GRIFFIN PARK PRIMARY SCHOOL

End of Year Curriculum Intent Statement

Nursery	End Point for Year Group
A scientist in Nursery will…	**experience:** Sensory – Standing on leaves, playing with snow, sand, water, mud, playing with musical instruments. Role play- hibernation station/plant shop/pet shop/home/vets Chicks hatching/holding a chick Watching a caterpillar, change into a chrysalis and then butterfly Plant seeds Exercise and healthy foods. All about me – growing **be able to:** Talk about things they can see, hear, feel and smell Tell an adult if they feel hot or cold. Observe animals Show care and concern for living things. Listen to the story of The Very Hungry Caterpillar (English link)
Key Vocabulary	**Key assessment tasks**
Crunching, leaves, trees, cold, hot, Autumn, Winter, Summer, Spring, snow, flowers, plants, caterpillar, butterfly, chick, egg, hatch, baby, farm animals, sea animals, jungle animals, see, hear, touch, smell, nose, eyes, ears, mouth,	Can children describe how something feels/smells/looks/sounds? Can children talk about when they were a baby? Can children identify when they feel cold/hot? Can children recall some of the life cycle story?
Learning links to enhance Long Term Memory	**Seasonal/environmental walks** **Visiting the pond** **Observing the mini-beast hotel** **Chicks hatching**

	Caterpillars (life cycle of a butterfly) **Visit animals** **Science week**

Reception	End Point for Year Group
A scientist in Reception will…	**experience:** Seasonal walks identifying changes to trees. Use natural materials to create a picture. (Art link) Spray painting leaves (Art) Night and day Space/planets Dressing up for different weather types. Role play – hibernation station/plant shop/ Jack's beanstalk Chicks hatching/holding a chick watching a caterpillar, change into a chrysalis and then butterfly Exercise and healthy foods. Plants seeds- Observe plants grow All about me – growing Animals **be able to:** Ask questions Select appropriate equipment. Look and talk about changes in the appearance of trees based upon different seasons. Talk about the things they can do now compared to when they were a baby. Talk about their how they look different from when they were a baby.(History link) Identify suitable clothing for different weather. Talk about what happens when ice melts. Talk about the life cycle of a chick/butterfly

	Retell the story of the hungry caterpillar (English link) Explain that plants need water to grow. Group farm, jungle, sea animals. (Geography link) Show care and concern for living things.
Key Vocabulary	**Key assessment tasks**
Autumn, harvest, hibernate, squirrel, hedgehog, nocturnal, acorn, conker, trees, leaves, Winter, ice, melting, snow, cold, hot, water, sink, float, full, empty, caterpillar, chrysalis, butterfly, chick, baby, egg, hatch, incubator, farm animals, jungle animals, sea animals, plant, broad bean, soil, see, hear, touch, smell, nose, eyes, ears, mouth,	Can children talk about the changes in the appearance of trees through all four seasons? Can children use their senses to investigate? Can children talk about the changes from baby to now? Can children identify hot and cold? Can children describe how they body feels when they do exercise? Do children choose healthy foods? Can children explain that plants need water to grow?
Learning links to enhance Long Term Memory	Seasonal/environmental walks Role play- hibernation station Visiting the pond Observing the mini-beast hotel Caterpillars (life cycle of a butterfly) Chicks hatching Growing plants/herb garden/strawberries/broad beans Sports week (LINK to PD/PSHE) Science week Visit animals

Year 1	End Point for Year Group
A Scientist in Year 1 will…	**Know…** **<u>Plants</u>** What is needed to grow a plant successfully from a seed or bulb. The names of parts of a plant. The names of common/garden plants, including deciduous and evergreen trees. **<u>Living things and their habitats</u>**

	There are four seasons The changes in each season. The day length changes between the seasons. **Animals including humans** The names of different parts of the human body. The five senses and the parts of the body associated with these. The meaning of amphibian, fish, reptile, bird, mammal, herbivore, carnivore, omnivore. **Properties of Materials** The names of everyday materials. Different materials have different properties suitable for specific purposes. **Electricity** The names of common appliances. Construct a simple circuit. **Forces** What happens when an object is pushed/pulled. **Sound** Different sources of sound, and we hear sound through our ear. **Be able to…** Ask questions Select appropriate equipment. Observe the growth of a plant. Group animals according to what type they are. Classify animals according to their diet. Label the parts of a human body and animal bodies. Label the five senses and explain what they do. Classify materials according to their properties. Compare and group materials based on simple physical properties Investigate a range of materials to identify their suitability for specific purposes.
Key Vocabulary	**Key assessment tasks**
Animals, humans, senses, mammals, reptiles,	Can children name parts of a plant?

