Year 3 Science Curriculum Overview

Where we use our enquiry skills to explore, question and talk about ourselves and the world around us.

During year 3, 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 use 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.
- Using straightforward scientific evidence to answer questions or to support their findings.
- Identifying differences, similarities or changes related to simple scientific ideas and processes.
- Using results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions.
- Reporting on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions.

Autumn One	Autumn Two
Rocks- Chemistry **'Why are there different rocks?'**	**Animals Including Humans- Biology** **'What is in food?'** **'How can animals and humans move?'**
Lesson 1: I can identify metamorphis, Sedimentary and Igneous rocks. Enquiry type: Enquiry skill: ask questions, observe, record Working scientifically: Asking relevant questions and use types of scientific enquiries to answer them. Making systematic and careful observations. Recording findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables. Using straightforward scientific evidence to answer questions or to support their findings. Identifying differences and similarities related to simple scientific ideas. Deepening Understanding: Talk like a Scientist comparing the similarities and differences. **Lesson 2:** I can identify the physical properties of rocks. **(Misconception 1 & 2)**	**Lesson 1:** I can recognise that animals and humans get the right types and amount of nutrition from the food they eat. **(Misconeption 1,2,3 &4)** Enquiry type: ***use nutrition labels on goods and nutrition calculators*** Enquiry skill: observe, record, interpret Working scientifically: Asking relevant questions and use types of scientific enquiries to answer them. Gathering, recording, classifying and presenting data in a variety of ways to help in answering questions. Using results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions. Reporting on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions.

Enquiry type:  ***permeable, density, hard and soft***
Enquiry skill: observe, record, report
Working scientifically: Asking relevant questions and use types of scientific enquiries to answer them. Making systematic and careful observations. Recording findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables. Using straightforward scientific evidence to answer questions or to support their findings. Reporting on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions.
Deepening Understanding: Thinking about their properties which rocks could be used for certain jobs? Which rocks would have been most suitable to build the pyramids from?

Lesson 3: I can compare and group different types of rocks based on their appearance and physical properties.
(Misconception 3&4)

Enquiry type: 
Enquiry skill: observe, record, report
Working scientifically: Making systematic and careful observations. Gathering, recording, classifying and presenting data in a variety of ways to help in answering questions. Identifying differences, similarities or changes related to simple scientific ideas and processes.
Deepening Understanding: Think like a Scientist odd one out.

Lesson 4: I can understand the work of Mary Anning.

Enquiry type: 
Enquiry skill: ask questions, interpret
Working scientifically: Asking relevant questions and use types of scientific enquiries to answer them. Reporting on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions.
Deepening Understanding: Talk like a Scientist- Cause and effect because of Mary Anning…….has happened today.

Lesson 5: I can understand and explain how fossils are formed.
(Misconception 5 & 6)

Deepening Understanding: Look at animals diets (carnivores, herbivores and omnivores) identify the nutrition gained from these diets.

Lesson 2: I can sort animals and humans into skeleton groups.

(Misconception 5 & 6)

Enquiry type: 
Enquiry skill: observe, record
Working scientifically: Asking relevant questions and use types of scientific enquiries to answer them. Making systematic and careful observations. Gathering, recording, classifying and presenting data in a variety of ways to help in answering questions. Using straightforward scientific evidence to answer questions or to support their findings. Identifying differences, similarities or changes related to simple scientific ideas and processes.
Deepening Understanding: Think like a Scientist concept cartoon or discuss the advantages and disadvantages of each type of skeleton.

Lesson 3: I can use the work of Marie Curie to identify bones in the human skeleton and discuss their functions (protection, support).

Enquiry type: 
Enquiry skill: observe, record
Working scientifically: Asking relevant questions and use types of scientific enquiries to answer them. Making systematic and careful observations. Recording findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables.
Deepening Understanding: Looking at xrays what other features can you spot? **Cause and effect because of Mary Anning…….has happened today.**

Lesson 4: I can investigate how the human skeleton supports movement.

