

Year 6

TOPICS	Knowledge (Theory)	Skill (Practice)	Links
Animals	<ul style="list-style-type: none"> • Can state how animals & plants are classified? • Can make a key to classify? • Can explain where we find microbes? 	<ul style="list-style-type: none"> • Draw diagrams to describe/explain • Group & sub-group • Draw diagrams to describe 	Animals (Y4 Sci) Animals & Nutrition (Y3) Animals & Offspring (Y2 Sci) Animals (Y1 Sci)
Electricity	<ul style="list-style-type: none"> • Can you make a working series circuit? • How can we change the amount of energy in a circuit? • What is electrical resistance? • What happens to the energy as it flows around a circuit? 	<ul style="list-style-type: none"> • Use a science model to explain • Make a hypothesis • Plan a reliable fair test • Use a science model to explain • Test my circuits 	Forces (Y5 Sci) Make a moon Buggy (Y5 DT) Electricity (Y4 Sci) Electricity (Y2 Sci)
Inheritance & Evolution	<ul style="list-style-type: none"> • Why are fossils so important? • How are we different? How are we the same? • How are living things adapted to their environment? • How do living things change? 	<ul style="list-style-type: none"> • Use complex science words • Construct charts/graphs • Construct complex tables & graphs 	Darwin (Y6 History) Changes in the Environment (Y4 Sci) Climate Change (Y4 Geog) Animals & Off Spring (Y2 Sci)
Light	<ul style="list-style-type: none"> • Can they describe how light travels? • Can they explain how we see things? • Can they explain what happens when light hits an object? • Can they explain how shadows are formed? 	<ul style="list-style-type: none"> • Use a science model to explain • Describe patterns & make conclusions • Draw diagrams to describe & explain 	Earth & Space (Y5 Sci) Light (Y3 Sci) Night & day (Y1 Sci)
Circulatory System	<ul style="list-style-type: none"> • Can state why we have blood and how blood gets around the body. • Can they name the main organs are in the body? • Can they describe the effects of exercise, diet and drugs on the body? 	<ul style="list-style-type: none"> • Use complex science words • Use a science model to explain • Write an ordered method 	Animals & Nutrition (Y3 Sci) Healthy Living & Survival (Y2 Sci) Body Parts (Y1 Sci)
Living Things (Life Cycles)	<ul style="list-style-type: none"> • Can give examples of life cycles for different species • Can describe life cycles involving metamorphosis 	<ul style="list-style-type: none"> • Use complex science words • Use a science model to explain • Draw diagrams to describe & explain 	Inheritance (Y6 Sci) Life, Growth & Reproduction (Y5 Sci) Life Cycles (Y5 Sci) Animals & Offspring (Y2 Sci) Body Parts (Y1 Sci)

