



Science Curriculum Overview

<p>EYFS</p>	<p>- Explore the natural world around them, making observations and drawing pictures of animals and plants; Pzazz Lesson Resources 1 - The Seasons 2 - The Weather 3 – My Body 4 – Animals 5 – Dinosaurs 13 – Exercise 14 – Food & Hygiene 15 – Plants 17 – Bugs 18 – Flowers & Trees</p>	<p>- Know some similarities and differences between the natural world around them and contrasting environments, drawing on their experiences and what has been read in class; Pzazz Lesson Resources 1 - The Seasons 2 - The Weather 16 – Habitats 9 – Materials 10 – Properties of Materials</p>	<p>- Understand some important processes and changes in the natural world around them, including the seasons and changing states of matter. Pzazz Lesson Resources 1 - The Seasons 2 - The Weather 6 – Fizzing 7 – Liquids 8 – Changes 11 – Magnets 12 – Planes and Boats</p>		
<p>Year 1</p>	<p>Plants Pupils should be taught to: identify and name a variety of common wild and garden plants, including deciduous and evergreen trees identify and describe the basic structure of a variety of common flowering plants,</p>	<p>Animals, including humans Pupils should be taught to: <input type="checkbox"/> identify and name a variety of common animals including fish, amphibians, reptiles, birds and mammals <input type="checkbox"/> identify and name a variety of common animals that are</p>	<p>Everyday materials Pupils should be taught to: <input type="checkbox"/> distinguish between an object and the material from which it is made <input type="checkbox"/> identify and name a variety of everyday materials, including wood, plastic, glass, metal, water, and rock</p>	<p>Seasonal changes Pupils should be taught to: <input type="checkbox"/> observe changes across the four seasons <input type="checkbox"/> observe and describe weather associated with the seasons and how day length varies. Pzazz Lesson Resources 1.1 – The Seasons 1.2 – Day Length</p>	

	<p>including trees.</p> <p>Pzazz Lesson Resources</p> <p>1.10 – Planting</p> <p>1.14 – Identifying Plants</p> <p>1.15 – Planting Review</p>	<p>carnivores, herbivores and omnivores</p> <p>describe and compare the structure of a variety of common animals (fish, amphibians, reptiles, birds and mammals, including pets)</p> <p><input type="checkbox"/> identify, name, draw and label the basic parts of the human body and say which part of the body is associated with each sense.</p> <p>Pzazz Lesson Resources</p> <p>1.8 – Zoology</p> <p>1.9 – Animal Diets</p> <p>1.11 – The Human Body and Taste</p> <p>1.12 – Eyesight and Hearing</p> <p>1.13 – Touch and Smell</p>	<p><input type="checkbox"/> describe the simple physical properties of a variety of everyday materials</p> <p><input type="checkbox"/> compare and group together a variety of everyday materials on the basis of their simple physical properties.</p> <p>Pzazz Lesson Resources</p> <p>1.4 – An Introduction to Materials</p> <p>1.5 - Testing Materials</p> <p>1.6 – Other Properties of Materials</p>	<p>1.3 – Weather Around the World</p> <p>1.7 – Weather Review</p> <p>1.16 - Seasons Review</p>	
<p>Year 2</p>	<p>Living things and their habitats</p> <p>Pupils should be taught to:</p> <p><input type="checkbox"/> explore and compare the differences between things that are living, dead, and things that have never been alive</p> <p><input type="checkbox"/> identify that most living things live in</p>	<p>Plants</p> <p>Pupils should be taught to:</p> <p><input type="checkbox"/> observe and describe how seeds and bulbs grow into mature plants</p> <p><input type="checkbox"/> find out and describe how plants need water, light and a suitable temperature to grow and stay healthy.</p> <p>Pzazz Lesson Resources</p>	<p>Animals, including humans</p> <p>Pupils should be taught to:</p> <p><input type="checkbox"/> notice that animals, including humans, have offspring which grow into adults</p> <p><input type="checkbox"/> find out about and describe the basic needs of animals, including humans, for</p>	<p>Uses of everyday materials</p> <p>Pupils should be taught to:</p> <p><input type="checkbox"/> identify and compare the suitability of a variety of everyday materials, including wood, metal, plastic, glass, brick, rock, paper and cardboard for particular uses</p>	

