Enquiry 1 - Cycle 1

Animals including Humans

3.1-3.2

Science Skills	In this enquiry you will be:	
Please refer to the skills document and video for guidance on the science skills of Planning Investigations, Presenting and Analysing Data and Evaluation of Investigations, as well as pupil progression in each skill.	Observing Over Time	X
	Pattern Seeking	X
	Identifying, Classifying and Grouping	X
	Comparative and Fair Testing (Controlled Investigations)	X
	Researching Using Secondary Resources	X

National Curriculum Knowledge	Key Questions
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	1) Can I name some of the different nutrient groups? 2) Can I name some of the foods associated with each nutrient group? 3) Can I describe what a healthy, balanced meal looks like? 4) Can I classify animals as carnivorous, herbivorous, or omnivorous?
Skeletons Identify that humans and some other animals have skeletons and muscles for support, protection, and movement.	1) Can I name a variety of animals that have a skeleton? 2) Can I identify that humans have a skeleton? 3) Can I name some parts of the skeleton? 4) Can I discuss the possible functions of the skeleton?
Muscles Identify that humans and some other animals have skeletons and muscles for support, protection and movement.	1) Can I name some muscles in animals? 2) Can I discuss the functions of muscles in the body? 3) Can I identify some locations of muscles in the body? 1) Can I describe how some muscles work together?

Scientist Study on Chris Packham – Animal Conservationist

Previous Knowledge

Animals including Humans

- Find out 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.
- Know that animals, including humans, have offspring which grow into adults
- Know the basic stages in a life cycle for animals, including humans.
- Find out 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.

Enquiry 2 - Cycle 1

Animals including Humans

4.1-4.3

Science Skills	In this enquiry you will be:	
Please refer to the skills document for guidance on the science skills of Planning Investigations, Presenting and Analysing Data and Evaluation of Investigations, as well as pupil progression in each skill.	Observing Over Time	X
	Pattern Seeking	X
	Identifying, Classifying and Grouping	X
	Comparative and Fair Testing (Controlled Investigations)	X
	Researching Using Secondary Resources	X

National Curriculum Knowledge	Key Questions
Describe the simple functions of the basic parts of the digestive system in humans.	1) I can correctly name the significant parts of the digestive system. 2) I can describe the functions of the significant parts of the digestive system. 3) I can define what digestion is and why it is necessary.
Identify the different types of teeth in humans and their simple functions.	1) I can name the different types of teeth in humans 2) I can describe the functions of each tooth type with reference to the tooth's shape. 3) I can discuss problems that may arise from not brushing teeth regularly.
Construct and interpret a variety of food chains, identifying producers, predators and prey.	1) Can I classify organisms as producers, predators or prey? 2) Can I construct food chains from information? 2) Can I interpret food chains?

Scientist Study on Ivan Pavlov – orthodontist and Nutrionist

Previous Knowledge

Animals Including Humans

-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

- Find out 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.

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

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

Enquiry 3 – Cycle 2

Rocks – Links to volcanoes

3.4-3.8

Science Skills	In this enquiry you will be:	
Please refer to the skills document and video for guidance on the science skills of Planning Investigations, Presenting and Analysing Data and Evaluation of Investigations, as well as pupil progression in each skill.	Observing Over Time	X
	Pattern Seeking	X
	Identifying, Classifying and Grouping	X
	Comparative and Fair Testing (Controlled Investigations)	X
	Researching Using Secondary Resources	X

National Curriculum Knowledge	Key Questions
Compare and group together different kinds of rocks on the basis of their appearance and simple physical properties	1) Can I describe the features of different rocks? 2) Can I classify rocks based on their features?
Compare and group together different kinds of rocks on the basis of their appearance and simple physical properties	1) Can I describe how sedimentary/metamorphic rocks are formed? 2) Can I give some examples of sedimentary/metamorphic rocks? 3) Can I describe some of the features of sedimentary/metamorphic rocks?
compare and group together different kinds of rocks on the basis of their appearance and simple physical properties	1) Can I describe how igneous rocks are formed? 2) Can I give some examples of igneous rocks? 3) Can I describe some of the features of igneous rocks?
describe in simple terms how fossils are formed when things that have lived are trapped within rock	1) Can I describe what a fossil is? 2) Can I describe how a fossil is formed? 3) Can I identify fossils as plant or animal?
recognise that soils are made from rocks and organic matter.	1) Can I state that soil is made up of rocks and organic matter? 2) Can I name the types of soil? 3) Can I list some of the properties of soil?

