



GNSA Primary Science Overview

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Rec	Animals & Habitats Pupils learn to name woodland animals with a focus on owls. They look at owl nests being made up of twigs, leaves and feathers. Plants Pupils identify wild plants in their local area. Seasons Pupils consider the weather and look at trees and leaves. Properties of materials Pupils explore items that sink and float. Changes of states of matter Pupils observe how solid turns to liquid when making porridge	Plants Pupils learn where different vegetables grow e.g. carrots in the ground. Habitats Pupils learn about habitats mentioned in stories that are studied, e.g. Antarctica, desert. Seasons Pupils observe the effects of Winter on our world.	Animals Pupils learn how to identify different bears. Habitats Pupils learn about bear habitats - linked to Bear Hunt Seasons Pupils observe the effects of Winter on our world Properties of materials Pupils learn about the suitability of materials Space Pupils learn about basic gravity, forces (rocket going up) and astronaut diet.	Animals Pupils learn about the life cycles of animals in the books they are reading - chicks/ducklings/butterflies Humans Pupils learn about the human life cycles and body parts Plants Pupils learn what a plant needs to survive and their lifecycle through observations over time. They go on to label - stem, leaves, roots, shoots, flowers and petals. Seasons Pupils observe the effects of Spring on our world. Properties of materials Pupils learn about the importance of recycling	Properties of materials Pupils learn about the suitability of materials as part of their 3 little pigs text. Changes of states of matter Pupils look at changes in texture through the cooking process. Seasons Pupils observe the effects of Summer on our world.	Animals & Habitats Pupils learn about animals found in different habitats. Some characteristics are also studied e.g. patterns - stripes, spots. Pupils also look at pet care plans. Humans Pupils consider how they have changed physically over their life. Seasons Pupils observe the effects of spring on our world
Year 1	Biology Humans Big Picture Knowledge Map Pupils will have opportunities to learn the names of the body. They will also learn about which part of the body is associated with each sense.	Biology Animals and Humans Big Picture Knowledge Map Children will identify and name, look closely at and compare and contrast different animals and their structure. They will also categorise animals into carnivores, herbivores and omnivores.	Chemistry Materials Big Picture Knowledge Map Pupils will explore, name and discuss and raise questions and answers about familiar everyday materials so that they become familiar with the names and properties.	Chemistry Materials Big Picture Knowledge Map Pupils will compare and group various materials and work scientifically by performing simple tests.	Biology Plants Big Picture Knowledge Map Pupils will learn to identify and describe the basic structure of flowering plants & trees. They also learn to identify a variety of common wild and garden plants including deciduous and evergreen trees.	Biology Seasonal Changes (across whole year) Big Picture Knowledge Map Pupils will observe and talk about changes in the weather and the seasons. They will learn about how seasons impact humans and animals. Also, they will learn about the impact of weather and seasons on the length of days.
Year 2	Biology Humans Big Picture Knowledge Map Pupils will learn about different ways to keep themselves healthy. They will consider the importance of eating the right amounts of food and the importance of exercise. They will then learn about the importance of hygiene.	Biology Humans and Animals Big Picture Knowledge Map Children will learn the basic needs of animals, including humans, for survival (water, food and air), the need for warmth and shelter and additional needs for health and well-being. Compare and contrast the life cycles of animal to that of a human.	Chemistry Uses of Materials Big Picture Knowledge Map Pupils should identify and discuss the uses of different everyday materials. They should think about the properties of materials that make them suitable or unsuitable for particular purposes and they should be encouraged to think about unusual and creative uses for everyday materials.	Biology Plants Big Picture Knowledge Map Pupils will observe and describe how seeds and bulbs grow into mature plants. Pupils will find out and describe how plants need water, light and suitable temperature to grow and stay healthy.	Biology Living things and their habitats Big Picture Knowledge Map Pupils will explore and compare the differences between things that are living, dead, and things that have never been alive. Pupils will learn about animal habitats and microhabitats	Biology Living things and their habitats Big Picture Knowledge Map Pupils will learn why and how animals are suited to their habitat. Also, they will describe how animals obtain their food from plants and other animals, using the idea of a simple food chain.
Year 3	Biology Humans Big Picture Knowledge Map Pupils will continue to learn about the importance of nutrition and research different food groups and how they keep us healthy. They will	Biology Animals and Humans Big Picture Knowledge Map Children will compare and contrast the nutrition of different animals to humans. They will identify that humans and some other animals have	Chemistry Rocks and Soils Big Picture Knowledge Map Pupils will compare and group different rocks on the basis of their appearance and properties. They will learn how fossils are formed	Physics Light Big Picture Knowledge Map Pupils will explore what happens when light reflects off reflective surfaces. They will learn why it is important to protect their eyes from bright lights.	Biology Plants Big Picture Knowledge Map Pupils will be introduced to the relationship between structure and function: the idea that every part has a job to do. They will explore	Physics Forces and Magnets Big Picture Knowledge Map Pupils should observe that magnetic forces can act without direct contact, unlike most forces, where direct contact is necessary.

