object’s mass and height above the ground will determine that object’s potential energy (gravitational) | | |  |  |  |  |
| **SC9** | I can **investigate** traditional fire-starting methods used by Aboriginal and Torres Strait Islander Peoples | | |  |  |  |  |
| **LG2** | **Students are able to identify and describe types of kinetic and potential energy in simple systems** | | |  |  |  |  |
| **3**  3 Lessons | **SC10** | I can **identify** forms of energy, including wasted energy | | |  |  |  |  |
| **SC11** | I can **describe** how energy transfers and transformations cause changes in simple systems | | |  |  |  |  |
| **SC12** | I can **construct** an energy flow diagram of a simple system | | |  |  |  |  |
| **SC13** | I can **use** an energy flow diagram to describe energy changes in a simple system | | |  |  |  |  |
| **LG3** | **Students are learning to construct diagrams to represent energy transfers and transformations in simple systems** | | |  |  |  |  |
| **4**  12 Lessons | **SC14** | I can **identify** questions to be investigated scientifically | | |  |  |  |  |
| **SC15** | I can **predict** the expected results from an investigation using information and knowledge from my own investigations and secondary sources. | | |  |  |  |  |
| **SC16** | I can **consider** potential hazards of equipment and chemicals used in an experimental investigation. | | |  |  |  |  |
| **SC17** | I can **identify** and **explain** the difference between controlled, dependent and independent variables. | | |  |  |  |  |
| **SC18** | I can **select** equipment appropriate to the task and collect data with accuracy | | |  |  |  |  |
| **SC19** | I can **construct** tables and graphs to present data, using digital technology as appropriate | | |  |  |  |  |
| **SC20** | I can **calculate** the average of a number of trials, and **analyse** tables and graphs for trends and patterns. | | |  |  |  |  |
| **SC21** | I can **evaluate** and **consider** how investigation methods and equipment may influence the reliability of collected data and describe and explain improvements to the experiment | | |  |  |  |  |
| **SC22** | I can **compare** conclusions with earlier predictions and review my scientific understanding. | | |  |  |  |  |
| **SC23** | I can **present** and **explain** my results and findings using an experimental report. | | |  |  |  |  |
| **LG4** | **Students will be able to investigate and communicate scientifically the energy flow through a simple system.** | | |  |  |  |  |