

Science – Weekly Overview 23-24

Year 1	Unit of Study	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7
Autumn 1	Seasonal Changes: <ul style="list-style-type: none"> The seasons (1.1) Day length (1.2) Weather around the world (1.3) 	Name the seasons and describe some of the things that happen in each of them. Set up temp/rainfall monitoring station. (1.1)	Identify a particular month with a season. (1.1)	Explain that day length varies across seasons and around the globe. (1.2)	Explain seasonal differences between the northern and southern hemispheres. (1.2)	Describe different types of weather. (1.3)	State the different types of weather associated with different seasons. (1.3)	Investigating different weather types (lightning and wind). (1.7)
Autumn 2	Everyday materials: <ul style="list-style-type: none"> Introduction to materials (1.4) Testing materials (1.5) 	Name different materials and describe them based on their properties. (1.4)	Identify materials objects are made from & explain how their properties make them suitable for purpose. (1.4)	Choose materials for different purposes based on their properties. (1.4)	Investigate the transparency of materials. (1.5)	Investigate how waterproof different materials are. (1.5)	Investigate how absorbent different materials are. (1.5)	Design, build and test an underwater base. (1.5)
Spring 1	Everyday materials: <ul style="list-style-type: none"> Other properties of materials (1.6) Seasonal Changes: <ul style="list-style-type: none"> Weather review (1.7) Animals incl. humans: Zoology (1.8)	Investigate the stretchiness of different materials. (1.6)	Investigate the bounciness of different materials. (1.6)	Analyse a set of weather data. (1.7)	Naming different animals and animal groups. (1.8)	Classifying animals (fish, mammal, amphibian, reptile, invertebrate) according to their features. (1.8)	Animals found in the local area. (1.8)	Animals from other places around the world. (1.8)
Spring 2	Animals incl. humans: <ul style="list-style-type: none"> Taste (1.11) Eyesight and hearing (1.12) Touch and smell (1.13) 	Which parts of the body are associated with which senses. (1.11)	Investigating taste. (1.11)	Investigating sight. (1.12)	Investigating hearing. (1.12)	Investigating touch. (1.13)	Investigating smell. (1.13)	
Summer 1	Plants: <ul style="list-style-type: none"> Planting (1.10) Plants: <ul style="list-style-type: none"> Identifying plants (1.14) Planting review (1.15) 	Setting up investigation into plant growth. (1.10)	Leaf collecting / nature walk. Identifying plants from their leaves. (1.14)	The parts of a plant. (1.14)	Deciduous and evergreen plants. (1.14)	Investigating fruits and vegetables. (1.15)	Leaf collecting / nature walk. Identifying plants from their leaves. (1.14)	
Summer 2	Animals incl. humans: <ul style="list-style-type: none"> Animal diets (1.9) Seasonal Changes: <ul style="list-style-type: none"> Seasons review (1.16) 	Analysing the results of the plant growth investigation. (1.15)	Looking at our teeth. Linking tooth shape to function. (1.9)	Researching animals and their diet. (1.9)	Analyse a set of weather data. (1.7)	Creating a report on the seasons. (1.16)		

Year 2	Unit of Study	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7
Autumn 1	Animals incl. humans: <ul style="list-style-type: none"> Animal growth (2.1) Animal survival (2.2) 	Stages in the human life cycle. Investigating differences between individuals. (2.1)	Stages in other animal life cycles. Comparing gestation periods. (2.1)	Researching insect life cycles. (2.1)	What a living thing needs in order to survive. (2.2)	Caring for a pet. (2.2)	Making bird feeders. (2.2)	Making a Desert Island Solar Still (2.2)
Autumn 2	Animals incl. humans: <ul style="list-style-type: none"> Food (2.3) Exercise (2.4) Hygiene (2.5) 	Name the different food groups. (2.3)	Investigating what goes on in our gut. (2.3)	The effects of overeating and undereating. Designing a balanced diet. (2.3)	Different types of exercise. Set up the Push Up Challenge. (2.4)	Investigating the effects of exertion on breathing rate. (2.4)	Drawing conclusions about the spread of germs. Sneeze / spray investigation (2.5)	The importance of handwashing. (2.5)
Spring 1	Everyday materials: <ul style="list-style-type: none"> Changing materials (2.6) Material strength (2.7) Ship building (2.8) 	Investigating how the shape of different solids can be changed. (2.6)	Using modelling materials. (2.6)	Investigating material strength. (2.7)	Comparing the material strength between paper and cardboard. (2.7)	Researching the uses of different materials in engineering and building. (2.7)	Investigating the effect of salinity on buoyancy. (2.8)	Floating and sinking. (2.8)
Spring 2	Everyday materials: <ul style="list-style-type: none"> Ship building (2.8) Materials in history (2.9) 	Investigating the relationship between boat design and buoyancy. (2.8)	Set up plant box mazes. (2.11)	Making a catapult. (2.9)	Making a trebuchet. (2.9)	Making plastic from milk. (2.9)	Plastic and the environment. (2.9)	
Summer 1	Plants: <ul style="list-style-type: none"> Planting (2.10) Living things and their habitats: <ul style="list-style-type: none"> Dead or alive (2.11) Habitats and adaptation (2.12) 	Set up plant growth investigations (2.10)	The necessary features of living organisms. (2.11)	Comparing plants and animals. (2.11)	Habitats and how animals have adapted to them. (2.12)	Investigating habitats in the local environment (2.12)	Making a microhabitat. (2.12)	
Summer 2	Living things and their habitats: <ul style="list-style-type: none"> Animal food (2.13) Plants: <ul style="list-style-type: none"> Plant growth (2.14) 	Carnivores, herbivores and omnivores. (2.13)	Constructing simple food chains. (2.13)	Making a food chain mobile. (2.13)	Predator / prey relationships. (2.13)	Drawing conclusions from the results of the plant growth investigation. (2.14)		

