Science Curriculum Plan

Links to Research		
Publication	**Selected Recommendations**	**How are we applying these to our Curriculum?**
Research review series: Science (Ofsted 2021) accessed from: https://www.gov.uk/government/publications/research-review-series-science/research-review-series-science#curriculum-progression-what-it-means-to-get-better-at-science	• Teachers and teaching assistants have access to high-quality subject-specific CPD to develop subject knowledge and pedagogical content knowledge. This is aligned to the curriculum. • In primary schools, there is at least one teacher who specialises in teaching science and science leaders have dedicated leadership time. • Timetables allocate appropriate teaching time to science, reflecting its status as a core subject in the national curriculum. There are particular concerns that pupils in some primary schools are not receiving sufficient curriculum time to learn science. • Pupils have access to sufficient practical resources to take part in demanding practical work, either	• The science leader and teachers undertake regular CPD through courses and staff meetings. The science leader has dedicated leadership time to support CPD. The science leader, and the whole school, are working towards renewal of the Primary Science Quality Mark. • In Key Stages 1 and 2, children have science lessons for a whole afternoon each week. • In EYFS, children have regular opportunities to access science through Knowledge and Understanding of the World teacher-led inputs. • Children have regular access to practical resources in lessons, with a dedicated budget for the science curriculum to update and replenish resources as and when necessary.

Published: November 2022
Next review: November 2023

	independently or in appropriately sized groups that enable first-hand experiences.	
The 10 Key Issues with children's learning in Primary Science in England (March 2021) Accessed from: https://www.scienceacrossthecity.co.uk/wp-content/uploads/2021/03/3634_Childrens_Learning_in_Primary_Science_Report_2020_v8.pdf	• Children should develop a deep understanding of the big ideas in science. • Children should process and build on their prior learning. • Children's science learning should be challenging. • Practical work in science should be purposeful. • Children should have regular and repeated opportunities to develop skills in science.	• Our curriculum has been carefully planned with great consideration of "Why this? Why now?" to ensure it is sequential, allows for the development and progression of skills and is appropriate to class topics if possible. • Our curriculum ensures full National Curriculum coverage and regular opportunities to work scientifically and develop scientific skills.

Published: November 2022
Next review: November 2023

Introduction

We use Snap Science as a scheme to deliver our Science lessons. Our science curriculum plan has been designed to ensure a sequence of knowledge and concepts. In order to deliver the aims of our curriculum, we ensure all pupils in Key Stage One and Key Stage Two study science for a minimum of two hours each week. As science is a core subject, we teach lessons discretely (not necessarily connected to the class topic for the term). Pupils must develop secure understanding of each key block of knowledge and concepts in order to progress to the next stage. We aim to introduce pre-testing to allow children the opportunity to recall their previous learning and to identify pupils who would benefit from interventions to address any gaps or misconceptions in their learning. Our curriculum will ensure that all pupils develop scientific knowledge and conceptual understanding, work scientifically and develop higher-order thinking skills. We use different contexts to maximise pupils' engagement with and motivation to study science.

Published: November 2022
Next review: November 2023

We have thought carefully about the sequence in which our science knowledge is taught, as detailed below.

Key Stage One

How to use this document.

National Curriculum objectives: These objectives are taken directly from the National Curriculum for Science.

Working scientifically and guidance: 'Working scientifically' is described separately in the programme of study, but must always be taught through and clearly related to the teaching of substantive science content in the programme of study. Throughout the notes and guidance, examples show how scientific methods and skills might be linked to specific elements of the content. Notes highlighted in bold are included as teacher prompts for specific concepts.

Published: November 2022
Next review: November 2023

Ravensden Church of England Primary Academy

Science Curriculum Plan

KS1 – Cycle A

Term	Module
Autumn term 1	Everyday Materials (Y1) (identify, name, compare & group materials)
Autumn term 2	Light (Y1) (sources of light, day + night, movement of the sun)
Spring term 1	Animals including humans (Y1) (identify, describe & compare common animals including fish and birds, carnivore/herbivore)
Spring term 2	Living things and their habitats (Y2) (living/dead/never alive, how habitats provide basic needs for different animals and plants)
Summer term 1	Plants & Growth (Y2) (How do seeds & bulbs grow into plants? What do plants need to grow?)
Summer term 2	Humans (Y2) (exercise, hygiene & diet)

Published: November 2022
Next review: November 2023

KS1 – Cycle B

Term	Module
Autumn term 1	Materials (Y2) (uses of everyday materials, how the shapes of materials can be changed)
Autumn term 2	Seasonal Changes (Y1) (the four seasons, the weather, how day length varies)
Spring term 1	Humans (Y1) (body parts & the senses)
Spring term 2	Plants and Trees (Y1) (identify common plants & trees + describe plant and tree structure)
Summer term 1	Animals including humans (Y2) (animals and humans have offspring + needs for survival)
Summer term 2	Living things and their habitats (Y2) (identify plants & animals in their habitats, micro-habitats, food chains + food sources)

Published: November 2022
Next review: November 2023

KS2 – Cycle A

Term	Module
Autumn term 1	Electricity
Autumn term 2	Sound
Spring term 1	Animals including humans (food chains, predators & prey)
Spring term 2	Food webs and ecosystems
Summer term 1	Plants
Summer term 2	Animals including humans (nutrition & digestive system)

Published: November 2022
Next review: November 2023

KS2 – Cycle B

Term	Module
Autumn term 1	Light
Autumn term 2	States of matter + the water cycle
Spring term 1	Rocks
Spring term 2	Forces & Magnets
Summer term 1	Living things and their habitats
Summer term 2	Animals including humans (muscles & skeletons) Classification keys

Published: November 2022
Next review: November 2023

Upper KS2 – Cycle A

Term	Module
Autumn term 1	Earth and Space
Autumn term 2	Animals including humans (lifestyle)
Spring term 1	Living things and their habitats (life cycles and reproduction)
Spring term 2	Properties and Change of materials
Summer term 1	Forces
Summer term 2	Evolution and Inheritance

Published: November 2022
Next review: November 2023

Upper KS2 – Cycle B

Term	Module
Autumn term 1	Properties and changes of materials
Autumn term 2	Animals including humans (circulatory)
Spring term 1	Electricity
Spring term 2	Animals including humans (changes, growth & development)
Summer term 1	Light
Summer term 2	Evolution and Inheritance

Published: November 2022
Next review: November 2023