fish, amphibians, birds, carnivores, herbivores, omnivores, leg, arm, elbow, head, ear, nose, back, wings, beak, material, wood, plastic, glass, metal, paper, soft, bendy, rough, smooth, water, rock Properties, deciduous, evergreen, leaves, flowers, blossom, petals, fruit, roots, bulb, seed, trunk, branches, stem, seasons, summer, spring, autumn, winter ,sun, day, moon, night, light, dark,	Can they talk about the appearance of evergreen and deciduous tress in Winter? Can children name the four seasons? Can children name all the 5 senses and link them to parts of the body? Can children classify animals? Can children group materials based upon their properties? Can children construct a simple circuit?
Learning links to enhance Long Term Memory	Nature walks Role play- garden centre Art - Rousseau Write a diary/instructions How to grow a sunflower. (English link) Forest school Observing pond life Visiting local recycling centre (Link to DT) Chicks hatching in school. Science week

Year 2	End Point for Year Group
A scientist in Year 2 will…	**Know…** **<u>Plants</u>** How conditions effect the growth of a plant How plants grow to maturity Plants are alive The names of common British plants and trees including annuals and perennials **<u>Animals including humans</u>** The five senses That humans resemble their parents. What animals need to survive

	The importance of exercise and a healthy lifestyle What happens in a simple food chain **Properties of Materials** Properties of materials and why they are useful How materials can be changed, e.g. stretching, squashing, bending … **Sound** How our ears allow us to hear sounds. **Light** How light travels to the eye. **Electricity** The name of different electrical appliances. Some names of components in an electrical circuit. **be able to:** Ask questions Select appropriate equipment. Plan and perform simple comparative and fair tests. Observe changes using simple equipment and explain their findings. Observe and describe the effect of exercise Use their observations and ideas to answer questions Observe how we hear sounds with our ears. Illustrate that ears allow us to hear sounds. Compare and contrast Categorise food types and explain why each group is important to humans Compare how different things move. Experiment with changing the shape of solid objects. Organise and summarise your findings. Identify and classify Gather and record data
Key Vocabulary	**Key assessment tasks**

(Including previous years)	
Survival, water, air, food, adult, baby, offspring, kitten, calf, puppy, exercise, hygiene, seeds, bulbs, water, light, temperature, growth, hard, soft , stretchy, stiff, shiny, dull, rough, smooth, bendy, waterproof, absorbent, opaque , transparent, brick, paper, fabric, squashing, bending, twisting, stretching, elastic, foil, living, dead, habitat, energy, food, chain, predator, prey, woodland, pond, desert,	Could children explain What would happen if a plant had no light, soil, water? Can children explain what plants need to stay healthy? Can children group materials according to their properties? Do children notice day length changes between seasons? Do children know the difference between a herbivore, carnivore and omnivore?
Learning links to enhance Long Term Memory	Nature walks Forest school Charles Darwin Plant diary Materials model (Link to DT) Grow plants Observing pond life Chicks/ducks hatching in school. Science and industry museum. Science week
Year 3	**End Point for Year Group**
A Scientist in Year 3 will…	**Know…** **<u>Plants</u>** That seeds need nutrients and the right light and temperature to grow. The functions of the main parts of a flowering plant. How nutrients and water are transported through a plant. That plants can make their own food through photosynthesis. How seeds are formed and dispersed to reproduce. The life cycle of a flowering plant. **<u>Animals including humans</u>** The names of the different food groups and why they are important.

	What herbivores, omnivores, carnivores, vertebrates and invertebrates are. The name of the main bones and joints in the human skeleton. That muscles can be moved by voluntary or involuntary movements. **Rocks** How sedimentary, metamorphic and igneous rocks are formed and what their properties are. What the word permeable means. How soil is formed. That there are different layers of the earth. **Forces and magnets** How forces are used in everyday life. In particular friction. That magnets create a force. That magnets have poles which can repel and attract each other. **Light** How shadows are formed. That some materials are reflective and how light is reflected. The properties of translucent, transparent and opaque materials. What the dangers of the sun are and how to protect ourselves from these. That light is needed in order to see things and darkness is created when the light source is removed. **Earth and Space** That the earth travels around the sun. **States of matter** Name materials as solids, liquids and gases. **be able to:** Ask questions Select appropriate equipment. Illustrate the functions of different parts of a plant. Investigate how water is transported through a plant. Label the main bones and joints in the human body. Identify and classify rocks according to their properties. Group rocks and soils depending on their properties and appearance.

