Science Curriculum at St. James' C of E Infant School

There are 3 Geography driven topics which are taught in Key Stage 1.

Each topic is started with a big question which the children are invited to answer at the beginning of the topic and then again at the end.

How could you find a friend?	Map Skills Knowledge of the UK Knowledge of the world
Could you survive in the desert?	Weather Seasons Seasonal Changes
What if you were lost?	Map Skills Knowledge of the UK Knowledge of the world

Year 1

Planning and prediction

CORE

Explore the world around them and begin to ask simple questions

Choose ways to try and answer questions with support

Make simple predictions if appropriate (based on observations but without an explanation)

Our Learning Ladder:

Carrying out the investigation

CORE

Make own suggestions on how to collect data with support

Able to observe closely

Use simple measurements and equipment (for example, hand lenses, egg timers) to gather data with support

Use simple features to compare objects, materials and living things and, with help, decide how to sort and group them

Talk about what they have done in their investigation

Recording and classification

CORE

Gather and record data with support

Draw pictures of an experiment

Help create a graph

Describe simple observations

Reviewing and evaluating

CORE
Describe observations

Able to say what they found out

OUR LEARNING LADDER	Vocabulary
Can you use simple equipment? Can you ask a simple question? Can you make an observation? Can you record data?	question equipment identify observation investigate data

Plants

CORE
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

OUR LEARNING LADDER	Vocabulary
Can you name garden and wild plants? Can you identify and name parts of a plant? Can you compare common plants? Can you name and identify deciduous and evergreen trees?	stem branch evergreen deciduous shoots bud blossom fruits trunk daffodil daisy oak tree dandelion tulip bluebell willow tree

Animals including humans

CORE

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)

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

OUR LEARNING LADDER	Vocabulary
Can you talk about what animals need to survive? Can you identify healthy/unhealthy foods? Can you talk about why exercise is important? Can you identify and name types of animals? Can you compare types of animals? Can you recognise carnivores, herbivores and omnivores? Can you identify, name, draw and label the basic parts of the human body? Can you talk about the 5 senses?	Healthy unhealthy fit unfit living dead fish amphibian reptile bird mammals carnivore herbivore omnivore sight hear touch smell taste

Everyday materials

CORE

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

OUR LEARNING LADDER	Vocabulary
Can you name different materials? Can you identify the material an object is made from? Can you describe a property of a material? Can you sort different materials according to their properties?	plastic water rock property compare waterproof absorb opaque transparent

Compare and group together a variety of everyday materials on the basis of their simple physical properties

Seasonal changes

CORE

Observe changes across the four seasons

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

OUR LEARNING LADDER	Vocabulary
Can you say what happens when the seasons change? Can you describe the weather?	leaves changing falling hibernating cold, flowers growing blossom buds observe

Year 2

Planning and prediction

CORE

Explore the world around them and ask simple questions

Choose ways to try to ask and answer questions

Take some guided planning decisions

Recognise when simple test is unfair

Make simple prediction if appropriate (based on observations)

Carrying out the investigation

CORE

Make own suggestions on how to collect data

Able to observe closely

Use simple measurements and equipment (for example, hand lenses, egg timers) to gather data with increasing confidence

Use simple features to compare objects, materials and living things and, with help, decide how to sort and group them

Talk about what they have done in their investigation

Begin to notice patterns and relationships

Recording and classification

CORE

Gather and record data

Draw labelled pictures of an experiment

Make a block diagram, simple pictogram or simple table to show results

Begin to use simple scientific language in recording their observations

Reviewing and evaluating

CORE

Describe observations confidently

Able to say what they found out and how they found out

Able to say whether results are what they expected

OUR LEARNING LADDER	Vocabulary
Can you gather and record data? Can you investigate to classify? Can you plan a simple investigation? Can you talk about why a fair test is important? Can you compare and interpret data? Can you ask a scientific question? Can you talk about alternative ways to carry out an investigation?	classify predict fair test compare conclusion alternative interpret evaluate

Plants

CORE

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

OUR LEARNING LADDER	Vocabulary
Can you describe how seeds grow? Can you say why a plant needs light and water? Can you say how to grow a healthy plant? Can you describe how plants have changed over time? Can you test/compare how plants grow and stay healthy? Can you find out how to keep plants healthy?	germination growth survival mature seed bulb water light temperature warmth stages of growth reproduction pollination

Animals including humans

CORE

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

OUR LEARNING LADDER	Vocabulary
Can you recognise that animals/humans have offspring which grow into adults? Can you talk about a balanced diet? Can you talk about hygiene? Can you talk about the effects of exercise?	offspring balanced diet carbohydrate protein vitamin minerals fats fibre hygiene

Use of everyday materials

CORE

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

OUR LEARNING LADDER	Vocabulary
Can you compare a variety of materials? Can you investigate shapes of solid objects? Can you suggest the most appropriate material for…? Can you observe changes in materials?	Squashing bending twisting stretching cardboard melting freezing reversible irreversible translucent

Can you investigate whether all changes can be reversed? Can you find out about a person who has developed a new material? Can you explain why a material is appropriate?	

Living things and their habitats

CORE

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 habitat, 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

OUR LEARNING LADDER	Vocabulary
Can you talk about things that are living, dead or have never been alive? Can you talk about why animals are adapted to their environment? Can you explain a food chain? Can you talk about the stages of animal/human growth? Can you describe a microhabitat? Can you talk about how animals and plants depend on each other?	producer predator prey stage toddler teenager adult spawn tadpole microhabitat