	design meals based on what they find out.	skeletons and muscles for support, protection and movement.	and recognise that soils are made from rocks and organic matter.	Also, they will explore shadows, and find out how they are formed and what might cause the shadows to change.	questions that focus on the role of the roots and stem in nutrition and support, leaves for nutrition and flowers for reproduction.	They will also explore the behaviour and everyday uses of different magnets.
Year 4	Biology	Biology	Biology	Chemistry	Physics	Physics
	Humans Big Picture Knowledge Map Pupils will be introduced to the main body parts associated with the digestive system and explore questions that help them to understand their special functions.	Animals and Humans Big Picture Knowledge Map Children will construct and interpret a variety of food chains, identifying producers, predators and prey. Identify types of human teeth and their functions.	Living things and their habitats Big Picture Knowledge Map Pupils should use the local environment throughout the year to raise and answer questions that help them to identify and study plants and animals in their habitat.	States of matter Big Picture Knowledge Map Pupils should explore a variety of everyday materials and develop simple descriptions of the states of matter; solid, liquid and gas. They should note the effect of cooling and heating water.	Sound Big Picture Knowledge Map Pupils should explore and identify the way sound is made through vibration in a range of different musical instruments from around the world; and find out how the pitch and volume of sounds can be changed in a variety of ways.	Electricity Big Picture Knowledge Map Pupils should identify common appliances that run on electricity and learn to construct simple series circuits, trying different components.
Year 5	Biology	Physics	Chemistry	Chemistry	Biology	Physics
	Animals and Humans Big Picture Knowledge Map Pupils will draw a timeline to indicate stages in the growth and development of humans. They will learn about changes in puberty. Research gestation periods of humans and animals.	Forces Big Picture Knowledge Map Pupils will explore the concept of gravity. They will also learn about the effects of air resistance, water resistance and friction. They will also recognise that some mechanisms including levers, pulleys and gears allow a smaller force to have a greater effect.	Properties and changes of materials Big Picture Knowledge Map Pupils should think about the properties of materials that make them suitable or unsuitable for particular purposes and they should be encouraged to think about unusual and creative uses for everyday materials.	Properties and changes of materials Big Picture Knowledge Map Pupils should explore reversible changes, including evaporating, filtering, sieving, melting and dissolving, recognising that melting and dissolving are different processes. Pupils should explore changes that are difficult to reverse.	Living things and their habitats Big Picture Knowledge Map Pupils should learn and observe life-cycle changes in a variety of living things. They should find out about different types of reproduction, including sexual and asexual reproduction in plants, and sexual reproduction in animals.	Earth and Space Big Picture Knowledge Map Pupils should be introduced to a model of the sun and Earth that enables them to explain day and night. They should learn that the sun is a star at the centre of our solar system and that it has 8 planets. They also should learn that the moon orbits a planet.
Year 6	Biology	Biology	Biology	Biology	Physics	Physics
	Humans Big Picture Knowledge Map Pupils will learn to name the main parts of the circulatory system and describe the functions of the heart, blood vessels and blood. They will learn about the impact of diet, exercise, drugs and lifestyle on the body.	Animals and Humans Big Picture Knowledge Map Pupils will learn to describe the ways nutrients and water are transported within animals, including humans.	Evolution and Inheritance Big Picture Knowledge Map Pupils should find out more about how living things on earth have changed over time. They should be introduced to the idea that characteristics are passed from parents to their offspring. Adaptations in animals and plants will also be identified.	Living things and their habitats Big Picture Knowledge Map Pupils should classify animals into commonly found invertebrates and vertebrates. They will learn the significance of the work of scientists such as Carl Linnaeus, a pioneer of classification.	Light Big Picture Knowledge Map Pupils will learn that light travels in straight lines. They will be exploring the way that light behaves, including light sources, reflection and shadows.	Electricity Big Picture Knowledge Map Pupils will learn how to represent a simple circuit in a diagram using recognised symbols. They will construct simple series circuits, to help them to answer questions about what happens when they try different arrangements of components.