	Use magnifying equipment to observe rocks and soils. Describe and Illustrate the formation of fossils. Investigate how the size of a shadow changes when the source of light is moved closer or further away. Record the effect of light in seeing things Explain and summarise observations. Make predictions prior to an investigation. Perform a fair test. Gather data and record results following an investigation. Identify similarities and differences in results.
Key Vocabulary (Including previous years)	
Skull, bones, muscles, joints, skeleton, air, light, water, nutrients, soil, reproduction, transportation, pollination, dispersal, flower Fossils, Soils, Sandstone, Granite, Marble, Pumice, Crystals, sedimentary, metamorphic, igneous, permeable, Absorbent Light, shadows, mirrors, reflective, dark, reflection, magnetic, force, contact, attraction, repel, poles, push, pull	Can children identify a rock which is absorbent? Can children describe how seeds are transported? Can children explain what enables our bodies to move? Can children explain how shadows formed?
Learning links to enhance Long Term Memory	Dissect a plant Grow a plant using coloured water to investigate. Observe nature/habitats in the pond Outdoor environmental walks.(links to geography) (science capital) Look/experience different rocks STEM activity linked to forces and magnets Stone age (History link)

Year 4	End Point for Year Group
A scientist in Year 4 will…	**…know:** **<u>Plants</u>** Why a flower that is not pollinated will not reproduce. **<u>Animals including humans</u>** Functions of the human digestive system. Teeth types of humans and other animals and their relation to diet **<u>Living things and their habitats</u>** Humans impact upon their environment in positive and negative ways. Key vocabulary of food chains including, producer, predator and prey. The difference between vertebrates and invertebrates. Key parts of an insect's body. **<u>States of matter</u>** Melting and boiling point of water. How particles are arranged in solids, liquids and gases. That surface area, temperature and wind affect evaporation rates. **<u>Electricity</u>** That some objects use electricity and that some are mains powered. How a switch can interrupt the flow of electricity. Electrical safety **<u>Sound</u>** That sound travels through vibrations in the air to the ear. That sounds get fainter as the distance from the sound source increases **<u>Rocks</u>** The process of forming fossils. **<u>be able to:</u>** Ask questions Select appropriate equipment. Observe the positive effect of a nature pond. Complete tables to show information. Classify different items, such as flowering and non-flowering plants or electrical and non-electrical

	objects. Create and use simple keys and branching databases. Construct food chains and discuss the impact of predators. Analyse and interpret patterns in population size which reflect the relationships between predators and prey. Observe the change of state of a material when cooled or heated. Compare and group materials according to their state of matter. Examine the factors which affect evaporation. Investigate whether different liquids evaporate at the same rate. Observe condensation and link this to this to the water cycle. Create models for scientific concepts in different ways. Create a simple circuit involving a range of components. Investigate conductivity of materials and how to make a bulb brighter or dimmer
Key Vocabulary	**Key assessment tasks**
mouth, tongue, teeth, Oesophagus, stomach, Small Intestine, Large Intestine, canine, Incisor, molar, faeces, urine, herbivore, carnivore, vertebrate, invertebrate, cells, wires, bulbs, switches, buzzers, battery, circuit, series, conductors, insulators, solid, liquid, gas, evaporation, condensation, particles, temperature, freezing, heating, boiling, volume, vibration, wave, pitch, tone, speaker, fossils,	Can children explain what pollination is? Can children describe the functions of the digestive system? Can children name different teeth? Can children illustrate the water cycle? Can children explain how sound travels through the ear? Do children know the freezing/oiling point for water?
Learning links to enhance Long Term Memory	Observe nature/habitats in the pond. Outdoor environmental walks.(links to geography) Visit from the dental assistant.(science capital) Visit from an electrician (science capital) Could be a parent/STEM ambassador. Science week
Year 5	**End Point for Year Group**

