

KS3 Science Curriculum - Autumn Term 2026

Inheritance & Evolution • Materials & Their Properties | 14 × 45-minute sessions

Wednesdays: 9 September – 16 December 2026 | Half term: 26–30 October

Week	Date	Topic	Session	Curriculum objectives
1	9 Sept	Inheritance & Evolution	Why Are We All Different? Variation	Define variation and distinguish between continuous and discontinuous variation. Investigate how genetic and environmental factors cause variation. Interpret simple variation data and identify patterns within populations.
2	16 Sept	Inheritance & Evolution	DNA, Genes & Chromosomes	Understand that genetic information is stored in DNA. Explain the relationship between DNA, genes and chromosomes. Understand that genes influence inherited characteristics and genetic information is passed from parents to offspring.
3	23 Sept	Inheritance & Evolution	Inheritance: What Do We Get From Our Parents?	Identify examples of inherited characteristics. Understand that offspring inherit genetic information from both parents. Distinguish inherited characteristics from those caused by environmental influences.
4	30 Sept	Inheritance & Evolution	Adaptation & Survival	Explain how organisms are adapted to their environments. Explore structural, behavioural and physiological adaptations. Investigate how adaptations can increase an organism's chances of survival and reproduction.
5	7 Oct	Inheritance & Evolution	Natural Selection: Survival of the Best Adapted	Understand the process of natural selection. Explain how variation, competition and survival can lead to changes within populations over generations. Apply natural-selection principles to examples such as antibiotic resistance or changing environmental conditions.
6	14 Oct	Inheritance & Evolution	Darwin & the Theory of Evolution	Explore how Charles Darwin developed his theory of evolution by natural selection. Investigate evidence and observations from his voyage on HMS Beagle. Understand why Darwin's ideas were controversial and how scientific explanations change as evidence develops.
7	21 Oct	Inheritance & Evolution	Evidence for Evolution & Extinction	Explore evidence for evolution including fossils, similarities between organisms and DNA. Understand how fossils provide evidence about organisms from the past. Explain how environmental change can lead to extinction and evaluate evidence supporting evolutionary theory.
8	4 Nov	Materials & Their Properties	What Is Everything Made Of?	Review the particle model and understand that all materials are made of particles. Distinguish between elements, compounds and mixtures. Relate the structure and composition of materials to their properties.
9	11 Nov	Materials & Their Properties	Properties of Materials	Investigate physical properties including density, hardness, strength, flexibility, electrical conductivity and thermal conductivity. Explain why different materials have different properties and interpret experimental data.
10	18 Nov	Materials & Their Properties	Metals & Non-Metals	Compare the characteristic properties of metals and non-metals. Explore conductivity, malleability, strength and appearance. Explain why particular metals are selected for different applications.
11	25 Nov	Materials & Their Properties	Polymers, Ceramics & Composites	Describe the properties of polymers, ceramics and composite materials. Explore how their structures affect their properties. Investigate why engineered materials are useful for particular applications in everyday life and technology.
12	2 Dec	Materials & Their Properties	Choosing the Right Material	Apply knowledge of material properties to real-world problems. Evaluate which materials are most suitable for buildings, vehicles, clothing, electronics and other products. Justify material choices using scientific evidence.
13	9 Dec	Materials & Their Properties	Changing Materials: Physical or Chemical?	Distinguish between physical and chemical changes. Identify evidence that a chemical reaction has occurred. Explore how the properties of materials can

				change during reactions and understand that new substances are formed in chemical changes.
14	16 Dec	Materials & Their Properties	Materials of the Future	Explore modern and emerging materials such as smart materials, graphene, biodegradable plastics and advanced composites. Investigate how scientists develop materials for medicine, transport, technology and space exploration. Evaluate how future materials could help solve real-world problems.

Scientific skills developed: scientific enquiry • interpreting data • using evidence • explaining scientific models • identifying patterns • evaluating explanations • applying scientific knowledge to real-world contexts.