Enquiry type:  ***Can people with a longer femur jump further?***
Enquiry skill: ***measure, record, interpret***
Working scientifically: Asking relevant questions and use 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. Recording findings using simple scientific language, drawings, labelled

Enquiry type: 
Enquiry skill: ask questions, interpret
Working scientifically: Asking relevant questions and use types of scientific enquiries to answer them. Identifying differences, similarities or changes related to simple scientific ideas and processes. Reporting on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions.
Deepening Understanding: Think like a Scientist concept cartoon.

Lesson 6: I can investigate soil to identify what it is made up of. **(Misconception 7)**

Enquiry type: 
Enquiry skill: observe, record, interpret
Working scientifically: Asking relevant questions and use types of scientific enquiries to answer them. Making systematic and careful observations. Recording findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables. Using straightforward scientific evidence to answer questions or to support their findings. Identifying differences, similarities or changes related to simple scientific ideas and processes.
Deepening Understanding: Talk like a Scientist comparing the similarities and differences. Egyptians grew crops on the banks of the River Nile. Think scientifically Every year the banks would get flooded making the soil more fertile. How could flooding make soil more fertile?

Misconceptions: (Firmly teach the Science first before discussing any misconceptions unless they arise within children's thinking).

1) Rocks are all hard in nature.
2) Rocks are hard, heavy and jagged, if smaller they are stones, if smooth they are pebbles.
3) Rock-like, man-made substances such as concrete or brick are rocks.
4) Materials which have been polished or shaped for use, such as a granite worktop, are not rocks as they are no longer 'natural'.
5) Certain found artefacts, like old bits of pottery or coins, are fossils.
6) Fossil is an actual piece of the extinct animal or plant.
7) Soil and compost are the same thing.

diagrams, keys, bar charts, and tables. Using results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions.
Deepening Understanding: Talk like a Scientist use your findings to explain if bones support movement.

Lesson 5: I can understand that we have muscles to move and explain how they work.

Enquiry type: 
Enquiry skill: set up, observe, interpret
Working scientifically: Asking relevant questions and use types of scientific enquiries to answer them. Making systematic and careful observations. 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.
Deepening Understanding: Name and locate key muscles. Talk like a Scientist to answer the statement 'Your skeleton moves when your bones contract and relax.'

Misconceptions: (Firmly teach the Science first before discussing any misconceptions unless they arise within children's thinking).

1) Certain whole food groups like fats are 'bad' for you.
2) Certain specific foods, like cheese are also 'bad' for you.
3) Food only contains fat if fat can be seen.
4) Diet and fruit drinks are 'good' for you.
5) Snakes are similar to worms, so they must also be invertebrates.
6) Invertebrates have no form of skeleton.

Vocabulary: rock, stone, pebble, boulder, grain, crystals, layers, hard, soft, texture, absorb water, soil, fossil, marble, chalk, granite, sandstone, slate, soil, peat, sandy/chalk/clay/soil, hard, soft, permeable, impermeable, density, natural, man-made. **Resources:** rock types, fossils, soil types, magnifying glasses, IPADS, books, use VR avantis world to see how fossils are made **Better Reading Better Science texts:** Little People Big Dreams-Mary Anning, Pebble in my pocket, Stone Girl Bone Girl, The Street Beneath my Feet **Cross Curricular Links:** **Art:** observational, labelled drawings, Hugo Rodin sculptures from stone and clay spring term. **History/computing/Literacy:** researching the work of Mary Anning, Stone Age and Iron Age spring term. Explaining how flooding at the River Nile made the soil more fertile for Egyptian farmers. Explaining which rocks would have been most suitable for building the pyramids based on their properties. **Maths:** grouping types of rocks. **Geography:** North America Rocky Mountains spring term.	**Vocabulary:** nutrition, nutrients, carbohydrates, sugars, protein, vitamins, minerals, fibre, fat, water, skeleton, bones, muscles, joints, support, protect, move, skull, ribs, spine, vertebrates, invertebrates, endoskeleton, exoskeleton, hydrostatic, x ray, Marie Curie, contract, relax. **Resources:** foods, food packaging, skeleton box-skeleton model and xrays, measuring tapes, meter sticks, use VR avantis world to explore the skeleton and models of muscles and Nutrition and Food. **Better Reading Better Science texts:** Little People Big Dreams Marie Curie, I will never ever eat a tomato, Flat Stanley **Cross Curricular Links:** **D & T:** types of foods and where food grows. **PE:** using muscles to move and stretching muscles to look after them. **D & T**: nutrition in different food groups. **Maths:** sorting types of skeleton, measuring bones and distance jumped, recording findings in a table, looking for patterns. **History/computing/Literacy:** researching the work of Marie Curie.

