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| **Class** | **Biology** | **Chemistry** | **Physics** | **Working Scientifically** |
| **2** | Plants * Identify, classify and describe their basic structure.

Animals and humans* Identify, classify and observe.
 | Materials * Identify, name, describe, classify, compare properties and changes.
 | Seasonal Changes* Observe seasonal changes.
* Observe changes across the four seasons
* Observe and describe weather associated with the seasons and how day length varies.
 | Across all year groups scientific knowledge and skills should be learned by working scientifically. (This is documented in the Essentials for progress section.)Across all year groups scientific knowledge and skills should be learned by working scientifically. (This is documented in the Essentials for progress section.)Across all year groups scientific knowledge and skills should be learned by working scientifically. (This is documented in the Essentials for progress section.)Across all year groups scientific knowledge and skills should be learned by working scientifically. (This is documented in the Essentials for progress section.) |
| **3** | Plants * Observe and describe growth and conditions for growth.

Animals and humans * Look at growth, basic needs, exercise, food and hygiene.
 | Materials * Look at the practical uses of everyday materials.
 | Forces* compare how things move on different surfaces

Seasonal Changes* Observe seasonal changes.
* Observe changes across the four seasons
* Observe and describe weather associated with the seasons and how day length varies.
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| **4** | Plants * Observe and describe growth and conditions for growth.

Habitats * Look at the suitability of environments and at food chains.

Animals and humans * Investigate differences.
 | Materials * Look at the practical uses of everyday materials.
 | Light* Look at sources and reflections.
* Earth and space Observe seasonal changes.

Electricity* Electricity Look at appliances and circuits.
* Safety with electricity
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| **7** | Animals and humans* Look at nutrition, transportation of water and nutrients in the body, and the muscle and skeleton system of humans and animals.
* Look at teeth.
 | Light* Look at sources, seeing, reflections and shadows
* Recognise that light appears to travel in straight lines
* use the idea that light travels in straight lines to explain that objects are seen because they give out or reflect light into the eye
 | Rocks* Compare and group together different kinds of rocks on the basis of their appearance and simple physical properties
* Describe in simple terms how fossils are formed when things that have lived are trapped within rock
* Recognise that soils are made from rocks and organic matter.
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| **8** | Plants* Look at the function of parts of flowering plants, requirements of growth, water transportation in plants, life cycles and seed dispersal. Evolution and inheritance
 | Light* Explain that we see things because light travels from light sources to our eyes or from light sources to objects and then to our eyes
* Use the idea that light travels in straight lines to explain why shadows have the same shape as the objects that cast them.
 | Forces* Look at contact and distant forces, attraction and repulsion
* Describe magnets as having two poles predict whether two magnets will attract or repel each other, depending on which poles are facing.
* Looks at poles, attractions and repulsion
* Look at gravity and drag
* Look at gears, pulleys and levers.
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| **9** | Animals and humans* Look at nutrition, transportation of water and nutrients in the body, and the muscle and skeleton system of humans and animals.
* Look at the digestive system in humans. Evolution and inheritance
* Look at changes to the human skeleton over time. All living things
* Look at the life cycle of animals and plants.
 | Materials* Examine the properties of materials using various tests. Look at solubility and recovering dissolved substances. Separate mixtures.
* Examine changes to materials that create new materials that are usually not reversible.
 | Electricity* Identify common appliances that run on electricity
* Construct a simple series electrical circuit, identifying and naming its basic parts, including cells, wires, bulbs, switches and buzzers
* Identify whether or not a lamp will light in a simple series circuit, based on whether or not the lamp is part of a complete loop with a battery
* Recognise that a switch opens and closes a circuit and associate this with whether or not a lamp lights in a simple series circuit

Earth and space * Look at the movement of the Earth and the Moon.
* Explain day and night.
* Describe the movement of the Earth, and other planets, relative to the Sun in the solar system
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| **10** | All living things* Identify and name plants and animals'
* Look at the life cycle of animals and plants.
* Look at the effect of diet, exercise and drugs.
 | Materials * Look at solubility and recovering dissolved substances.
* Separate mixtures
* Examine changes to materials that create new materials that are usually not reversible.
 | Sound * Look at sources, vibration, volume and pitch

Earth and space * Describe the Sun, Earth and Moon as approximately spherical bodies
* Use the idea of the Earth’s rotation to explain day and night and the apparent movement of the sun across the sky.
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| **11** | Evolution and Inheritance* Look at the human circulatory system. Evolution and inheritance
* Look at resemblance in offspring.
* Look at changes in animals over time.
* Look at adaptation to environments.
* Look at differences in offspring.
* Look at adaptation and evolution

All living things* Look at classification of plants, animals and micro-organisms.
* Look at classification keys
 | All living things* Look at classification of plants, animals and microorganisms.
* Look at the effect of diet, exercise and drugs.
 | Electricity * Look at circuits, the effect of the voltage in cells and the resistance and conductivity of materials.
* Use recognised symbols when representing a simple circuit in a diagram.
* Compare and give reasons for variations in how components function, including the brightness of bulbs, the loudness of buzzers and the on/off position of switch

Light* Explain that we see things because light travels from light sources to our eyes or from light sources to objects and then to our eyes
* Use the idea that light travels in straight lines to explain why shadows have the same shape as the objects that cast them.
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