	<p>habitats to which they are suited and describe how different habitats provide for the basic needs of different kinds of animals and plants, and how they depend on each other</p> <ul style="list-style-type: none"> □ identify and name a variety of plants and animals in their habitats, including micro habitats □ describe how animals obtain their food from plants and other animals, using the idea of a simple food chain, and identify and name different sources of food. <p>Pzazz Lesson Resources 2.11 – Dead or Alive? 2.12 – Habitats and Adaptation 2.13 – Animal Food</p>	2.10 – Planting 2.14 – Plant Growth	survival (water, food and air) □ describe the importance for humans of exercise, eating the right amounts of different types of food, and hygiene. Pzazz Lesson Resources 2.1 – Animal Growth 2.2 – Animal Survival 2.3 – Food 2.4 – Exercise 2.5 – Hygiene	□ find out how the shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching. Pzazz Lesson Resources 2.6 – Changing Materials 2.7 – Material Strength 2.8 - Ship Building 2.9 – Materials in History	
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Key Stage 1

Working scientifically
Statutory requirements
During years 1 and 2, pupils should be taught to use the following practical scientific methods, processes and skills through the teaching of the programme of study content:

- asking simple questions and recognising that they can be answered in different ways
- observing closely, using simple equipment
- performing simple tests
- identifying and classifying
- using their observations and ideas to suggest answers to questions
- gathering and recording data to help in answering questions.

Year 3

Plants

Pupils should be taught to:

- identify and describe the functions of different parts of flowering plants: roots, stem/trunk, leaves and flowers
- explore the requirements of plants for life and growth (air, light, water, nutrients from soil, and room to grow) and how they vary from plant to plant
- investigate the way in which water is transported within plants
- explore the part that flowers play in the life cycle of flowering plants, including pollination, seed formation and seed dispersal.

Pzazz Lesson Resources

- 3.13 - Roots
- 3.14 - Leaves
- 3.15 - Stems
- 3.16 - Flowers
- 3.17 - Plant Growth (Nutrients and Room)
- 3.18 - Plant Growth (Light and Water)

Animals, including humans

Pupils should be taught to:

- identify that animals, including humans, need the right types and amount of nutrition, and that they cannot make their own food; they get nutrition from what they eat
- identify that humans and some other animals have skeletons and muscles for support, protection and movement

Pzazz Lesson Resources

- 3.1 – Nutrition
- 3.2 – Skeletons
- 3.3 – Muscles

Rocks

Pupils should be taught to:

- compare and group together different kinds of rocks on the basis of their appearance and simple physical properties
- describe in simple terms how fossils are formed when things that have lived are trapped within rock
- recognise that soils are made from rocks and organic matter

Pzazz Lesson Resources

- 3.4 - Introduction to Rocks
- 3.5 - Sedimentary and Metamorphic Rocks
- 3.6 - Igneous Rocks and Minerals
- 3.7 - Fossils
- 3.8 - Soils

Light

Pupils should be taught to:

- recognise that they need light in order to see things and that dark is the absence of light
- notice that light is reflected from surfaces
- recognise that light from the sun can be dangerous and that there are ways to protect their eyes
- recognise that shadows are formed when the light from a light source is blocked by an opaque object
- find patterns in the way that the size of shadows change.

Pzazz Lesson Resources

- 3.11 – Darkness, Sunlight, Reflection
- 3.12 - Shadows

Forces and magnets

Pupils should be taught to:

- compare how things move on different surfaces
- notice that some forces need contact between two objects, but magnetic forces can act at a distance
- observe how magnets attract or repel each other and attract some materials and not others
- compare and group together a variety of everyday materials on the basis of whether they are attracted to a magnet, and identify some magnetic materials
- describe magnets as having two poles
- predict whether two magnets will attract or repel each other, depending on which poles are facing.

Pzazz Lesson Resources

- 3.9 – Friction
- 3.10 - Magnetism

Year 4

Living things and their habitats

Pupils should be taught to:

- 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.

Pzazz Lesson Resources

4.11 - Classification

4.12 - Extinction

Animals, Including Humans

Pupils should be taught to:

- 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.

Pzazz Lesson Resources

4.1 - The Digestive System

4.2 - Teeth

4.3 - Food Chains

States of Matter

Pupils should be taught to:

- compare and group materials together, according to whether they are solids, liquids or gases
- observe that some materials change state when they are heated or cooled, and measure or research the temperature at which this happens in degrees Celsius (°C)
- identify the part played by evaporation and condensation in the water cycle and associate the rate of evaporation with temperature.

Pzazz Lesson Resources

4.6

Solids

States of Matter

View Video View

Resources

4.7 - Liquids

4.8 - Gases

4.9 - Changes of State

4.10 - The Water Cycle

Sound

Pupils should be taught to:

- 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.

Pzazz Lesson Resources

4.13 - An Introduction to Sound

4.14 - How Sounds Travel

4.15 - Sound and Pitch

4.16 - Sound and Volume

4.17 - Sound and Distance

Electricity

Pupils should be taught to:

- identify common appliances that run on electricity
- construct a simple series electrical circuit, identifying and naming its basic parts, including cells, wires, bulbs, switches and buzzers
- identify whether or not a lamp will light in a simple series circuit, based on whether or not the lamp is part of a complete loop with a battery
- recognise that a switch opens and closes a circuit and associate this with whether or not a lamp lights in a simple series circuit
- recognise some common conductors and insulators, and associate metals with being good conductors.