National Curriculum: By the end of the Autumn Term, 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.
- 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.

Spring One	Spring Two
Forces and Magnets - Physics **'How do moving objects slow down?'** **'What materials are attracted to magnets?'**	**Light - Physics** **'How can we see things?'** **'What is a shadow?'**
Lesson 1: I can identify different types of forces on an object. (discuss many forces require contact) **Enquiry type:**  **Enquiry skill: observe, record** **Working scientifically:** Asking relevant questions and use types of scientific enquiries to answer them. Making systematic and careful observations. Recording findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables. Deepening Understanding: Think like a Scientist do all forces need contact? **Lesson 2:** I can compare how objects move on different surfaces. Enquiry type:  Enquiry skill: set up, measure, record Working scientifically: Setting up simple practical enquiries, comparative and fair tests. Making systematic and careful observations and, where appropriate, taking accurate measurements using standard units. Recording findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables. Identifying differences, similarities or changes related to simple scientific ideas and processes. Using results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions. Deepening Understanding: **Talk like a Scientist use your findings to explain how forces affected the movement of the objects. Thinking scientifically Egyptians had to move large limestone blocks across surfaces what kind of surface would it be easier to move these blocks on and why?** **Lesson 3:** I can identify that magnets have two poles and can predict if they will attract and repel each other. Enquiry type:  Enquiry skill: observe, interpret Working scientifically: Asking relevant questions and use types of scientific enquiries to answer them. Using straightforward scientific evidence to	**Lesson 1:** I can sort sources of light. **(Misconception 1 & 2)** Enquiry type:  ***Nicky waller sources of light activity*** Enquiry skill: ask questions, observe, interpret Working scientifically: Asking relevant questions and use types of scientific enquiries to answer them. Setting up simple practical enquiries. Making systematic and careful observations. Using straightforward scientific evidence to answer questions or to support their findings. Using results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions. Deepening Understanding: Think like a Scientist and discuss the statement 'A moon, a window and a mirror are sources of light.' Identify light sources in a Roman home. **Lesson 2:** I can notice that light is reflected from surfaces. **(Misconception 3 & 4)** Enquiry type:   ***Nicky Waller pg 108 test what materials are reflective. Romans used mirrors to reflect light and make signals what other materials could they use?-use a data logger*** Enquiry skill: observe, record, interpret Working scientifically: Asking relevant questions and use 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. Recording findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables. Using results to draw simple conclusions. Reporting on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions. Deepening Understanding: Use the light sensor on a data logger to confirm findings. Do all materials reflect light?

answer questions or to support their findings.
Deepening Understanding: **Talk like a Scientist to answer the question 'Do magnets attract magnets'. Concept cartoon.**

Lesson 4: I can observe how magnets attract some materials but not others and group these materials.
(Misconception 1 & 2)

Enquiry type: 
Enquiry skill: observe, results, interpret
Working scientifically: Asking relevant questions and use types of scientific enquiries to answer them. Setting up simple practical enquiries, comparative and fair tests. Recording findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables. Using results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions.
Deepening Understanding: Does the magnetic force need contact? What types of materials are attracted to magnets? Are all metals attracted?