Year 3	Unit of Study	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7
Autumn 1	Animals incl. humans: <ul style="list-style-type: none"> Nutrition (3.1) Skeletons (3.2) 	The different nutrient groups and their functions. (3.1)	The different food groups and the nutrients contained in them. (3.1)	Investigation into the amount of vitamin C in different fruit juices. (3.1)	The function of the skeleton. Naming different bones and learning their functions. (3.2)	Set up investigation into the effects of different substances on bone strength. (3.2)	Analyse results of bone strength investigation. The role of joints. (3.2)	
Autumn 2	Animals incl. humans: Muscles (3.3) Rocks: Intro to rocks (3.4) <ul style="list-style-type: none"> Sedimentary & metamorphic rocks (3.5) Igneous rocks & minerals (3.6) 	How muscles enable movement. (3.3)	Investigating the way different animals move. (3.3)	Classifying rocks based on their features. (3.4)	How sedimentary rocks are formed. (3.5)	Investigating the porosity of sedimentary rocks. (3.5)	Metamorphic rock formation. Practical demonstration of the process. (3.5)	Extrusive and intrusive igneous rock formation. The rock cycle. (3.6)
Spring 1	Rocks: <ul style="list-style-type: none"> Fossils (3.7) Soils (3.8) 	What leads to the difference in crystal size in extrusive and intrusive rocks. (3.6)	Investigating the minerals in rocks. (3.6)	How fossilisation occurs. Practical demonstration of the fossilisation process. (3.7)	Be a palaeontologist. What can fossils tell us. (3.7)	What is soil made of. Soil layers / horizons. (3.8)	Investigating soil drainage. (3.8)	
Spring 2	Forces: <ul style="list-style-type: none"> Friction (3.9) Magnetism (3.10) 	Demonstrating the production of heat as a result of friction (3.9)	Measuring forces. Investigating the relationship between shoe tread and friction. (3.9)	Investigating the effects of different surfaces on friction. (3.9)	Investigating magnets and magnetic fields. (3.10)	Investigating magnetic and non-magnetic materials. (3.10)	Understanding the requirements for plant growth. Planting for root view farm investigation. (3.13)	
Summer 1	Light: Darkness, sunlight and reflection (3.11) <ul style="list-style-type: none"> Shadows (3.12) Plants: Roots (3.13)	Things that produce light. Darkness is the absence of light. (3.11)	What is reflection. Demonstrating reflection and understanding the law of reflection. (3.11)	Investigation into material suitability based on transparency / translucency / opacity. (3.11)	How are shadows formed. Investigate which objects make the best shadows. (3.12)	Investigate the relationship between shadow size and the distance from a light source. (3.12)	Identifying the conditions needed for root growth. Analyse the results from the root view farm. (3.13)	The uptake of water through plant roots. Practical modelling activity. (3.13)
Summer 2	Plants: Leaves (3.14), How water is transported (3.15) <ul style="list-style-type: none"> Flowers (3.16) Plant growth (nutrients and room) (3.17) Plant growth (light and water) (3.18) 	Set up: <ul style="list-style-type: none"> plant food room for germination effect of light effect of diff. liquids investigations. (3.17 and 3.18)	The features of a leaf. Close observations of leaves. Set up transpiration investigation. (3.14)	The function of stomata. Analyse results of transpiration investigation. (3.14) Capillary action in plants. (3.15)	The parts of a flower and their functions. (3.16)	Different methods of seed dispersal. (3.16)	Draw conclusions from the results of plant food on growth investigation and room on germination investigation. (3.17)	Draw conclusions from the results of the effect of light investigation and the effect of different liquids on growth investigation. (3.18)

