

Year 6 Overview

	Key Objectives (knowledge) Physics	WS Key Areas	Vocabulary
Forces	<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 • That forces are measured in Newtons (N) • Recognise that there are a variety of forces • Recognise that forces act in particular directions and can affect direction/speed etc 	<p>ENQUIRY TYPES:</p> <ul style="list-style-type: none"> • Carrying out comparative & fair tests • Noticing patterns/pattern seeking <p>WS KEY SKILLS:</p> <ul style="list-style-type: none"> • Identifying scientific evidence that has been used to support or refute ideas or arguments • Planning different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary • Using test results to make predictions to set up further comparative and fair tests • Reporting and presenting 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 • Recording data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, and bar and line graphs • Taking measurements, using a range of scientific equipment with increasing accuracy and precision, including taking repeat readings when appropriate 	<p>gravity, falling, surface area, weight, mass, air resistance, friction, fast, slow, start, stop, change direction, fall, rotate, contact force, non-contact force, reaction force, balanced, water resistance, water, floating, ripples, drag, streamlined, surface area, float, sink, pull, force, gravity, stretch, extend, lever, pivot, push, pull, mechanism, machine, force, fulcrum, gears, cogs, wheels, teeth</p>

Light	<ul style="list-style-type: none"> • recognise that light appears to travel in straight lines • use the idea that light travels in straight lines to explain that objects are seen because they give out or reflect light into the eye • explain that we see things because light travels from light sources to our eyes or from light sources to objects and then to our eyes • use the idea that light travels in straight lines to explain why shadows have the same shape as the objects that cast them 	<p>ENQUIRY TYPES:</p> <ul style="list-style-type: none"> • Noticing patterns/Pattern seeking • Carrying out comparative and fair tests <p>WS KEY SKILLS:</p> <ul style="list-style-type: none"> • Identifying scientific evidence that has been used to support or refute ideas or arguments • Using test results to make predictions to set up further comparative and fair tests • Recording data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, and bar and line graphs • Planning different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary • Reporting and presenting 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 	<p>bright, dark, dim, dull, eye, light, mirror, opaque, reflect, shadow, shiny, translucent, transparent, image, reverse, backwards, upside down, inverted, shadow, opaque, predict, variable, refract, refraction, medium, accurate, reliable, spectrum, dispersion</p>
-------	---	---	--

<p style="text-align: center;">Living things and their habitats</p>	<ul style="list-style-type: none"> describe how living things are classified into broad groups according to common observable characteristics and based on similarities and differences, including micro-organisms, plants and animals give reasons for classifying plants and animals based on specific characteristics 	<p>ENQUIRY TYPES:</p> <ul style="list-style-type: none"> Grouping & Classifying Observing changes over time Finding things out using a wide range of secondary sources of information <p>WS KEY SKILLS:</p> <ul style="list-style-type: none"> Recording data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, and bar and line graphs Reporting and presenting 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. Planning different types of enquiries to answer questions including recognising and controlling variables where necessary identifying scientific evidence that has been used to support or refute ideas 	<p>identify, identification, classify, classification, reason, common characteristics, distinguishing characteristics, leaves, plant, shape, size, colour, flowering plants, conifers, ferns, mosses, algae, kingdom, division, species, vertebrates, invertebrates, backbone, fish, amphibians, mammals, birds, reptiles, invertebrates, wings, jointed legs, cased, transparent, antennae, shell, segments, classify, identify, molluscs, annelids, arachnids, insects, arthropods, plants, mosses, ferns, conifers, flowering plants, leaves, animals, vertebrates, fish, amphibians, birds, mammals, reptiles, birds, invertebrates, arachnids, annelids, molluscs, insects, micro-organisms, multiply, colony, colonies, mould, historically, grouping, classifying, Aristotle, Carl Linnaeus, kingdom, Animalia, Plantae, Fungi, Protista and Monera (or Prokaryota)</p>
--	--	--	--

Animals including humans

- identify and name the main parts of the human circulatory system,
- describe the functions of the heart, blood vessels and blood
- recognise the impact of diet, exercise, drugs and lifestyle on the way their bodies function
- Describe the ways in which nutrients and water are transported within animals, including humans

ENQUIRY TYPES COVERED:

- Finding things out using a wide range of secondary sources of information
- Grouping & classifying
- Carrying out comparative & fair tests

WS KEY SKILLS:

- Recording data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, and bar and line graphs
- Reporting and presenting 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
- Identifying scientific evidence that has been used to support or refute ideas or arguments
- Taking measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings where appropriate.

heart, blood vessels, veins, arteries, blood, system, lungs, circulatory system, skeletal system, muscular system, digestive system, oxygenated blood, deoxygenated blood, nutrients, water, aorta, artery, atrium, blood, capillaries, chamber, circulation, heart, heart valves, vein, ventricle, vessel, pump, oxygen, lungs, rest of body, chest cavity, circulatory system, blood, vessel, artery, vein, valve, red blood cell, plasma, oxygen, carbon dioxide, waste gases, platelets, nutrients, digestive tract, white blood cells, red blood cells, plasma, water, transport, humans, waste, nutrition, animals, cells, body temperature, hydration, lubricant, diet, food, exercise, healthy lifestyle, impact, nutrients, water, oxygen, carbohydrates, fats, proteins, minerals, essential, healthy, vitamins, regular, calories, balanced, carbohydrates (also referred to as starchy foods), proteins - including meat, fish, eggs and beans, fats, sugars, fibre, calories, dairy, RDA (recommended daily allowance), saturated fat, unsaturated fat, salt/sodium, eatwell plate, vitamins, minerals, roughage, heartbeat, pulse rate, beats per minute (bpm), resting rate, stopwatch, exercise, heart, norm, recovery rate, drugs, medicine, illegal, legal, alcohol, caffeine, solvents, short-term effects, long-term effects, consequences, peer pressure

<p style="text-align: center;">Evolution and inheritance</p>	<ul style="list-style-type: none"> • recognise that living things have changed over time and that fossils provide information about living things that inhabited the Earth millions of years ago • recognise that living things produce offspring of the same kind, but normally offspring vary and are not identical to their parents • identify how animals and plants are adapted to suit their environment in different ways and that adaptation may lead to evolution 	<p>ENQUIRY TYPE:</p> <ul style="list-style-type: none"> • Grouping & classifying • Finding things out using a wide range of secondary sources of information • Carrying out comparative and fair tests <p>WS KEY SKILLS:</p> <ul style="list-style-type: none"> • Recording data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, and/or bar and line graphs • Identifying scientific evidence that has been used to support or refute ideas or arguments • Planning different types of scientific enquiries to answer questions, including recognising and controlling variables • Reporting and presenting findings from enquiries, including conclusions, causal relationships and explanations of results, in oral and written forms such as displays and other presentations 	<p>variation, characteristic, environment, inherited, measurement, data, compare and contrast, breeding, inheritance, offspring, characteristics, crossbreed, generation, population, variable, survival, habitat, temperature, predator, prey, adaptation, natural selection, extinction, evolution, inheritance, fossil</p>
---	---	---	---