

## St. Vincent's SCIENCE Curriculum Map

Terms	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Autumn 1	Weather & Seasons	Habitats	Rocks	Living things & habitats	Earth & Space	Living things
Autumn 2	Everyday Materials	Materials	Forces and Magnets	Electricity	Forces	Electricity
Spring 1	Night & Day	Healthy Living & Survival	Skeleton & Muscles	Sound	Properties of Materials	Inheritance & evolution
Spring 2	Common animals/Pets	Animals & offspring	Animals & Nutrition	States of Matter	Changes of materials	Light
Summer 1	Plants	Plants	Plants	Animals	Life Cycles	A & P
Summer 2	Body Parts	Electricity	Light	Changes in Environment	Birth, Growth & reproduction	Living things

# Knowledge, Skills and Understanding breakdown for SCIENCE

Plants		
Year 1	Year 2	Year 3
<p><b>PLANTS</b> 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, including trees.</p>	<p><b>PLANTS</b> Observe and describe how seeds and bulbs grow into mature plants. Find out and describe how plants need water, light and a suitable temperature to grow and stay healthy.</p> <p><b>HABITATS</b> Explore and compare the differences between things that are living, dead, and things that have never been alive identify that most living things live in 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 identify and name a variety of plants and animals in their habitats, including microhabitats 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>	<p><b>PLANTS</b> 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.</p>
Year 4	Year 5	Year 6
<p><b>LIVING THINGS AND HABITATS</b> 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.</p>	<p><b>LIFE CYCLES</b> Describe the life process of reproduction in some plants and animals.</p>	<p><b>LIVING THINGS</b> 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> <p><b>EVOLUTION AND INHERITANCE</b> Identify how animals and plants are adapted to suit their environment in different ways and that adaptation may lead to evolution.</p>

# Knowledge, Skills and Understanding breakdown for SCIENCE

## Animals including Humans

### Year 1

#### COMMON ANIMALS & PETS

Identify and name a variety of common animals including fish, amphibians, reptiles, birds and mammals.

Identify and name a variety of common animals that are carnivores, herbivores and omnivores.

Describe and compare the structure of a variety of common animals (fish, amphibians, reptiles, birds and mammals including pets).

#### BODY PARTS

Identify, name, draw and label the basic parts of the human body and say which part of the body is associated with each sense.

### Year 2

#### ANIMALS AND OFFSPRING

Notice that animals, including humans, have offspring which grow into adults.

Find out about and describe the basic needs of animals, including humans, for survival (water, food and air).

Describe the importance for humans of exercise, eating the right amounts of different types of food, and hygiene.

#### 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

### Year 3

#### ANIMALS AND NUTRITION

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.

#### SKELETON & MUSCLES

Identify that humans and some other animals have skeletons and muscles for support, protection and movement.

### Year 4

#### ANIMALS

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.

#### LIVING THINGS AND THEIR HABITATS

Construct and interpret a variety of food chains, identifying producers, predators and prey.

### Year 5

#### BIRTH, GROWTH & REPRODUCTION

Describe the changes as humans develop to old age.

#### LIFE CYCLES

Describe the differences in the life cycles of a mammal, an amphibian, an insect and a bird.

### Year 6

#### ANATOMY & PHYSIOLOGY

Identify and name the main parts of the human circulatory system, and 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.

#### EVOLUTION AND INHERITANCE

Recognise that living things produce offspring of the same kind, but normally offspring vary and are not identical to their parents.

# Knowledge, Skills and Understanding breakdown for SCIENCE

## Materials

### Year 1

#### EVERYDAY MATERIALS

Distinguish between an object and the material from which it is made.  
Identify and name a variety of everyday materials, including wood, plastic, glass, metal, water, and rock.  
Describe the simple physical properties of a variety of everyday materials.  
Compare and group together a variety of everyday materials on the basis of their simple physical properties.

### Year 2

#### MATERIALS

Identify and compare the suitability of a variety of everyday materials, including wood, metal, plastic, glass, brick, rock, paper and cardboard for particular uses.  
Find out how the shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching.

### Year 3

### Year 4

#### STATES OF MATTER

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.

### Year 5

#### PROPERTIES OF MATERIALS

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.

#### CHANGES OF MATERIALS

Know that some materials will dissolve in liquid to form a solution, and describe how to recover a substance from a solution.  
Use knowledge of solids, liquids and gases to decide how mixtures might be separated, including through filtering, sieving and evaporating.  
Give reasons for the particular uses of everyday materials, including metals, wood and plastic.  
Demonstrate that dissolving, mixing and changes of state are reversible changes.  
Explain that some changes result in the formation of new materials, and that this kind of change is not usually reversible.

### Year 6

# Knowledge, Skills and Understanding breakdown for SCIENCE

## Earth & Space (inc Forces)

### Year 1

#### WEATHER AND SEASONS

Observe changes across the 4 seasons.

#### NIGHT AND DAY

Observe and describe weather associated with the seasons and how day length varies.

#### LIGHT AND SHADOWS

Observe the apparent movement of the sun during the day. Observe light coming from a light source. Observe light being blocked by an object to create a shadow. Investigate how to make a place lighter and darker. Know light and dark safety.

### Year 2

#### ELECTRICITY

Identify appliances that run on electricity. Recognise the need for a power source (mains, battery, rechargeable, renewable, etc) and a circuit to make an appliance work. Identify both the component and its symbol in a simple circuit. Build simple closed series circuits. Know electrical safety.

### Year 3

#### ROCKS

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.

#### LIGHT

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.

### Year 4

#### SOUND

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 and 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.

#### 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 some common conductors and insulators, and associate metals with being good conductors.

### Year 5

#### EARTH AND SPACE

Use the idea of the Earth's rotation to explain day and night and the apparent movement of the sun across the sky.

### Year 6

#### EVOLUTION AND INHEITANCE

Recognise that living things have changed over time and that fossils provide information about living things that inhabited the Earth millions of years ago.

#### LIGHT

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.

#### ELECTRICITY

Associate the brightness of a lamp or the volume of a buzzer with the number and voltage of cells used in the circuit. Compare and give reasons for variations in how components function. Use recognised symbols when representing a simple circuit in a diagram.