

Science - Year 1

The NC AIMS are that all children should:

Working scientifically Yrs 1 and 2

During years 1 and 2, pupils should be taught to use the following practical scientific methods, processes and skills through the teaching of the programme of study content:

- asking simple questions and recognising that they can be answered in different ways
- observing closely, using simple equipment
- performing simple tests
- identifying and classifying
- using their observations and ideas to suggest answers to questions
- gathering and recording data to help in answering questions

Plants

- identify and name a variety of common wild and garden plants, including deciduous and evergreen trees
- identify and describe the basic structure of a variety of common flowering plants, including trees

Animals, including humans

- identify and name a variety of common animals including fish, amphibians, reptiles, birds and mammals
- identify and name a variety of common animals that are carnivores, herbivores and omnivores
- describe and compare the structure of a variety of common animals (fish, amphibians, reptiles, birds and mammals including pets)
- identify, name, draw and label the basic parts of the human body and say which part of the body is associated with each sense

Everyday materials

- distinguish between an object and the material from which it is made
- identify and name a variety of everyday materials, including wood, plastic, glass, metal, water, and rock
- describe the simple physical properties of a variety of everyday materials
- compare and group together a variety of everyday materials on the basis of their simple physical properties

Seasonal changes

- observe changes across the 4 seasons
- observe and describe weather associated with the seasons and how day length varies

The EASTCOURT ATTAINMENT TARGETS can be tabulated as follows:

Enquiry skills	Biology : living and growing	Biology : animals including humans	Chemistry : types of material	Physics : light	Physics : seasons
Enquiry skills					
Enquiry Skills					

This section applies to both Year 1 and Year 2 and will not be repeated

Questioning

- explore the immediate world and raise simple questions
- experience different types of science enquiries, including practical activities
- begin to recognise different ways in which scientific questions might be answered
- ask people questions and use simple secondary sources to find answers.

Observing

- observe closely, using simple equipment
- with help, observe changes over time
- with guidance, begin to notice patterns and relationships

Sorting and classifying

- use simple features to compare objects, materials and living things and, with help, decide how to sort and group them (identifying and classifying)

Testing

- carry out simple tests

Measuring and recording

- use simple measurements and equipment (*e.g.* hand lenses, egg timers) to gather data
- record simple data.

Analysing

- use observations and ideas to suggest answers to questions. Talk about what has been found out, and how.
- with help, record and communicate findings and begin to use simple scientific language

Biology : Living and growing

Body parts

- name the parts of our bodies
- recognise and compare the main external parts of the bodies of humans and other animals
- describe and compare the structure of a variety of common animals (fish, amphibians, reptiles, birds and mammals including pets)

Living - not living

- understand that animals, including humans, are living

- learn the differences between things that are living and things that have never been alive

Flowering plants

- understand that plants and humans and other animals need food to grow.
- recognise and name the leaf, flower, stem and root of flowering plants

Biology : Animals, including humans

- identify and name a variety of common animals including fish, amphibians, reptiles, birds and mammals
- identify and name a variety of common animals that are carnivores, herbivores and omnivores
- say which part of the human body is associated with each sense
- understand that animals, including humans, are living

Plants

- identify and name a variety of common wild and garden plants, including deciduous and evergreen trees
- identify and describe the basic structure of a variety of common flowering plants

Frogs

- understand that the babies of some animals go through different stages
- understand how to treat animals with care and sensitivity

Chemistry: Types of materials

Naming materials

- understand that the objects around us are made of different materials and be able to name some of the materials
- use senses to explore and recognise similarities and differences between materials
- recognise and name common types of material and recognise that some of them are found naturally

Exploring materials

- understand that materials have different properties which make them useful in different ways
- sort objects into groups on the basis of simple material properties
- find out about the uses of a variety of materials and how they are chosen on the basis of their simple properties

Floating and sinking

- understand that some materials float in water and some sink

Why things float

- understand that some materials float because they are lighter or less dense than water

Materials for building

- understand which materials are suitable for making different buildings

Magnetic materials

- understand that some materials are attracted to magnets.
- sort objects according to whether they are magnetic or non-magnetic