Pzazz Lesson Resources

4.4 - Circuits

4.5 - Electrical Conductors

**Lower
Key
Stage 2
(Y3 & 4)**

Working scientifically

Statutory requirements

During years 3 and 4, pupils should be taught to use the following practical scientific methods, processes and skills through the teaching of the programme of study content:

- asking relevant questions and using different types of scientific enquiries to answer them
- setting up simple practical enquiries, comparative and fair tests
- making systematic and careful observations and, where appropriate, taking accurate measurements using standard units, using a range of equipment, including thermometers and data loggers
- gathering, recording, classifying and presenting data in a variety of ways to help in answering questions
- recording findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables
- reporting on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions
- using results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions
- identifying differences, similarities or changes related to simple scientific ideas and processes
- using straightforward scientific evidence to answer questions or to support their findings.

Year 5

Living things and their habitats

Statutory requirements

Pupils should be taught to:

- describe the differences in the life cycles of a mammal, an amphibian, an insect and a bird
- describe the life process of reproduction in some plants and animals.

Pzazz Lesson Resources

5.17 - Animal Life Cycles and Reproduction
5.18 - Plant Reproduction

Animals, including humans

Statutory requirements

Pupils should be taught to:

- describe the changes as humans develop to old age.

Pzazz Lesson Resources

5.16 The Human Lifecycle

Properties and changes of materials

Statutory requirements

Pupils should be taught to:

- compare and group together everyday materials on the basis of their properties, including their hardness, solubility, transparency, conductivity (electrical and thermal), and response to magnets
- know that some materials will dissolve in liquid to form a solution, and describe how to recover a substance from a solution

Earth and space

Statutory requirements

Pupils should be taught to:

- 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

Forces

Statutory requirements

Pupils should be taught to:

- 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



			5.10 - Separation by Evaporation 5.11 - Hardness 5.12 - Transparency and Magnetism 5.13 - Thermal and Electrical Conductivity		
Year 6	Living things and their habitats Statutory requirements Pupils should be taught to: <input type="checkbox"/> 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 <input type="checkbox"/> give reasons for classifying plants and animals based on specific characteristics. Pzazz Lesson Resources 6.7 - Microorganisms 6.8 - Classification	Animals including humans Statutory requirements Pupils should be taught to: <input type="checkbox"/> identify and name the main parts of the human circulatory system, and describe the functions of the heart, blood vessels and blood <input type="checkbox"/> recognise the impact of diet, exercise, drugs and lifestyle on the way their bodies function <input type="checkbox"/> describe the ways in which nutrients and water are transported within animals, including humans. Pzazz Lesson Resources 6.1 - The Heart and the Circulatory System 6.2 - Diet 6.3 - Exercise, Drugs and Lifestyle 6.4 - The Transport of Water and Nutrients	Evolution and inheritance Statutory requirements Pupils should be taught to: <input type="checkbox"/> recognise that living things have changed over time and that fossils provide information about living things that inhabited the Earth millions of years ago <input type="checkbox"/> recognise that living things produce offspring of the same kind, but normally offspring vary and are not identical to their parents <input type="checkbox"/> identify how animals and plants are adapted to suit their environment in different ways and that adaptation may lead to evolution. Pzazz Lesson Resources 6.9 - Adaption 6.10 - Inheritance 6.11 – Evolution	Light Statutory requirements Pupils should be taught to: <input type="checkbox"/> recognise that light appears to travel in straight lines <input type="checkbox"/> 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 <input type="checkbox"/> 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 <input type="checkbox"/> use the idea that light travels in straight lines to explain why shadows have the same shape as the objects that cast them. Pzazz Lesson Resources 6.6 How Light Travels	Electricity Statutory requirements Pupils should be taught to: <input type="checkbox"/> associate the brightness of a lamp or the volume of a buzzer with the number and voltage of cells used in the circuit <input type="checkbox"/> compare and give reasons for variations in how components function, including the brightness of bulbs, the loudness of buzzers and the on/off position of switches <input type="checkbox"/> use recognised symbols when representing a simple circuit in a diagram. Pzazz Lesson Resources 6.5 - Circuits

**Upper
Key
Stage 2
(Y5 & 6)**

Working scientifically

Statutory requirements

During years 5 and 6, pupils should be taught to use the following practical scientific methods, processes and skills through the teaching of the programme of study content:

- planning different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary
- taking measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate
- recording data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs
- 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
- identifying scientific evidence that has been used to support or refute ideas or arguments.