Year 5

TOPICS	Knowledge (Theory)	Skill (Practice)	Links
Earth & Space	<ul style="list-style-type: none"> Name planets Size of Earth, moon & sun, Earth/moon orbit, Asteroid belt Sun as a star (luminous, large, heat, light) Moon as a non-luminous Phases of the moon Lunar eclipse Historical understanding of solar system 	<ul style="list-style-type: none"> Draw & annotate diagrams Describe patterns & trends Use science model to describe/explain 	Night & Day (Science Y1) N Armstrong (History Y1) The Globe (Geog Y2) Forces & Magnets (Science Y3) Light (Science Y3) Sound (Science Y4) Changes in the Environment (Science Y4)
Forces	<ul style="list-style-type: none"> Know what gravity is and its impact on our lives. Identify and know the effect of air resistance. Identify and know the effect of water resistance. Identify and know the effect of friction. Explain how levers, pulleys and gears allow a smaller force to have a greater effect. Know who Isaac Newton and Galileo were. 	<ul style="list-style-type: none"> Construct a complex table Use science model to describe/explain Construct a graph 	Pneumatic Models (DT Y2) Electricity (Y2 & Y4) Forces & Magnets (Science Y3)
Properties of Materials	<ul style="list-style-type: none"> Some raw materials can be changed to make new materials, Natural materials can be made into new materials, e.g. trees into paper Most materials have more than one property e.g. wood is rigid, buoyant and flammable. 	<ul style="list-style-type: none"> Plan fair test Use science models to describe & explain Select suitable equipment 	Materials (Y1 & Y2) Stone/Bronze/Iron Ages (History Y3) States of matter (Science Y4) DT in all year groups
Changes in Materials	<ul style="list-style-type: none"> Characteristics of solids, liquids gases. Definition and examples of reversible and irreversible Methods of separating materials e.g. filtering, sieving, evaporation. 	<ul style="list-style-type: none"> Plan fair test Use science models to describe & explain Select suitable equipment 	Materials (Y1 & Y2) Stone/Bronze/Iron Ages (History Y3) States of matter (Science Y4) Changes in Environment (Science Y4)
Life Cycles	<ul style="list-style-type: none"> Life Cycle of mammals (including humans), amphibians, birds and insects Reproduction of plants Timeline for the growth of a human 	<ul style="list-style-type: none"> Use science model to describe & explain Draw & annotate diagrams Plan fair test 	Common animals (Science Y1) Animals & Offspring (Science Y2) Living Things (Science Y4)
Birth, Growth & Reproduction	<ul style="list-style-type: none"> Human gestation period is 9 months Development of a foetus Development of human senses Vaccinations for infants Average life-spans 	<ul style="list-style-type: none"> Draw & annotate diagrams Construct complex tables Use complex word Use model to describe/explain 	Body Parts (Science Y1) Healthy Living (Science Y2) Animals & Nutrition (Science Y3) Skeleton & Muscles (Science Y3)

Year 4

TOPICS	Knowledge (Theory)	Skill (Practice)	Links
Living Things & Habitats	<ul style="list-style-type: none"> Identify vertebrate animal groups (fish, amphibians, reptiles, birds, mammals). State the 7 life processes Recognise and compare features of different habitats List impact of forest fires, fly tipping oil spills etc Name extinct and endangered animals 	<ul style="list-style-type: none"> Create appropriate groups for sorting Use spider keys with fine differences Construct bar charts Present data as charts and graphs 	Animals/Habitats (Science Y1, Y2) Animals & Offspring (Science Y2) Animals & Nutrition (Science Y3)
Electricity	<ul style="list-style-type: none"> Know where electricity comes from & Identify sources (e.g. power stations, wind/solar, battery, etc). Discuss how it gets to homes (use a solar powered fan/calculator as a stimulus) Name components of a circuit Describe energy flow Identify conductors and insulators 	<ul style="list-style-type: none"> Use science words correctly Use a science model to describe Use science to explain 	Electricity (Science Y2) Make a Torch (DT Y3)
Sound	<ul style="list-style-type: none"> State how sound travels Know how water affects sound travel Know how size and distance affects volume Know how animals use sound Name parts of the human ear 	<ul style="list-style-type: none"> Use science model to describe Plan a fair test Identify the data range & interval 	Musical Instruments (All year groups) Light (Science Y3)
States of Matter	<ul style="list-style-type: none"> Name the 3 states of matter and its characteristics Explain the processes of evaporation and condensation Recount the water cycle 	<ul style="list-style-type: none"> Use science words correctly Use a science model to describe Plan a fair test Use a science model to describe 	Materials (Science Y1, Y2) Stone/Bronze/Iron Ages (History Y3) Healthy Meals (DT Y3)
Animals (Digestion)	<ul style="list-style-type: none"> Name the types of teeth & ho to care for them Name the major digestive organs and their functions 	<ul style="list-style-type: none"> Use science words & models to describe Use science to explain 	Body Parts (Science Y1) Animals & Offspring (Science Y2) Animals & Nutrition (Science Y3)
Changes in the Environment	<ul style="list-style-type: none"> Explain the science of meteorology Give a definition of Weather Name the 5 factors that determine weather 	<ul style="list-style-type: none"> Present data as charts and graphs Use science words correctly Use a science model to describe 	Weather & Seasons (Science Y1) Stone/Bronze/Iron Ages (History Y3)