Physics : Light

Identify Light Sources

- understand that we need light to see things and that it comes from different sources
- identify different light sources, including the sun
- understand that dark is the absence of light

Physics: Seasons

Seasonal changes

- observe changes across the four seasons
- observe and describe the weather associated with the seasons and how day length varies

Science - Year 2

The NC AIMS are that all children should:

Living things and their habitats

- explore and compare the differences between things that are living, dead, and things that have never been alive
- identify that most living things live in habitats to which they are suited and describe how different habitats provide for the basic needs of different kinds of animals and plants, and how they depend on each other.
- identify and name a variety of plants and animals in their habitats, including microhabitats
- describe how animals obtain their food from plants and other animals, using the idea of a simple food chain, and identify and name different sources of food

Plants

- observe and describe how seeds and bulbs grow into mature plants
- find out and describe how plants need water, light and a suitable temperature to grow and stay healthy

Animals, including humans

- notice that animals, including humans, have offspring which grow into adults
- find out about 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

Uses of everyday materials

- identify and compare the suitability of a variety of everyday materials, including wood, metal, plastic, glass, rock, paper and cardboard for particular uses
- find out how the shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching

The EASTCOURT ATTAINMENT TARGETS can be tabulated as follows:

Biology: Plants

Biology: healthy humans

Living things in their environment

Chemistry: Changing materials

Biology: Plants

Plants are alive

- understand that plants are living things and name their parts

Seed Investigation

- understand that when we are doing an investigation we need to make it fair
- learn that plants need light and water to grow

Life cycle of plants

- understand that (observe and describe how) seeds grow into flowering plants and that flowering plants make seeds

Observe local plants

- understand that many different plants grow in the local area
- group things according to observable similarities and differences
- find out about different plants and animals in the local environment
- relate life processes to plants found in the local environment
- care for the environment

Seeds and fruits

- understand that different plants produce different seeds

Collate findings

- understand the results of investigations can help answer questions

Biology : healthy humans

Our bodies

- understand that to stay alive, to grow and be healthy, people and animals need food and water and that to stay healthy they need exercise and rest
- learn that animals, including humans, move, feed, grow
- notice that animals, including humans, have offspring which grow into adults

Balanced Diet

- understand that food can be divided into different groups
- understand what is meant by the term "a balanced diet"
- learn that eating the right types and amounts of food helps to keep humans healthy

Safety with medicines

- understand some things we put in our bodies can make us well but some things can harm us
- learn about the role of drugs as medicines

Clean hands

- understand how keeping clean and having enough rest can help keep us healthy

Biology : living things in their environment

Plant and animal characteristics

- understand the differences and similarities between plants and animals
- understand the differences between things that are living and things that have never been alive
- understand that animals including humans move, feed, grow, use their senses and reproduce
- relate life processes to animals and plants found in the local environment, using a simple food chain
- group living things according to observable similarities and differences

Minibeasts in local environment

- understand that there are different plants and animals in the locality and they need to be handled with care and sensitivity
- find out about the different kinds of plants and animals in the local environment
- learn how to treat animals with care and sensitivity

Minibeast habitats

- understand that where animals live affects the way they look
- identify similarities and differences between local environments and ways in which these affect animals and plants that are found there

Caring for our environment

- understand why it is important to create and look after different kinds of habitats
- care for the environment

Chemistry: Changing materials

Group and sort materials

- understand that there are many different materials that have different properties and different uses
- use their senses to explore and recognise similarities and differences between materials.
- recognise and name common types of materials.
- find out about the uses of a variety of materials and how these are chosen for specific uses on the basis of their simple properties.

Changing Shape

- understand that there are some materials that change shape when forces are exerted on them
- collect information in a table
- find out how the shapes of objects made from some materials can be changed by some processes, including squashing, bending, twisting and stretching

Manufactured or natural?

- understand that some materials are natural and some are not (manufactured)
- recognise and name some common types of materials and recognise that some of them are found naturally

Learn about people who have developed useful materials.