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|  | **Newbrough C of E Primary School**  **Summary of Science in EYFS** |

In Nursery and Reception, science is an integral part of the approach to teaching and learning which is guided by the children’s interests but includes experiences and resources which are carefully planned by the teacher to stimulate the children.

The characteristics of effective learning from the [Statutory Framework for the Early Years Foundation Stage](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/974907/EYFS_framework_-_March_2021.pdf) are the foundations on which the working scientifically skills build in Key Stage 1. While children are playing and exploring, teachers model, encourage and support them to do the following:

* show curiosity and ask questions
* make observations using their senses and simple equipment
* make direct comparisons
* use equipment to measure
* record their observations by drawing, taking photographs, using sorting rings or boxes and, in Reception, on simple tick sheets, tallies, lists or labels
* use their observations to help them to answer their questions
* talk about what they are doing and have found out
* identify, sort and group.

Understanding the World' is the specific area that includes the science content in the Statutory Framework and is described as follows.

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**Understanding the World**

Understanding the world involves guiding children to make sense of their physical world and their community. The frequency and range of children’s personal experiences increases their knowledge and sense of the world around them – from visiting parks, libraries and museums to meeting important members of society such as police officers, nurses and firefighters. In addition, listening to a broad selection of stories, non-fiction, rhymes and poems will foster their understanding of our culturally, socially, technologically and ecologically diverse world. As well as building important knowledge, this extends their familiarity with words that support understanding across domains. Enriching and widening children’s vocabulary will support later reading comprehension.  
*Statutory framework for the early years foundation stage, p10, DfE*

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The Statutory Framework does not specify the knowledge that children in EYFS should learn however, DfE has published non-statutory guidance, called [Development Matters](https://www.gov.uk/government/publications/development-matters--2), that does provide statements that describe how early years settings can meet the requirements of the Statutory Framework. It is these statements from Development Matters that have been used to show how the content from the Statutory Framework introduces children to the science they will learn and build on in the topics they study in Key Stage 1 and 2. Most of these statements come from the Understanding the World area, but statements that are relevant to science from other areas are also included. PLAN (Association of Science education) has mapped all the relevant science statements from Development Matters, for the seven areas of learning and development in the Statutory Framework, to the relevant science topics in the National Curriculum in England. These are used as a basis of this summary.

**What does Ofsted say about science in the EYFS?**

In Ofsted’s [Research review of the factors that influence the quality of science education](https://www.gov.uk/government/publications/research-review-series-science/research-review-series-science), it states the following about science in the EYFS.

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“A high-quality science curriculum not only identifies the important concepts and procedures for pupils to learn, it also plans for how pupils will build knowledge of these over time. This starts in the early years.”

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So what does the report say about how science knowledge is built over time in the EYFS? It includes the following.

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“Pupils begin their formal science education in the early years foundation stage (EYFS). This involves learning foundational knowledge primarily through the ‘understanding the world: the natural world’ area of learning. This provides a number of rich contexts for pupils to learn a wide range of vocabulary. These words form the beginnings of scientific concepts that will be built on in Year 1 and beyond. Because pupils develop their scientific and non-scientific vocabulary during this time, the EYFS should not just be considered as preparation for learning further science in Year 1.”

Specific scientific learning which will be covered will include the following areas:

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|  |  | * **During their time in the EYFS children will:** |
| **Animals, excluding humans** | * Learn about the life cycles of animals * Compare adult animals to their babies * Observe how baby animals change over time * Name and describe animals that live in different habitats. Describe different habitats | |
| **Humans** |  | * Learn about the life cycles of humans * Learn about their senses * Describe people who are familiar to them * Learn about how to take care of themselves |
| **Living things and their habitats** |  | * Explore the surrounding natural environment * Explore natural objects from the surrounding environment * Explore the plants in the surrounding natural environment * Explore the animals in the surrounding natural environment * Explore plants and animals in a contrasting natural environment |
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| **Plants** |  | * Grow plants |
| **Seasonal changes** | * Play and explore outside in all seasons and in different weather * Observe living things throughout the year | |
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| **Materials, including changing materials** |  | * Explore a range of materials including natural materials * Shape and join materials * Combine and mix ingredients * Change materials by heating and cooling, including cooking * Make objects from different materials, including natural materials * Observe, measure and record how materials change when heated and cooled * Compare how materials change over time and in different conditions |
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| **Electricity** |  | * Identify electrical devices |
|  |  | * Use battery-powered devices |
| **Light** |  | * Explore light sources * Shine light on or through different materials * Explore shadows * Explore rainbows |
| **Forces** |  | * Feel forces * Explore how things work * Explore how objects/materials are affected by forces * Explore how to change how things work * Explore how the wind can move objects * Explore how objects move in water |
| **Sound** |  | * Listen to sounds * Make sounds * Listen to sounds outside and identify the source |
| **Earth and space** |  | * Learn about the Earth, Sun, Moon, planets and stars * Learn about space travel |
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