Science

Intent – National Curriculum

***At Yeading infants and Nursery School, we believe that Science is part of our everyday life and helps children to understand how the world works. We want our children to be excited by Science, to be curious, to question and to challenge and to understand Science is about changing, developing and progressing and they are a part of that*.**

EYFS

In EYFS, children learn about similarities and differences in relation to places, objects, materials and living things. They talk about the features of their own immediate environment and how environments might vary from one another. By the use of our own forest schools area, children make observations of animals and plants and explain why some things occur, and talk about changes.

Children use a range of 'Characteristics of Effective Learning' in their independent learning. These can be seen as complementing '*Working Scientifically'*:

- **Playing and exploring – engagement**

Finding out and exploring; playing with what they know; being willing to 'have a go'.

- **Active learning – motivation**

Being involved and concentrating; keep on trying; enjoying achieving what they set out to do.

- **Creating and thinking critically – thinking**

Having their own ideas; making links; choosing ways to do things.

Key Stage 1

During years 1 and 2, pupils will be taught to use the following practical scientific methods, processes and skills through the teaching of the programme of study content and assessed at the end of each topic. They learn to:

- Ask simple questions and recognise that they can be answered in different ways.
- Observe closely, using simple equipment.
- Perform simple tests.
- Identify and classify
- Use their observations and ideas to suggest answers to questions.
- Gather and record data to help answer questions.

The topics covered:

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 four seasons.
- Observe and describe weather associated with the seasons and how day length varies.

Implementation

At Yeading, we encourage our children to think and work scientifically through observing, identifying, classifying and grouping. Our curriculum is based on using prior knowledge and learning new concepts, which allows children to take part in effective scientific investigations. Children learn technical vocabulary in lessons to ensure precise scientific explanations and recordings.
We link Science other areas of the curriculum such as Maths, English, P.E, Art, and D&T to deepen understanding and enhance enjoyment of the subject.

Outdoor learning
Children at Yeading have the opportunity to engage in outdoor learning with our forest school area, enabling them to implement the knowledge and skills they have acquired into practice, allowing them to become independent learners. Children learn about the various plants and animals that we are lucky to have at school, these include exotic animals such as leaf insects and chameleons. Children learn to cook and engage with the herb curriculum by creating their own dishes using the forest area's cob oven.

Trips
Children enjoy trips to various Science based venues such as the Science Museum and the Steam and Water Museum. Here at Yeading, we pride ourselves on being part of the community and children experience this when working on projects such as Walk for Water.

Parents
Parents are involved in their child's learning journey through Science curriculum workshops. They are encouraged to support their child with Science home learning i.e. discovery homework, growing plants, cooking.

Impact – Assessment

Through continuous, ongoing assessment, children's progress is tracked and developed further. Assessment through various formal and informal methods such as a task at the start and end of a topic, interactive games, quizzes or written work to demonstrate their understanding.

Scientific skills and knowledge are assessed in order to decide whether a child is *working towards*, *at expected* or working *above the expected standard*.

At Yeading Infants, we expect our children to leave as *curious learners*, *scientific investigators and systematic thinkers*.