Lesson 5: I can investigate if magnetic forces can act at a distance.

Enquiry type: 
Enquiry skill: set up, measure, record
Working scientifically: Asking relevant questions and use 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. Recording findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables. Using results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions.
Deepening Understanding: Use your findings to answer the question.

Misconceptions: (Firmly teach the Science first before discussing any misconceptions unless they arise within children's thinking).

1) The bigger the magnet the stronger it is.
2) All metals are magnetic.

Lesson 3: I can identify that shadows are formed when the light from a light source is blocked.
(Misconception 5,6, & 7)

Enquiry type:  **(use Nicky Waller shadow sculpture-bring in previous learning on transparent and opaque).**
Enquiry skills: observe, interpret
Working scientifically: Asking relevant questions and use types of scientific enquiries to answer them. Setting up simple practical enquiries. Gathering, recording, classifying and presenting data in a variety of ways to help in answering questions. Using results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions.
Deepening Understanding: What kinds of materials make the best shadows?
If additional lessons allow; prior to this lesson give children time to explore shadows for themselves with open ended questions 'What do you need to make a shadow?, what objects make a good shadow?, What do you notice about shadows?

Lesson 4: I can find patterns that determine the size of the shadow.

Enquiry type:  ***Nicky Waller Great Shadow Size Investigation.***
Enquiry skill: *set up, measure, record*
Working scientifically: Asking relevant questions and use 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. Recording findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables. Using results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions.
Deepening Understanding: Talk scientifically to answer the question 'Why is a shadow bigger when the object is closer to the light source?

Lesson 5: I can recognise that light from the sun can be dangerous

Enquiry types: 
Enquiry skills: ask questions, interpret
Working scientifically: Asking relevant questions and use types of scientific enquiries to answer them. Gathering, recording, classifying and presenting data in a variety of ways to help in answering questions. Using

	straightforward scientific evidence to answer questions or to support their findings. Deepening Understanding: Thinking like a Scientist concept cartoon. **Lesson 6:** I can investigate ways to protect ourselves from the sun's light Enquiry type:  ***Nicky Waller UV beads.*** Enquiry skill: set up, observe, interpret Working scientifically: Asking relevant questions and use types of scientific enquiries to answer them. Setting up simple practical enquiries, comparative and fair tests. Making systematic and careful observations. Identifying differences, similarities or changes related to simple scientific ideas and processes. Using results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions. Deepening Understanding: Thinking like a Scientist discuss the statement you can look at the sun as long as you wear sunglasses. Misconceptions: (Firmly teach the Science first before discussing any misconceptions unless they arise within children's thinking). 1) We can still see even where there is an absence of any light. 2) Our eyes 'get used to' the dark. 3) The moon and reflective surfaces are light sources. 4) A transparent object is a light source. 5) Shadows contain details of the object, such as facial features on their own shadow. 6) Shadows result from objects giving off darkness. 7) My shadow is always there inside me and bright light can push it out. 8) Light is only found in bright areas.
Vocabulary: force, push, pull, twist, contact force, non-contact force, magnetic force, magnet, strength, bar magnet, ring magnet, button magnet, horseshoe magnet, repel, attract, magnetic material, metal, iron, steel, poles, north pole, south pole, friction. **Resources:** Magnets of different sizes, multi surface ramps, toy car, materials boxes, ruler, stop watch, **Better Reading Better Science texts: The Iron Man, Mr Gumpy's Motor Car, Act normal don't tell anybody about the Rhinoceros's magnet**	**Vocabulary:** light, light source, dark, absence of light, transparent, translucent, opaque, shiny, matt, surface, shadow, reflect, mirror, sunlight, dangerous. **Resources: torches, materials, junk modelling, shoe boxes, data loggers, lego figures, uv beads, sun cream, sun glasses, use VR avantis world to find sources of light.** **Better Reading Better Science texts: Moon bears shadow, The Owl Who was Afraid of the Dark, Oscar and the Moth, The Day I met my Shadow**

Cross Curricular Links: **Maths:** Comparing the size of magnets. **History:** Egyptians- **consider which type of surface it would be easier for them to move their large sandstone blocks on.**	**Cross Curricular Links:** **Maths:** sorting light sources; measuring distance from the light sources and size of the shadow. **History:** finding reflective surfaces to help Romans to send signals. **Computing:** using a data logger to measure reflection. **Literacy/computing:** researching the dangers of the sun light.

