

Lower Key Stage 2 Cycle A – Autumn 1



Animals including Humans (1)

Knowledge

What are the basic needs of animals to survive?
(movement, senses, warmth, reproduction, energy, nutrition)

Do all animals including humans have skeletons and muscles?

Why are skeletons and muscles important in our bodies?
(movement, protection and support)

Why do humans have different types of teeth and what are the different teeth called? (Functions of teeth)

What are human teeth made from?

Skills

I can start to raise my own relevant questions about the world around me.

I can think about how to record what I can see and explain what is happening using developing scientific vocabulary.

I can set up a simple comparative and fair test (with help where needed).

I can begin to say whether what happened was what I expected, acknowledging any unexpected outcomes.

Science Enquiry Approaches: Comparative and Fair Testing, Problem Solving

Vocabulary: muscles, skeleton, nutrition, incisors, molars, canines, premolars, grind, chew, producer, prey, predator, herbivore, carnivore, omnivore, primary consumer, secondary consumer, tertiary consumer, function

Famous Scientist: Washington & Lucius Sheffield- Toothpaste in a tube / Joseph Lister-Antiseptic

Lower Key Stage 2 Cycle A – Autumn 2



Animals including Humans (2)

Knowledge

Why do animals including humans need the right amount of nutrition to survive?

What foods should we be eating to keep healthy?

What is a food chain and what are the roles of producers, predators and prey?

What is the digestive system and how does it work?

What are names and basic functions of the main parts of the digestive system? (oesophagus, stomach, liver, large and small intestine, anus)

Skills

I can decide what criteria to use when independently sorting objects.

I can use straightforward scientific evidence to support my findings, make further predictions and explain my findings to others.

I can recognise when and how secondary sources might help me answer questions that cannot be answered through practical investigations.

I can begin to record findings using scientific language, drawings and labelled diagrams.

I can identify and discuss what I have learned and use it to draw conclusions.

Science Enquiry Approaches: Research, Pattern Seeking

Vocabulary: digestive system, digest, mouth, tongue, saliva, oesophagus, stomach, liver, acid, enzymes, small and large intestine, absorb, vitamin, compact, colon, rectum, anus, dairy, carbohydrate, protein, fats, fruits/vegetables, fibre

Famous Scientist: Ivan Pavlov- Digestive System Mechanisms

Lower Key Stage 2 Cycle A – Spring 1



Plants

Knowledge

Why are plants and trees important? (shelter and food for wildlife, absorb carbon dioxide and produce breathable air)

What are the main requirements plants need to grow? Is this the same for all plants?

Do all plants have the same structure? (Name parts of plants)

Why are the roots and leaves of plants important?

How is water transported within plants?

What role do flowers play in the life cycle of flowering plants? (pollination, seed formation and seed dispersal.)

Are all seeds dispersed the same way?

Skills

I can make systematic and careful observations, including observing changes over time.

I can begin to use a range of equipment to observe and measure, including data loggers.

I can take measurements using standard units and begin to use data loggers.

I can identify differences, similarities or changes related to simple scientific ideas or processes and more complex groups of living things.

I can collect and organise data from my own observations and measurements.

Science Enquiry Approaches: Identifying, Grouping and Classifying and Observation Over Time

Vocabulary: structure, roots, stem, trunk, leaves, flowers, flowering plant, function, nutrition, support, reproduction, air, light, water, fertiliser, pollination, seed, dispersal, formation

Famous Scientist: Joseph Dalton Hooker

Lower Key Stage 2 Cycle A – Spring 2



Electricity

Knowledge

Where does electricity come from? (power stations, wind, sun, water)

Which common appliances around us use electricity? Are they mains or battery powered?

What is a simple electrical circuit and what components does it need to work? (include bulbs and switches)

What is the difference between a complete and incomplete circuit?

What are common electrical conductors and insulators and how/why are they used?

Why are switches useful to use in circuits?

Skills

I can group and classify things (appliances) independently.

I can begin to use the scientific evidence I have and use when drawing conclusions.

I can begin to say whether what happened was what they expected, acknowledging any unexpected outcomes.

I can begin to present data in a variety of ways to help in answering questions.

I can begin to identify similarities, differences, patterns and changes relating to simple scientific ideas.

Science Enquiry Approaches: Pattern Seeking and Problem Solving

Vocabulary: cells, wires, bulbs, switches, buzzers, conductors, insulators, brightness, motor, danger, circuit,

Famous Scientist: Thomas Edison

Lower Key Stage 2 Cycle A – Summer 1



Forces and Magnets

Knowledge

Why do objects move differently on different surfaces?

Why do some forces need contact between 2 objects?
(Push and Pull)

How do magnetic forces work? (North and South pole)

Does a magnet need contact with an object for a force to be applied?

Are all materials magnetic?

Skills

I can start to raise my own relevant questions about the world around me in response to a range of scientific experiences.

I can make careful and systematic observations.

I can use a range of equipment to observe and measure.

I can identify differences, similarities or changes related to simple scientific ideas or processes and more complex groups of objects.

I can record findings using scientific language, drawings, labelled diagrams and tables.

Science Enquiry Approaches: Problem Solving and Pattern Seeking

Vocabulary: attract, repel, magnetic poles, North, South, push, pull, force, material, magnetic, non-magnetic, surface

Famous Scientist: Andre Marie Ampere

Lower Key Stage 2 Cycle A – Summer 2



Living Things and their Habitats

Knowledge

Can living things be grouped in different ways? (fish, amphibians, mammals, reptiles, birds, plants)

What is the difference between vertebrates and invertebrates?

Can we classify plants in different ways? – (flowering / non-flowering)

How can classification keys be used to help us to identify different living things?

Why do organisms live in different habitats?

What impact do humans have on habitats and environments? (positive and negative)

Can environments change? What dangers can this create?

Skills

I can start to make my own decisions about the most appropriate type of scientific enquiry I can use to answer questions.

I can use straightforward scientific evidence to answer questions and make predictions.

I can take accurate measurements using standard units using a range of equipment including data loggers.

I can ask simple questions about the world based on my own ideas and look in books and use the internet to find answers.

I can record findings in a variety of ways using scientific language, drawings, labelled diagrams and keys.

Science Enquiry Approaches: Comparative and Fair Testing, Research and Identifying, Grouping and Classifying

Vocabulary: environment, flowering, non-flowering, vertebrate, invertebrate, fish, amphibian, reptile, mammal, bird, moss, fern, grass, human, positive, nature reserve, ecological, negative, population, development, deforestation, pollution

Famous Scientist: Jacques Cousteau -Marine Biology