Year 3

TOPICS	Knowledge (Theory)	Skill (Practice)	Links
Rocks & Soils	<ul style="list-style-type: none"> State the properties of sedimentary, metamorphic, and igneous rock Know how fossils are formed How soil is made and identify different types of soil Know the magnetic properties of the planet Earth 	<ul style="list-style-type: none"> Create groups for sorting Combine properties required for an application Begin to use science model to help describe Remember science words used before 	Plants (Science Y1) Plants (Science Y2) Habitats (Science Y2) Materials (Science Y2)
Forces & Magnets	<ul style="list-style-type: none"> Define the term 'force' Know how to measure forces and the unit used Recount how magnets behave Identify magnetic metals 	<ul style="list-style-type: none"> Begin to use a science model to describe Predict cause & effect Follow written instructions 	Bats & Balls & other PE topics Rocks & Magnets (Science Y3)
Light	<ul style="list-style-type: none"> List sources of natural and man-made light Know how shadows are formed Define 'refraction' Identify potential dangers of sunlight 	<ul style="list-style-type: none"> Begin to use a science model to describe Predict using cause & effect 	Night and Day (Science Y1) Electricity (Science Y2)
Animals & Nutrition	<ul style="list-style-type: none"> Name the 5 food groups Name the 7 groups of nutrients Define the terms carnivore, herbivore and omnivore State the effects of water and exercise on the body 	<ul style="list-style-type: none"> Begin to use a science model Use frames to construct tables & bar charts Remember science words 	Animals (Science Y1 & Y2) Healthy Living & Survival (Science Y2) 5-A-Day (DT Y2)
Plants	<ul style="list-style-type: none"> State why trees are important for the environment Can label the parts of a plant Know how water is transported within a plant Explain pollination, seed formation and seed dispersal 	<ul style="list-style-type: none"> Begin to use a science model to describe Describe patterns in data, charts & graphs 	Plants (Science Y1 and Y2)
Skeleton & Muscles	<ul style="list-style-type: none"> Functions of the human skeleton including the spine Functions of human muscles State foods support a healthy body 	<ul style="list-style-type: none"> Begin to use a science model to describe Describe patterns in data, charts & graphs 	Body Parts (Science Y1) 5-A-Day (DT Y2)