Science – Weekly Overview 23-24

Year 4	Unit of Study	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7
Autumn 1	Animals incl. humans: <ul style="list-style-type: none"> The digestive system (4.1) Teeth (4.2) Food chains (4.3) 	The parts of the digestive system and their functions. (4.1)	Investigate role of saliva in the digestion process. (4.1)	The names of different teeth - similarities and differences between them. Set up tooth staining investigation (4.2)	What stains teeth – discuss investigation results. Plaque and tooth decay. (4.2)	Investigating the effectiveness of toothpaste. (4.2)	Identifying producers, prey, predators and apex predators. (4.3)	Constructing and interpreting food chains. (4.3)
Autumn 2	Electricity: <ul style="list-style-type: none"> Circuits (4.4) Electrical conductors (4.5) 	Naming the components in an electrical circuit and using them to construct a simple circuit. (4.4)	Representing a simple circuit in diagrammatic form. (4.4)	Switches and how they work. (4.4)	Investigating conductors and insulators. (4.5)	Different power sources and appliances that use them. (4.5)	Constructing a circuit for a purpose (burglar alarm). (4.5)	
Spring 1	States of matter: <ul style="list-style-type: none"> Solids (4.6) Liquids (4.7) Gases (4.8) 	Sort items into solid, liquid and gases. Learn the properties of each. Represent with particle diagrams. (4.6)	Demonstrate the chemical process that happens to turn cream into butter. (4.6)	Investigating how the different densities of liquids or different constituents of liquids makes them behave. (4.7)	Investigating the different viscosities of liquids and representing these in diagrammatic form. (4.7)	Creating a gas from a chemical reaction. (4.8)	Investigating the amount of carbon dioxide given off by different chemical reactions. (4.8)	
Spring 2	States of matter: <ul style="list-style-type: none"> Changes of state (4.9) The Water Cycle (4.10) 	Learn that changes in state are temperature dependent. Set up rates of evaporation investigation. (4.9)	Demonstrate how milk changes state when it is cooled (making ice cream). (4.9)	Different liquids will evaporate at different rates (analysis of evaporation investigation). Demonstrate different rates of diffusion. (4.9)	The stages of the water cycle. (4.10)	Investigating rates of evaporation. (4.10)	How condensation leads to cloud formation. Simulating rain. (4.10)	
Summer 1	Living things and their habitats: <ul style="list-style-type: none"> Classification (4.11) Extinction (4.12) Sound: <ul style="list-style-type: none"> Introduction to sound (4.13) 	Classifying different groups of objects according to their characteristics. (4.11)	The characteristics of the different animal groups. Similarities and differences between groups. (4.11)	Using and creating classification keys. (4.11)	Investigating factors that have led to environmental changes on planet earth. (4.12)	Extinction events. (4.12)	Investigating how sounds are made. (4.13)	
Summer 2	Sound: <ul style="list-style-type: none"> How sound travels (4.14) Sound and pitch (4.15) Sound and volume (4.16) Sound and distance (4.17) 	Sound waves and how sound travels through solids. (4.14)	How sound travels through liquids and gases. (4.14)	Pitch and how it is changed. (4.15)	Measuring sound. (4.16)	Investigating the best materials to dampen sound. (4.16)	Investigating the distance sound can travel. (4.17)	