Scientist Study on Mary Anning – Fossilist/Geologist

Previous Knowledge

Everyday Materials

- Identify and name a variety of everyday materials including, including wood, metal, plastic, glass water and rock.
- compare and group together a variety of everyday materials on the basis of their simple properties.
- identify and compare the suitability of a variety of everyday materials, including wood, metal, plastic, glass, brick, rock, paper and cardboard for particular uses.

Enquiry 4 – 3.13-3.18
Plants

Science Skills	In this enquiry you will be:	
Please refer to the skills document and video for guidance on the science skills of Planning Investigations, Presenting and Analysing Data and Evaluation of Investigations, as well as pupil progression in each skill.	Observing Over Time	X
	Pattern Seeking	X
	Identifying, Classifying and Grouping	
	Comparative and Fair Testing (Controlled Investigations)	X
	Researching Using Secondary Resources	X

National Curriculum Knowledge	Key Questions
Roots identify and describe the functions of different parts of flowering plants: roots, stem/trunk, leaves and flowers	1) Can I describe the differences and similarities between tree roots and other types of plant? 2) Can I describe how water and nutrients are taken up by the plant through the root? 3) Can I describe roots as important for the stability of the plant?
Leaves identify and describe the functions of different parts of flowering plants: roots, stem/trunk, leaves and flowers	1) I can identify that the surfaces of a leaf are different from each other. 2) I know that the stomata are situated on the underside of a leaf. 3) I can describe the leaf features of different plant species.
Stems investigate the way in which water is transported within plants.	1) Can I name the structures in the stem in which water and nutrients are transported? 2) Can I describe the journey of water through a plant? 3) Can I define transpiration?
Flowers explore the part that flowers play in the life cycle of flowering plants, including pollination, seed formation and seed dispersal.	1) Can I name some the parts of a flower and their function? 2) Can I describe the process of pollination and name some pollinators? 3) Can I say that fertilisation is when a pollen grain and an ovum fuse together and it will eventually result in a seed being formed? 4) Can I identify some methods for how seeds are dispersed?
Plant Growth 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	1) Can I name some of the nutrients that plants need? 2) Can I identify some of the health problems plant will have if they do not get the minerals they need? 3) Can I describe why some plants have evolved to be carnivorous?
Plant Growth 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	1) Can I name some of the nutrients that plants need? 2) Can I identify some of the health problems plant will have if they do not get the minerals they need? Can I describe why some plants have evolved to be carnivorous?

Explore Ahmed Mumin Warfa – Botanist from Somali

Previous Knowledge
– Identify the roots, trunk, branches and leaves of a tree.
– Find out how plants need water, light and a suitable temperature to grow and stay healthy.

Enquiry 5 – 3.11-3.12
Light

Science Skills	In this enquiry you will be:	
Please refer to the skills document and video for guidance on the science skills of Planning Investigations, Presenting and Analysing Data and Evaluation of Investigations, as well as pupil progression in each skill.	Observing Over Time	
	Pattern Seeking	X
	Identifying, Classifying and Grouping	X
	Comparative and Fair Testing (Controlled Investigations)	X
	Researching Using Secondary Resources	X

National Curriculum Knowledge	Key Questions
Darkness, sunlight and reflection 1) Recognise that they need light in order to see things and that dark is the absence of light. 2) Notice that light is reflected from surfaces. 3) Recognise that light from the sun can be dangerous and that there are ways to protect their eyes.	1) Can I state that darkness is an absence of light? 2) Can I say that light is reflected from objects, and that opaque objects make the best reflectors? 3) Can I describe why the Sun can be dangerous to our eyes and how to protect them?
Shadows 1) Recognise that shadows are formed when the light from a light source is blocked by an opaque object. 2) Find patterns in the way that the size of shadows change.	1) Can I say that we have shadows because a shape blocks the light? 2) Can I understand that a shadow has a similar shape as the object blocking the light? 4) Can I describe how to change the size of a shadow?

Explore Ibn al-Haytham – Astronomer and light study

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