Year 5 Science

	The Human Life Cycle	Forces	Changes of Materials	Material Properties	Earth and Space	Studying Living Things	End of Year Target
M							
%							
S							
%							
D							
%							
E							
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Term	Progress	Topic	Experiment Skills
Autumn	**What are you most confident with?**		☐ Predicting ☐ Listing equipment ☐ Writing a method ☐ Results Table
	What do you need to develop?		☐ Predicting ☐ Listing equipment ☐ Writing a method ☐ Showing results in a table or graph ☐ Describing results ☐ Writing a conclusion ☐ Suggesting improvements (Evaluation)
Spring	**What are you most confident with?**		☐ Predicting ☐ Listing equipment ☐ Writing a method ☐ Showing results in a table or graph ☐ Describing results ☐ Writing a conclusion ☐ Suggesting improvements (Evaluation)
	What do you need to develop?		☐ Predicting ☐ Listing equipment ☐ Writing a method ☐ Showing results in a table or graph ☐ Describing results ☐ Writing a conclusion ☐ Suggesting improvements (Evaluation)
Summer	**What are you most confident with?**		☐ Predicting ☐ Listing equipment ☐ Writing a method ☐ Showing results in a table or graph ☐ Describing results ☐ Writing a conclusion ☐ Suggesting improvements (Evaluation)
	What do you need to develop?		☐ Predicting ☐ Listing equipment ☐ Writing a method ☐ Showing results in a table or graph ☐ Describing results ☐ Writing a conclusion ☐ Suggesting improvements (Evaluation)

	Emerging	Developing	Secure	Mastery
The Human Life Cycle	**Recall** all children grow **Recognise** some key signs of ageing in humans	**Suggest** at least one change during puberty **Describe** the changes as humans develop to old age, with support	**Identify** changes that take place during puberty to boys and girls **Describe** the changes as humans develop to old age	**Compare** the human life cycle with another mammal **Link** data with scientific thinking on growth
Forces	**Compare** how things move on different surfaces **Notice** that some forces need contact between 2 objects **Draw** a diagram of the forces acting on a parachute	**Draw** a diagram of the forces acting on a parachute **Describe** how friction acts on object **Describe** examples of simple mechanisms	**Draw** an accurate diagram of forces & **explain** their action **Identify** the effects of air resistance, water resistance and friction **Recognise** that the effect of simple machines and mechanisms	**Draw** an accurate diagram of the forces acting on a parachute and **explain** their purpose **Identify** the similarities and differences between air and water resistance and explain **Recognise** and **explain** the effect of simple machines and mechanisms
Changes of Materials	**Identify** rusting as an irreversible change **Identify** methods for reversing a physical change **Name** some irreversible changes	**Describe** how to recover a substance from a solution, with support **Demonstrate** knowledge of a reversible change **Describe** an irreversible change	**Describe** how to recover a substance from a solution **Demonstrate** that dissolving, mixing and changes of state are reversible changes **Explain** that some changes result in the formation of new materials	**Evaluate** the strengths and weaknesses of a recovery method and **suggest** improvements **Explain** why a change is irreversible and **identify** new products have been made **Explain** why rusting is an irreversible change, and how to prevent it
Properties of Materials	**Define** "dissolve" **Sort** materials according to their properties **Know** that some materials will dissolve in liquid to form a solution	**Group** together everyday materials on the basis of their properties **Describe** what happens when a substance dissolves **Describe** when filtering and sieving can be used	**Compare** and **group** together everyday materials on the basis of their properties **Describe** how a variety of mixtures can be separated **Give reasons** for use of everyday materials	**Describe** and **explain** how a variety of mixtures can be separated **Apply** results to **explain** how the properties of materials enable them to be suitable for a specific task
Earth and Space	**Recall** the order of the planets from the Sun **State** how Earth moves in space **Recall** the movement of the Moon	**Describe** key characteristics of a planet **State** how the Sun transitions across the sky **Identify** similarities and differences of the planets	**Describe** the Sun, Earth, moon as spheres **Describe** how night and day happen **Describe** the movement of the Moon relative to the Earth	**Describe** the Sun, Earth, moon and other celestial bodies as spheres **Compare** how night and day happen **Explain** that Moon's orbit
Studying Living Things	**State** the three types of mammals **Recall** key stages from the life cycle of an insect or amphibian **State** the importance of studying living organisms	**Describe** what a life cycle is **Describe** the life cycle of an insect or amphibian **Identify** important facts about studying living organisms	**Articulate** what a life cycle is giving examples **Describe** the life cycle of an amphibian and insect **Describe** the differences between a mammal and a bird or reptile life cycle **Report** about 2 key members of the scientific community	**Compare** the process of metamorphosis in amphibians and insects **Describe** the similarities and differences between a mammal and a bird or reptile life cycle **Explain** the importance of animal conservation, giving research examples.

KS2 Science – Year 5

Summer 2

STEM Challenges

- Too tall tower
- Paper Chain Challenge
- Making Ice Cream
- Theme Park Maps
- STEM Heroes

Onwards to Year 6 Science

Summer 1

Studying Living Things

- Bird and reptiles
- Mammal recap
- Jane Goodall and David Attenborough
- Insect and amphibian
- Plant reproduction

Earth and Space

- Phases of the Moon
- Movement of Earth in Space
- The Planets
- Time Zones
- Motion of planets

Spring 2

Properties of Materials

- Properties of materials
- Thermal Properties
- Hardness
- Solubility in water
- Separation investigation

Changes of Materials

- Burning reactions
- Reactions of bicarbonate of soda
- Irreversible
- Rusting
- Reversible
- Separating mixtures
- States of matter

Spring 1

Forces

- Sir Isaac Newton
- Air Resistance
- Friction
- Gears
- Gravity
- Water resistance
- Levers and Pulleys

Autumn 2

Animals including Humans

- Old Age
- Childhood Changes
- Gestation
- Puberty changes
- Foetal Development
- Mammal's Life Cycle

YEAR 5

= Chemistry
= Biology
= Physics

Welcome