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| **Year:** | **7** | **Unit:**  | **Physical Science – Crashing Back to Earth** |
| **Subject:** | **Science** | **Assessment:**  | **Assignment** |
| **LG** | **LEARNING GOALS and SUCCESS CRITERIA** | **I feel confident with this…** | **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**7 Lessons | **SC1** | I can **define** the term force and identify the forces *push, pull* and *twist*. |  |  |  |  |
| **SC2** | I can **explain** the difference between contact and non-contact forces. |  |  |  |  |
| **SC3** | I can **represent** forces diagrammatically (using *free-body diagrams*). |  |  |  |  |
| **SC4** | I can **identify** and **explain** the difference between balanced and unbalanced forces,  |  |  |  |  |
| **SC5**  | I can **investigate** common situations where forces are balanced (eg: stationary objects), and unbalanced (eg: falling objects)  |  |  |  |  |
| **SC6** | I can **investigate** the effects of applying different forces to familiar objects. |  |  |  |  |
| **LG1** | **Students will understand that forces affect the motion of objects.** |  |  |  |  |
| **2** 6Lessons | **SC7** | I can **explain** that gravity pulls objects towards the centre of the Earth, and **consider** how it keeps planets in orbit around the sun. |  |  |  |  |
| **SC8** | I can **use** appropriate equipment to measure force. |  |  |  |  |
| **SC9** | I can **explain** how *mass, weight and gravitational force* are related. |  |  |  |  |
| **SC10** | I can **understand** what the centre of gravity is and how it relates to objects and their movement |  |  |  |  |
| **LG2** | **Students will understand that gravity affects objects on the surface of the Earth.** |  |  |  |  |
| **3**8Lessons | **SC11** | I can **identify** that *friction* is a force that acts in the *opposite direction* to movement or intended movement. |  |  |  |  |
| **SC12** | I can **investigate** and **draw conclusions** about the effects of friction on motion. |  |  |  |  |
| **SC13** | I can **identify** that *air resistance* is a frictional force that opposes movement through air. |  |  |  |  |
| **SC14** | I can **explain** the relationship between air resistance, drag and vehicle design. |  |  |  |  |
| **LG3** | **Students will understand that friction can affect forces in a number of ways** |  |  |  |  |
| **4**7 Lessons | **SC15** | I can **identify** and **investigate** different types of simple machines and their uses, such as the bow and arrows used by Torres Strait Islander Peoples or the spear throwers used by Aboriginal Peoples. |  |  |  |  |
| **SC16** | I can **investigate** how different simple machines work, such as lever or pulley systems |  |  |  |  |
| **SC17** | I can **demonstrate** that complex mechanical systems may be a combination of simple machines. |  |  |  |  |
| **SC18** | I can **understand** that simple machines reduce the amount of force needed to complete a task. |  |  |  |  |
| **SC19** | I can **explain** the role of safety features and how they reduce the effects of forces, Eg: relating regulations about wearing seatbelts or safety helmets to knowledge of forces and motion |  |  |  |  |
| **LG4** | **Students will understand that science and technology contribute to finding solutions to a range of contemporary issues.** |  |  |  |  |