

Science Knowledge and Skills Overview

Class 4

Year B

	Autumn 1 Digestion	Autumn 2 Classification	Spring 1 Sound	Spring 2 Forces	Summer 1 Earth and Space	Summer 2 Decay and Recycling
Knowledge	<ul style="list-style-type: none"> Describe the simple functions of the basic parts of the digestive system in humans Identify the different types of teeth in humans and their simple functions Construct and interpret a variety of food chains, identifying producers, predators and prey 	<ul style="list-style-type: none"> Recognise that living things can be grouped in a variety of ways Explore and use classification keys to help group, identify and name a variety of living things in their local and wider environment Recognise that environments can change and that this can sometimes pose dangers to living things 	<ul style="list-style-type: none"> Identify how sounds are made, associating some of them with something vibrating Recognise that vibrations from sounds travel through a medium to the ear Find patterns between the pitch of a sound and features of the object that produced it Find patterns between the volume of a sound and the strength of the vibrations that produced it Recognise that sounds get fainter as the distance from the sound source increases 	<ul style="list-style-type: none"> Explain that unsupported objects fall towards the Earth because of the force of gravity acting between the Earth and the falling object Identify the effects of air resistance, water resistance and friction, that act between moving surfaces Recognise that some mechanisms including levers, pulleys and gears allow a smaller force to have a greater effect 	<ul style="list-style-type: none"> Describe the movement of the Earth and other planets relative to the sun in the solar system Describe the movement of the moon relative to the Earth Describe the sun, Earth and moon as approximately spherical bodies Use the idea of the Earth's rotation to explain day and night and the apparent movement of the sun across the sky 	<ul style="list-style-type: none"> Describe the process of decay and its usefulness Identify materials that will decay Plan a scientific enquiry to find decay times of common materials, recognising and controlling variables Record findings and estimate degree of trust in results From investigation, estimate the time needed for some common materials from litter to decay Know that some materials can be recycled

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						into useful new materials
Skills	<ul style="list-style-type: none"> • Set up simple practical enquiries, comparative and fair tests • Gather, record, classify and present data in a variety of ways to help in answering questions • Record findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables 	<ul style="list-style-type: none"> • Set up simple practical enquiries, comparative and fair tests • Make systematic and careful observations and, where appropriate, taking accurate measurements using standard units, using a range of equipment, including thermometers and data loggers • Gather, record, classify and present data in a variety of ways to help in answering questions 	<ul style="list-style-type: none"> • Ask relevant questions and using different types of scientific enquiries to answer them • Set up simple practical enquiries, comparative and fair test • Report on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusion • Identify differences, similarities or changes related 	<ul style="list-style-type: none"> • Plan different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary • Take measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate • Record data and results of increasing complexity 	<ul style="list-style-type: none"> • Take measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate • Record data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs • Use test results to make predictions to 	<ul style="list-style-type: none"> • Report and present findings from enquiries, including conclusions, causal relationships and explanations of and degree of trust in results, in oral and written forms such as displays and other presentations

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		<ul style="list-style-type: none">Record findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tablesUse results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questionsIdentify differences, similarities or changes related to simple scientific ideas and processesUse straightforward scientific evidence to answer questions or to support their findings	<p>to simple scientific ideas and processes</p> <ul style="list-style-type: none">Use straightforward scientific evidence to answer questions or to support their findings.	<p>using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs</p> <ul style="list-style-type: none">Use test results to make predictions to set up further comparative and fair testsReport and present findings from enquiries, including conclusions, causal relationships and explanations of and degree of trust in results, in oral and written forms such as displays and other presentationsIdentify scientific evidence that has been used to support or	<p>set up further comparative and fair tests</p> <ul style="list-style-type: none">Report and present findings from enquiries, including conclusions, causal relationships and explanations of and degree of trust in results, in oral and written forms such as displays and other presentations	
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				refute ideas or arguments.		
Vocabulary	Carnivore, Herbivore, Omnivore, Incisor, Canine, Pre-molar, Molar, Decay, Gum, Saliva, Tongue, Taste, Sweet, Sour, Taste buds, Decay, Bacteria, Acid, Oesophagus, Intestine, Enzyme, Excrete, Food chain, Predator, Prey	Classification, Kingdom, University, Voyage, Biography, Botanist, Study, Decision, Question, Identify, Compound leaf, Simple leaf, Plain, Serrated, Backbone, Amphibian, Gills, Lungs, Cold-blooded, Warm-blooded, Class, Mammal, Bird, Feathers, Reptiles, Scales, Eggs, Invertebrate, Annelid, Mollusc, Crustacean, Insect, Arachnid, Thorax, Abdomen, Antennae, Plant, Root, Stem, Algae,	Sound, Vibration, Amplify, Compression, Sound wave, Pitch, Hear, Detect, Sense, Travel, Volume, Stretched, Ear, Out ear, Inner ear, Middle ear, Auditory Canal, Ear drum, Cochlea, Signal, Conclusion, Evaluation	Force, Gravity, Speed, Acceleration, Newtons,, Variation, Kilograms, Air resistance, Push, Mass, Weight, Upthrust, Tension, Direction, Friction, Conclusion, Evaluation, Axis, Pulley, Angle, Lever, Axle	Earth, Sun, Planets, Orbit, Sphere, Horizon, Moon, Astronomer, Astronomy, Heavenly body, Distance, Star, Year, Day, Asteroid, Rotation, Atmosphere, Gravity, Axis, Sunrise, Summer, Sunset, Autumn, Season, Winter, Shadow, Spring, Daylight, Wane, Position, Crater, Impact, Phase, Crescent, New moon, Gibbous	Decay, Rot, Compost, Nutrients, Decomposers, Bacteria, Funghi, Waste, Scavengers, Fertiliser, Break down, Litter, Recycle, Reuse

Key Vocabulary