National Curriculum: By the end of the Spring Term, 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.
- 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.

Summer One	Summer Two
Plants - Biology **'What do plants need to survive?'** **'What do different parts of a plant do?'**	
Lesson 1: I can think about what plants need for life and growth-Brian Cox-soil. Enquiry type:  ***royal society of Science resource become familiar with Brian Fox and look at his research. We know from year two they need light, water and temp now explore further requirements.*** Enquiry Skill: ask questions, interpret Working scientifically: Asking relevant questions and use types of scientific enquiries to answer them. Using straightforward scientific evidence to answer questions or to support their findings. Reporting on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions. **Deepening understanding: Think Scientifically-Can plants grow without soil?** **Lesson 2:** I can find out what plants need for life and growth. **(Misconception 4)** Enquiry type:   ***Nicky Waller-set up the comparative test-(air, nutrients from soil and space)- use broccoli, lettuce and pea seeds to see if it varies from plant to plant.*** Enquiry skill: set up, observe, record Working scientifically: Asking relevant questions and use 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. Recording findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables. Identifying differences, similarities or changes related to simple scientific ideas and processes. **Deepening understanding: Do all plants need the same thing? Thinking scientifically where in Egypt would have been a good place for the farmers to grow their crops.** **Lesson 3:** I can identify the functions of roots and leaves in flowering plants. **(Misconceptions 2 & 5)**	**Lesson 1:** I can investigate how water is transported within plants. Enquiry type:  Enquiry skill: observe, interpret Working scientifically: Asking relevant questions and use types of scientific enquiries to answer them. Setting up simple practical enquiries. Making systematic and careful observations. Recording findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables. Using straightforward scientific evidence to answer questions or to support their findings. Identifying differences, similarities or changes related to simple scientific ideas and processes. Reporting on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions. **Deepening understanding: How quickly is water and nutrients transported through a stem?** Lesson 2: I can identify the inner parts of a flowering plant. Enquiry type:  ***-dissect and label a daffodil/lilly to recognise the key parts needed in reproduction/plant lifecycle.*** Enquiry skill: observe, record Working scientifically: Asking relevant questions and use types of scientific enquiries to answer them. Making systematic and careful observations. Recording findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables. Deepening understanding: Can plants survive without all of their parts? **Lesson 3:** I can explore the part that flowers play in pollination. Enquiry type:  ***Use VR/ secondary sources to understand pollination -role play it Nicky Waller OR write/draw an explanation.*** Enquiry skill: observe, interpret Working scientifically: Asking relevant questions and use types of scientific

Enquiry type:  *(Children should be able to label the parts from year 1) after researching the function of leaves and roots take time to observe this part and see it in action.*
Enquiry skill: ask questions, record, interpret
Working scientifically: Asking relevant questions and use types of scientific enquiries to answer them. Recording findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables. Using straightforward scientific evidence to answer questions or to support their findings.
Deepening understanding: Do all plants have the same parts?

Lesson 4: I can test the functions of different parts of flowering plants.

Enquiry type:   *Nicky Waller removing leaves and roots/ roots as anchors-Nicky Waller.*
Enquiry skill: observe, record
Working scientifically: Setting up simple practical enquiries, comparative and fair tests. Making systematic and careful observations. Reporting on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions.
Deepening understanding: Is this a fair test? What variables are there? What variables are changing/ staying the same?

Lesson 5: I can describe what plants need for life and growth.

