KS2 UPPER SCIENCE CURRICULUM OVERVIEW FOR PARENTS

Science in Upper Key Stage 2 builds independence and confidence. Children explore more complex ideas, plan their own investigations, and use results to explain how and why things happen. They learn that scientific discoveries help us understand and care for the world.

Biology

EVOLUTION AND INHERITANCE

- Find out that living things produce offspring with similarities and differences.
- Explore how animals and plants adapt to their environment.
- Learn how fossils provide clues about life on Earth millions of years ago.

🦴 **Children understand how life evolves and adapts over time.**

ANIMALS, INCLUDING HUMANS

- Learn how the human body changes as we grow and age.
- Explore how the heart and circulatory system work to keep us alive and healthy.
- Discover how diet, exercise and lifestyle affect wellbeing.
- Understand the effects of drugs and substances on the body.

Children learn how their bodies work and how to look after them.

LIVING THINGS

- Group plants and animals based on the features and similarities.
- Learn about life cycles in plants, mammals, amphibians, insects and bird
- Explore how living things grow, reproduce and change.
- Find out how environments can change naturally or through human actions.

Children develop respect and understanding for all living things and the habitats they depend on.

Physics

EARTH AND SPACE

- Learn about the movement of the Earth, Sun and Moon.
- Understand how this creates day, night and seasons.
- Explore the planets of the solar system and their orbits.

Children gain a sense of wonder about our place in the universe.

LIGHT

- Learn that light travels in straight lines.
- Understand how we see objects and how shadows are formed.
- Explore how light reflects and how mirrors and lenses change the direction of light.

Children see how light helps us understand vision, reflection and colour.

FORCES

- Find out about different types of forces such as gravity, air resistance and friction.
- See how levers, pulleys and gears make work easier.
- Explore how forces help us move, lift and build.
- **Children understand how invisible forces affect movement in the world around them.**

Chemistry

ELECTRICITY

- Build circuits using wires, bulbs, switches and motors.
- Test how changing parts of a circuit affects brightness or speed.
- Learn to use circuit symbols when drawing diagrams.

Children explore how electricity powers our everyday lives safely and efficiently.

MATERIALS

- Test materials to see if they are strong, flexible, waterproof or good conductors.
- Investigate how materials dissolve, mix and separate.
- Discover which changes can be reversed (like freezing water) and which are permanent (like burning wood).

Children explore how materials behave, change and are used for different purposes.

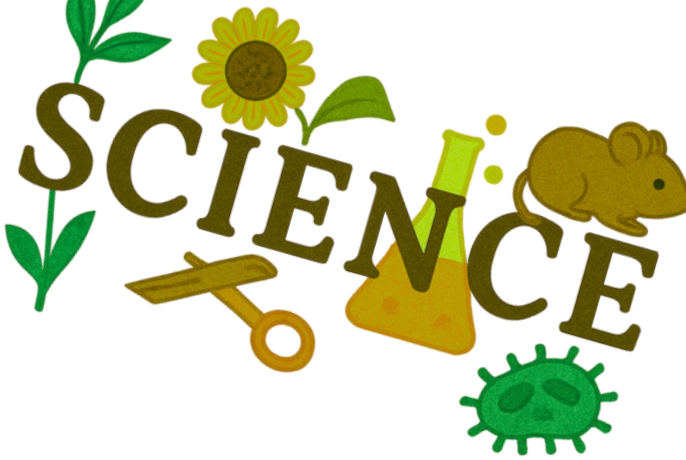
Throughout all topics, children will learn how to:

- Plan fair tess and choose the best way to find answers.
- Use equipment carefully to measure accurately.
- Record results in charts, graphs and diagrams.
- Look for patterns and relationships in their findings.
- Explain what their evidence shows and why it matters.

Science helps children:

- Think carefully about how and why things happen.
- Work scientifically and explain their reasoning clearly.
- See how science connects to technology, health and the environment.
- Develop curiosity, creativity and confidence as lifelong learners.

KS2U How can I help my child at home?



Encouraging curiosity, conversation and connection helps your child think like a scientist — asking questions, testing ideas, and understanding the world more deeply.

Talk about recycling, water use, and how choices affect the planet.

Experiment safely at home
Try investigations like how shadows change during the day, how plants grow best, or which materials insulate heat.

Encourage questioning and reasoning
When they ask “why?”, help them think of ways to find out — look for evidence, compare ideas, and discuss possibilities.

Connect learning to the wider world
Talk about real-life science — renewable energy, weather, space exploration, or health — and why it matters.

Discuss how scientists, engineers, doctors, and inventors use science in their work.