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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**  6  Lessons | **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**  8  Lessons | **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.** | | |  |  |  |  |