Science Year 7 Overview

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | Week 1 | Week 2 | Week 3 | Week 4 | | Week 5 | Week 6 | Week 7 |
| Au Term 1 | Introduction to Science | | 10 Powerful Ideas | | | | | Baseline |
| Au Term 2 | Organisms | | | | | | | Matter |
| Sp Term 1 | Matter | | | Forces | | | |  |
| Sp Term 2 | Forces | | Learning Review 1 | | Energy | | |  |
| Su Term 1 | Energy | | | | | Genes | |  |
| Su Term 2 | Genes | | | | Learning Review 2 | Re-Teach / Adaptative teaching time | |  |

Curriculum Statements

Organisms

Students know and remember the names, functions, adaptations and differences between plant and animal cells. They understand how to use a light microscope to observe cell features. Students know and remember the structure and functions of the skeletal and muscular systems. They can use this knowledge to explain the role of antagonistic muscles. Students know and remember the effects of recreational drugs on behaviour and health.

Matter

Students know and remember the states of matter. They can use the particle model to explain the properties of solids, liquids and gases. They then use this model to explain changes of state and diffusion.

Forces

Students also know the difference between contact and non-contact forces and balanced and unbalanced forces. Students know and remember how to calculate resultant force and be able to explain the effect of this overall force.

Students know the effect of drag on the motion of objects and can also describe the difference between mass and weight.

Students know how to carry out practical investigations and use data to explain how forces affect the extension of an elastic object.

Energy

Students know that energy can be described as being in different ‘stores’ and know these stores. Students understand that energy can be transferred between these stores and that energy is conserved. Students know how to describe the energy transfers between stores in objects that are speeding up, falling and being stretched. Students also know how to calculate the cost of energy in the home; understand work done; and understand the difference between renewable and non-renewable resources.

Genes

Students will know and remember the structure of the human reproductive system, including the menstrual cycle. Students can use this knowledge to describe fertilisation in humans, how a foetus develop, and will consider the effects of various substances on a developing foetus.