(Misconception 4)

Enquiry type:   *-findings from lesson 2*
Enquiry skill: interpret
Working scientifically: Asking relevant questions and use types of scientific enquiries to answer them. Using straightforward scientific evidence to answer questions or to support their findings. Identifying differences, similarities or changes related to simple scientific ideas and processes. Using results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions. Reporting on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions.
Deepening understanding: What happens if plants do not get the things they need?

enquiries to answer them. Making systematic and careful observations. Gathering, recording, classifying and presenting data in a variety of ways to help in answering questions.
Deepening understanding: Talk like a Scientist to answer the statement 'Petals are there to make a plant look attractive.'

Lesson 4: I can explore the part that flowers play in seed formation.

 *Use VR/ secondary sources to understand seed formation -role play it Nicky Waller OR write/draw an explanation.*
Enquiry skill: observe, interpret
Working scientifically: Asking relevant questions and use types of scientific enquiries to answer them. Making systematic and careful observations. Gathering, recording, classifying and presenting data in a variety of ways to help in answering questions.
Deepening understanding: How is each stage ordered on the lifecycle of a flower?

Lesson 5: I can explore the part that flowers play in seed dispersal.

 *Use VR/ secondary sources to understand seed dispersal -role play it Nicky Waller OR write/draw an explanation.*
Enquiry skill: observe, interpret
Working scientifically: Asking relevant questions and use types of scientific enquiries to answer them. Making systematic and careful observations. Gathering, recording, classifying and presenting data in a variety of ways to help in answering questions.
Deepening understanding: How is each stage ordered on the lifecycle of a flower? Do trees disperse seeds in the same way? Think like a Scientist concept cartoon.

Misconceptions: (Firmly teach the Science first before discussing any misconceptions unless they arise within children's thinking).

1) Flowers are merely decorative rather than a vital part of the life cycle in reproduction.

Misconceptions: (Firmly teach the Science first before discussing any misconceptions unless they arise within children's thinking).

1) Plants eat food.
2) Food comes from the soil via the roots.
3) Flowers are merely decorative rather than a vital part of the life cycle in reproduction.
4) Plants only need sunlight to keep them warm.
5) Roots suck in water which is then sucked up the stem.

Vocabulary: soil, nutrient, stem, flower, roots, leaves, transportation, pollen, insect/wind pollination, seed formation, seed, wind, animal, water, dispersal.

Resources: Royal society videos Brain Cox-TES, think tanks, botanical gardens kits, food colouring, lilies, use VR avantis world lifecycle of a plant, IPADS, non-fiction texts, magnifying glasses, pompoms, crisps, gloves, hat, hair gel, fan.

Better Reading Better Science texts: The Story of Frog Belly Rat Bone, A seed is Sleepy, Oh Say Can You Seed

Cross Curricular Links:

Literacy: researching seed formation, seed dispersal and pollination reading non-fiction texts and sources.
computing: Use of VR and IPADS to research functions for parts of a plant and the processes of pollination, seed formation and seed dispersal.
Art: labelled diagrams/ sketches- parts of a flower, stem. Exploring Van Gough-Sunflowers.
History: Egyptians-considering what farmers would need to grow their crops and where they could grow their crops.

National Curriculum: By the end of the Summer Term, 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

Science capital:

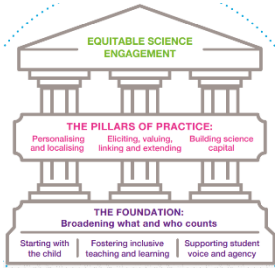
Educational visit: caving experience to see absolute darkness and the need for light to see, Botanical Garden Centre Birmingham,

School environment: Complete a shadow hunt around school, Investigate different types of rocks on the school grounds, observe plants to identify the parts and their functions.

Creative Homework: Shadow puppet show

Parent workshops: Rock and fossil exhibition/museum (Hamilton)

Professional visits: Mary Anning Workshop



Themed days: Annual science day/science week