Gothic Mede Academy Science Curriculum 2026-2027

For our science curriculum we use the *Kapow Primary scheme of work*. It is taught via the following topics:

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Nursery	*All about me- me, my family* *How I have changed*	Bear Hut - habitats Winter weather observations and seasonal changes Light - linked to Festivals	Spring weather observations and seasonal changes The Arctic/ Antarctic - weather, animals, clothing	**Science week 9-13 March** *Observing changes experiments* *Planting* *Magnets* *Easter - melting chocolate*	*Under the Sea - habitats, aquatic animals, simple adaptation* Caring for our environment. Litter picking, recycling, planting, turning off lights and taps, reduce, reuse, making bird feeders *Superheroes - making potions (colour mixing liquids, observing changes)*	
Reception	**Visits to Forest School;** seasonal changes, exploration of natural world, weather, habitat, animals, plants, natural materials *Continuous provision and curriculum enhancement -Understanding of the World - Physical development*					
	Investigating Autumn & Harvest Little Red Hen - pizza and dough making	*Winter* *Materials-keeping warm*	*Healthy, happy me* *Colour*	**Science week** *Change and Adapt* *Dinosaurs*	*Planting - Jack and the Beanstalk* *Life Cycles* *Seaside holidays*	
Year 1	*Forces and space: Seasonal changes*	*Materials: Uses of everyday materials*	*Animals: Sensitive bodies*	**Science week** *Animals: Comparing animals*	*Plants: Introduction to plants*	*Making connections: Investigating science through stories*

Year 2	*Living things: Habitats*	*Living things: Microhabitats*	*Materials: Use of everyday materials*	**Science week** *Forces and space: Seasonal changes*	*Plants: Plants growth*	*Making connections: Plant-based materials*
Year 3	*Animals: Movement and nutrition*	*Forces and space: Forces and magnets*	*Materials: Rocks and soil*	**Science week** *Energy: Light and shadow*	*Plants: Plant reproduction*	*Making connections: Does hand span affect grip strength?*
Year 4	*Animals including humans: Digestion and food*	*Energy: Electricity and circuits*	*Materials: States of matter*	**Science week** *Energy: Sound and vibrations*	*Living things: Classification and changing habitats*	*Making connections: How does the flow of liquids compare?*

National Curriculum

To find out about the subject content in KS1 and KS2 follow this link:
https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/425618/PRIMARY_national_curriculum_-_Science.pdf

Purpose of study

A high-quality science education provides the foundations for understanding the world through the specific disciplines of biology, chemistry and physics. Science has changed our lives and is vital to the world's future prosperity, and all pupils should be taught essential aspects of the knowledge, methods, processes and uses of science. Through building up a body of key foundational knowledge and concepts, pupils should be encouraged to recognise the power of rational explanation and develop a sense of excitement and curiosity about natural phenomena. They should be encouraged to understand how science can be used to explain what is occurring, predict how things will behave, and analyse causes.

Aims

The national curriculum for science aims to ensure that all pupils:

- develop scientific knowledge and conceptual understanding through the specific disciplines of biology, chemistry and physics
- develop understanding of the nature, processes and methods of science through different types of science enquiries that help them to answer scientific questions about the world around them
- are equipped with the scientific knowledge required to understand the uses and implications of science, today and for the future.

Scientific knowledge and conceptual understanding

The programmes of study describe a sequence of knowledge and concepts. While it is important that pupils make progress, it is also vitally important that they develop secure understanding of each key block of knowledge and concepts in order to progress to the next stage. Insecure, superficial understanding will not allow genuine progression: pupils may struggle at key points of transition (such as between primary and secondary school), build up serious misconceptions, and/or have significant difficulties in understanding higher-order content. Pupils should be able to describe associated processes and key characteristics in common language, but they should also be familiar with, and use, technical terminology accurately and precisely. They should build up an extended specialist vocabulary. They should also apply their mathematical knowledge to their understanding of science, including collecting, presenting and analysing data. The social and economic implications of science are important but, generally, they are taught most appropriately within the wider school curriculum: teachers will wish to use different contexts to maximise their pupils' engagement with and motivation to study science.

The nature, processes and methods of science

'Working scientifically' specifies the understanding of the nature, processes and methods of science for each year group. It should not be taught as a separate strand. The notes and guidance give examples of how 'working scientifically' might be embedded within the content of biology, chemistry and physics, focusing on the key features of scientific enquiry, so that pupils learn to use a variety of approaches to answer relevant scientific questions. These types of scientific enquiry should include: observing over time; pattern seeking; identifying, classifying and grouping; comparative and fair testing (controlled investigations); and researching using secondary sources. Pupils should seek answers to questions through collecting, analysing and presenting data. 'Working scientifically' will be developed further at key stages 3 and 4, once pupils have built up sufficient understanding of science to engage meaningfully in more sophisticated discussion of experimental design and control.

Spoken language

The national curriculum for science reflects the importance of spoken language in pupils' development across the whole curriculum – cognitively, socially and linguistically. The quality and variety of language that pupils hear and speak are key factors in developing their scientific vocabulary and articulating scientific concepts clearly and precisely. They must be assisted in making their thinking clear, both to themselves and others, and teachers should ensure that pupils build secure foundations by using discussion to probe and remedy their misconceptions.

School curriculum

The programmes of study for science are set out year-by-year for key stages 1 and 2. Schools are, however, only required to teach the relevant programme of study by the end of the key stage. Within each key stage, schools therefore have the flexibility to introduce content earlier or later than set out in the programme of study. In addition, schools can introduce key stage content during an earlier key stage if appropriate. All schools are also required to set out their school curriculum for science on a year-by-year basis and make this information available online.

Attainment targets

By the end of each key stage, pupils are expected to know, apply and understand the matters, skills and processes specified in the relevant programme of study.