Year 2

TOPICS	Knowledge (Theory)	Skill (Practice)	Links
Habitats	<ul style="list-style-type: none"> Match common creatures with their habitats Link features with a desert, rainforest, ocean, beach, etc Define the term microhabitat. Have a general understanding of the 7 life processes Know how animals find food 	<ul style="list-style-type: none"> Use & remember science words over time Group using differences, similarities or changes Use a spider key Add labels & information to diagrams 	Materials (Science Y1) Animals (Science Y1) Hot & Cold countries (Geog Y1) When grandparents were young (History Y1)
Materials	<ul style="list-style-type: none"> Identify solids, liquids and gases State appropriate materials for specific objects e.g. glass for windows Materials can be man made (plastic) or natural (wood) Know the inventions of Macintosh, Dunlop & McAdam 	<ul style="list-style-type: none"> Link properties to an application Use range of equipment correctly Group by difference, similarity or change Follow instructions 	Materials (Science Y1) Hot & Cold countries (Geog Y1)
Healthy Living & Survival	<ul style="list-style-type: none"> State basic animal needs: food & water, shelter and air Know how to care for our bodies inc diet, hygiene and exercise Know the importance of good mental & emotional health 	<ul style="list-style-type: none"> Use & remember science words over time Group using differences, similarities or changes Use a spider key Add labels & information to diagrams 	Body Parts (Science Y1) Materials (Science Y1)
Animals & Offspring	<ul style="list-style-type: none"> Define the term, Life Cycle Develop a general understanding of the 7 life processes State infant animal nouns e.g. foal, gosling and tadpole 	<ul style="list-style-type: none"> Use & remember science words over time Group using differences, similarities or changes Use a spider key Add labels & information to diagrams 	Common Animals (Science Y1) Hot & Cold countries (Geog Y1)
Plants	<ul style="list-style-type: none"> List what plants need to grow Define the term 'germination' State the functions of the parts of a plant Identify 10 common flowers 	<ul style="list-style-type: none"> Use & remember science words over time Group using differences, similarities or changes Add labels & information to diagrams 	Common plants (Science Y1) Hot & Cold countries (Geog Y1) Seasons/Weather (Science Y1) Seasonal Change (Y1 Geog)
Electricity	<ul style="list-style-type: none"> State that electricity can be made from sunshine, wind and at power stations List examples of how we use electricity Can identify the dangers of electricity Can build a simple circuit 	<ul style="list-style-type: none"> Group by difference, similarity or change List common dangers to safe working Suggest what might happen in an investigation Follow a spoken & written instructions 	Common Materials (Science Y1) Weather (Science Y1) Materials (Science Y2)

Year 1

TOPICS	Knowledge (Theory)	Skill (Practice)	Links
Weather & Seasons	<ul style="list-style-type: none"> List the 4 seasons and when they occur Know common signs for each season, e.g. falling leaves in autumn State different types of weather Know that seasons and weather is different around the world e.g. UK vs Australia 	<ul style="list-style-type: none"> Use & remember science words during activity Add to block charts & pictograms 	Hot & Cold Countries (Geog Y1) Hot & Cold colours (Art Y1)
Everyday Materials	<ul style="list-style-type: none"> Can identify the material of a set of objects e.g. fork, door, window, ruler Can state properties of materials e.g. waterproof, stretchy, hard Know which materials are best for certain functions and why, e.g. glass for windows because it's transparent 	<ul style="list-style-type: none"> Remember some science facts & words Remember some science words & facts during activity Add science word labels to diagrams Sort using yes/no statements Link properties of materials to an application 	Make a Toy (DT Y1) Gt Fire of London (History Y1)
Night and Day	<ul style="list-style-type: none"> State that light comes from the sun but not the moon Know that it is daytime for parts of the Earth facing the sun and it is night-time for parts of the Earth facing away from the sun Know how to make a shadow It takes 1 year for the earth to travel around the sun Name nocturnal animals 	<ul style="list-style-type: none"> Describe what is happening using science Use a table by recording in words & numbers Add to block charts by counting up Use some science words during activity Remember some science facts 	Weather & Seasons (Y1) Seasonal Change (Geog Y1) Columbus/Armstrong (History Y1)
Plants	<ul style="list-style-type: none"> Name the parts of a plant and tree Name a variety of common flowers and trees Define the terms deciduous and evergreen 	<ul style="list-style-type: none"> Remember science words during activity Group by difference or similarity Remember some science facts 	Weather & Seasons (Y1) Seasonal Change (Geog Y1)
Animals & Pets	<ul style="list-style-type: none"> Now the difference between pets and wild animals Define endangered species and give an example State some fascinating facts about wild animals 	<ul style="list-style-type: none"> Remember science facts & words during activity Group by difference or similarity 	Night & Day (Science Y1) Hot & Cold Countries (Geog Y1)
Body Parts	<ul style="list-style-type: none"> State the 5 senses Name parts of the body Locate the heart, brain and lungs 	<ul style="list-style-type: none"> Remember science facts & words during activity Group by difference or similarity 	Animals & Pets (Science Y1) Hot & Cold Countries (Geog Y1)