A scientist in Year 5 will…	**know:** **<u>Living things and their habitats</u>** Understand what reproduction is in humans and animals. What gestation periods are and how they differ between animals **<u>Animals including humans</u>** Lifecycles of a mammal (including humans) and how this differs to an amphibian and insect. What complete and incomplete metamorphosis is. **<u>Plants</u>** How plants reproduce. Names of reproductive parts of a flower. Plants can grow from seeds, bulbs or cuttings. **<u>States of matter</u>** Know that dissolving, mixing and changes of state are reversible changes. Give examples of reversible and irreversible changes. The terminology: permeability, insulators, conductors and solubility. **<u>Forces</u>** Gravity is the force which causes objects to fall to the centre of the Earth. Understand the effects of air and water resistance on objects. Levers, pulleys and gears use forces to create movement. **<u>Earth and Space</u>** Name the planets in the solar system. The impacts of asteroids and comets on spherical bodies. The movement of the Earth and other planets relative to the sun in the solar system and understand that they are spherical bodies. The movement of the Moon relative to the Earth. That the Earth's rotation causes day and night. **be able to:** Ask questions Select appropriate equipment. Create a classification key and explain the different stages of lifecycles of a mammal (including

	humans). Compare and contrast the physical appearance of children and adults. Observe and describe mixing is reversible and how dissolving a substance into a solution is reversible. (lab) Observe and describe how objects tend to slow down because of drag forces. Apply your knowledge. Carry out fair tests to group materials. Classify materials according to their properties. Plan and carry out investigations and analyse the findings/data. Separate different materials using different processes e.g. filtration. Draw diagrams to illustrate the movement of planets in the solar system.
Key Vocabulary	**Key assessment tasks**
Foetus, embryo, womb, gestation, baby, toddler, teenager, elderly, growth, development, puberty, mammal, reproduction, insect, reptile, amphibian, bird, offspring, hardness, solubility, transparency, conductivity, magnetic, filter, evaporation, dissolving, mixing, Earth, sun, star, moon, orbit, axis, rotation, day/night, phases of the moon, constellation, air resistance, gravity, friction, water resistance, newton, gears, pulleys, load, effort, fulcrum	Can children create a classification tree? Can children describe day and night in relation to the Earth? Can children explain what reproduction is? Can children explain what gravity is? Can children give an example of a reversible/irreversible change? Can children illustrate the reproductive parts of a flower? Can children identify a conductor and insulator?
Learning links to enhance Long Term Memory	Witton academy (science lab) Puberty talk (links to PSHE) Observe nature/habitats in the pond. Outdoor environmental walks.(links to geography) Forrest school STEM ambassador – Forces Science week

Year 6	**End Point for Year Group**
A scientist in Year 6 will…	**…know**: **<u>Animals including humans</u>** What blood is. The functions of the heart. How nutrients travel through the body The function of the circulatory system What makes a healthy body **<u>Living things and their habitats</u>** The Linnaeus classification system. Identify helpful and harmful bacteria. The conditions needed for the growth of microorganisms **<u>Evolution and inheritance</u>** Understand that we inherit features and characteristics from our parents Living things adapt and evolve to their environment. **<u>Light</u>** Light travels in straight lines. That we can see because of reflected light The basic structure of the human eye How shadows change That the shape of an object affects its shadow; know which surfaces reflect the most light **<u>Electricity</u>** What a simple circuit is. Recognise the symbols for components **be able to:** Ask questions Select appropriate equipment. Propose criteria for classification groups. Create a classification key in the style of Carl Linnaeus Illustrate how animals and plants adapt to environments in different ways.

	Predict the outcome of placing various components into an electrical circuit. Explain the pattern. Create a circuit diagram applying component symbols appropriately. Compare and contrast different types of adaption. Investigate the condition in which life on earth survived millions of years ago Draw and label diagrams to show how light travels. Experiment with ways that demonstrate how light travels. Report and present findings from enquiries. Identifying scientific evidence that has been used to support or refute ideas or arguments
Key Vocabulary	**Key assessment tasks**
Circulatory, heart, blood vessels, veins, arteries, oxygenated, deoxygenated, valve, exercise, respiration, classification, vertebrates, invertebrates, micro-organisms, amphibians, reptiles, mammals, insects, cells, wires, bulbs, switches, buzzers, battery, circuit, series, conductors, insulators, amps, volts, cell, fossils, adaptation, evolution, characteristics, reproduction, genetics,	Can children describe the function of the heart? Can children create a classification tree? Can children use component symbols when drawing a diagram? Can children use vocabulary associated with evolution and inheritance? Can children explain how we see? Can children use symbols for components in a circuit?
Learning links to enhance Long Term Memory	Witton academy (science lab) Careers evening (science capital) Observe nature/habitats in the pond. Outdoor environmental walks.(links to geography) Forest school Science week