Year 5	Unit of Study	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7
Autumn 1	Forces: <ul style="list-style-type: none"> Gravity (5.1) Friction (5.2) Air resistance (5.3) 	Investigating mass and weight. Force diagrams. (5.1)	Demonstrating the effect of gravity (Galileo's ramp). (5.1)	Gravity and air resistance. (5.1)	Investigating the relationship between different surfaces and friction. (5.2)	Investigating the relationship between surface area and air resistance. (5.2)	Investigating the relationship between shape of an object and drag. (5.2)	Investigating rocket aerodynamics. (5.3)
Autumn 2	Forces: <ul style="list-style-type: none"> Water resistance (5.4) Levers, pulleys and gears (5.5) 	Investigating the effect of boat shape on water resistance. (5.4)	Researching how water resistance influences vessel design. (5.4)	Reducing water resistance (hydrodynamics). (5.4)	Investigating levers. (5.5)	Investigating pulleys. (5.5)	Investigating gears. (5.5)	
Spring 1	Properties and changes of materials: <ul style="list-style-type: none"> Burning (5.6) Acid and bicarbonate of soda (5.7) Dissolving, mixtures and changes of state (5.8) Separation by filtration and sieving (5.9) 	The requirements for burning. (5.6)	Irreversible changes as a result of burning. (5.6)	Investigating pH. (5.7)	Chemical reactions between acids and alkalis. (5.7)	Solutions and solubility. (5.8)	Reversible changes. (5.8)	Separating mixtures by sieving and filtering. (5.9)
Spring 2	Properties and changes of materials: <ul style="list-style-type: none"> Separation by evaporation (5.10) Hardness (5.11) Transparency and magnetism (5.12) Thermal and electrical conductivity (5.13) 	Investigating evaporation. (5.10)	Classifying materials using hardness. (5.11)	Alloys. (5.11)	Investigating transparency. (5.12)	Investigating magnetism. (5.12)	Investigating thermal conductivity. (5.13)	Investigating electrical conductivity. (5.13)
Summer 1	Space: <ul style="list-style-type: none"> The solar system (5.14) The earth and the moon (5.15) 	The Planets of the Solar System. (5.14)	The size and composition of the planets. (5.14)	Planetary orbits. (5.14)	Explaining day and night. (5.15)	Earth's moons and its phases. (5.15)	Investigating the spherical nature of planets. (5.15)	Investigating animal life cycles – setting up a worm farm. (5.17)
Summer 2	Animals incl. humans: <ul style="list-style-type: none"> The human lifecycle (5.16) Living things and their habitats: <ul style="list-style-type: none"> Animal lifecycles and reproduction (5.17) Plant reproduction (5.18) 	Asexual reproduction in plants – setting up plant growth investigations. (5.18)	The Stages of the Human Life Cycle. (5.16)	Puberty. (5.16)	Comparing different animal life cycles. (5.17)	Researching an animal life cycle. (5.17)	Sexual and asexual reproduction in animals. (5.18)	Drawing conclusions from the results of the plant growth investigations. (5.18)

Year 6	Unit of Study	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7
Autumn 1	Animals incl. humans: <ul style="list-style-type: none"> The heart and circulatory system (6.1) Diet (6.2) 	The function and parts of the circulatory system. Start the Push Up Challenge. (6.1)	The structure of the heart and its role in blood circulation. (6.1)	Blood and blood vessels. (6.1)	Investigating the effect of exercise on heart rate. (6.1)	Comparing a balanced diet with an unhealthy diet. (6.2)	Investigating how many calories there are in snacks. (6.2)	Investigating sugar content in foods and the effects of sugar on the body. (6.2)
Autumn 2	Animals incl. humans: <ul style="list-style-type: none"> Exercise, drugs and lifestyle (6.3) The transport of water and nutrients (6.4) 	Analyse the results of the Push Up Challenge. The difference between cardiovascular and strength exercises. (6.3)	Investigation into stamina (exercise on breathing rate). (6.3)	Lifestyle changes for health. (6.3)	Drugs and medicines and their effects on the body. (6.3)	Demonstrating the function of the kidneys with a model. (6.4)	Investigating osmosis. (6.4)	
Spring 1	Evolution and inheritance: <ul style="list-style-type: none"> Inheritance (6.10) Adaptation (6.11) Evolution (6.12) 	Inherited and acquired characteristics. (6.10)	The role of genes in the inheritance of characteristics. (6.10)	Investigating adaptive advantages in the natural world. (6.11)	Darwin's theory of evolution by natural selection. (6.12)	Demonstrating the effect of beak shape on survival. (6.12)	Evidence supporting evolution in the fossil record. (6.12)	Evidence supporting the theory of human evolution. (6.12)
Spring 2	Living things and their habitats: <ul style="list-style-type: none"> Classification (6.8) Microorganisms (6.7) 	Grouping living things according to their characteristics. (6.8)	Exploring ways to distinguish between different organisms with the same characteristics. (6.8)	Classifying plants. (6.8)	Carl Linnaeus and his system of classification. (6.8)	Classifying microbes. (6.7)	Demonstrating the spread of microbes. Set up microbial growth investigation. (6.7)	
Summer 1	Light: <ul style="list-style-type: none"> How light travels (6.6) 	Analyse and draw conclusions from results of microbial growth investigation. (6.7)	Demonstrating the light path of light. (6.6)	Ray diagrams and how we see. (6.6)	Investigating shadows. (6.6)	Investigating reflection. (6.6)	Making a periscope. (6.6)	
Summer 2	Electricity: <ul style="list-style-type: none"> Circuits (6.5) 	Making working circuits. (6.5)	Representing circuits and the components in them using symbols. (6.5)	Investigating the relationship between cells, bulbs and brightness. (6.5)	Investigating the relationship between voltage and the functionality of components. (6.5)	Design a device to scare birds away. (6.5)		