

Science in the EYFS Curriculum at HCFS

The EYFS framework is structured very differently to the national curriculum as it is organised across seven areas of learning rather than subject areas. The aim of this document is to help understand how the skills taught across the EYFS feed into national curriculum subjects.

This document demonstrates which statements from the 2021 Development Matters are a prerequisite skill for science within the national curriculum. The table below outlines the most relevant statements taken from the Early Learning Goals in the EYFS statutory framework and the Development Matters age ranges for three and four year olds and Reception to match the programme of study for science.

The most relevant statements for science are taken from the following areas for learning:

- Communicate and Language
- Physical Development
- Personal Social and Emotional Development
- Understanding the World.

Communication & Language		
Birth - 3 Years <i>for reference only</i>	3 Years - 4 Years	In Reception
Enjoy singing, music and toys that make sounds. Identify familiar objects and properties for practitioners when they are described. Understand simple questions about 'who', 'what', and 'where'.	Understand 'why' questions like: "why do you think the caterpillar got so fat?" Use a wider range of vocabulary - suggestions of using scientific vocabulary when talking about parts of an insect.	Use new vocabulary through the day in different contexts - suggestions of using scientific vocabulary about water in puddles disappearing using 'evaporation'.

Personal, Social & Emotional Development		
Birth - 3 Years <i>for reference only</i>	3 Years - 4 Years	In Reception
Notice and ask questions about differences, such as skin colour, types of hair, gender, special needs and disabilities, religion and so on.	Be increasingly independent in meeting their own care needs e.g. brushing teeth, using the toilet, washing and drying their hands thoroughly. Make healthy choices about food, drink, activity and toothbrushing.	Show resilience and perseverance in the face of challenge. Manage their own needs: personal hygiene. Know and talk about the different factors that support their overall health and wellbeing. <ul style="list-style-type: none">- Regular physical activity- Healthy eating- Toothbrushing- Sensible amounts of screen time- Having a good sleep routine- Being a safe pedestrian.

Physical Development		
Birth - 3 Years <i>for reference only</i>	3 Years - 4 Years	In Reception
Explore different materials and tools.	Start taking part in some group activities which they make up for themselves, or in teams.	N/A

Literacy		
Birth - 3 Years <i>for reference only</i>	3 Years - 4 Years	In Reception
N/A		

Mathematics		
Birth - 3 Years <i>for reference only</i>	3 Years - 4 Years	In Reception
N/A		

Understanding the World		
Birth - 3 Years <i>for reference only</i>	3 Years - 4 Years	In Reception
Repeat actions that have an effect.	Use all their senses in hands-on exploration of natural materials.	Explore the natural world around them.
Explore materials with different properties.	Explore collections of materials with similar and/or different properties.	Describe what they see, hear and feel whilst outside.
Explore natural materials, indoors and outdoors.	Talk about what they see, using a wide vocabulary.	Understand the effect of changing seasons on the natural world around them.
Explore and respond to different natural phenomena in their setting and on trips.	Explore how things work.	Recognise some environments that are different to the one in which they live.
Make connections between the features of their family and other families.	Plant seeds and care for growing plants.	
Notice differences between people.	Understand the key features of the life cycle of a plant and an animal.	
	Begin to understand the need to respect and care for the natural environment and all living things.	
	Explore and talk about different forces they can feel.	
	Talk about the differences between materials and the changes they notice.	

Expressive Arts & Design		
Birth - 3 Years <i>for reference only</i>	3 Years - 4 Years	In Reception
N/A		

In planning and guiding what children learn, practitioners must reflect on the different rates at which children are developing and adjust their practice appropriately, referring to the Characteristics of Effective Teaching and Learning.

At HCFS, the main preparation for becoming ready for the core Science curriculum comes through the thematic projects that children engage with in the afternoons of the school day. The projects that are taking place throughout the year are as follows:

Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
All About Me	Nursery Rhymes Celebrations	Superheroes	Going on a Journey	Creations Circus	Animal Kingdoms

The linked scientific statements taken from the Development Matters are met mainly within the Projects in Spring 2 (Going on a Journey) and Summer 2 (Animals Kingdoms). The below overview shows the coverage of the linked statements from development matters for science coverage for each Project. In the EYFS department, they have an ongoing area for children to engage with in the form of an investigation station. Teachers in EYFS change the theme of this station in line with the children's interests, but on occasions, this is directly linked to the project in question. Science subject custodians have provided a few different ideas for the investigation stations within the tables below.

Autumn 1
All About Me (PSE Development & Understanding the World)
Linked Statements from Development Matters for Science Coverage
<ul style="list-style-type: none"> Manage their own needs: personal hygiene. Know and talk about the different factors that support their overall health and wellbeing: <ul style="list-style-type: none"> Regular physical activity Healthy eating Toothbrushing Sensible amounts of screen time Having a good sleep routine Being a safe pedestrian. Be increasingly independent in meeting their own care needs e.g. brushing teeth, using the toilet, washing and drying their hands thoroughly. Make healthy choices about food, drink, activity and toothbrushing.
Suggested CIL Investigation Stations Ideas for EYFS Team
<ul style="list-style-type: none"> Labelling the human body Role playing a sandwich shop making sandwiches for packed lunches Clean the teeth Role playing bedtime routine with baby dolls Ordering steps to washing hands. Matching senses to objects Source the sound challenge Listening to snippets of music and saying if they like it etc.

Autumn 1
Houses & Homes (Understanding the World & Expressive Arts & Design)
Linked Statements from Development Matters for Science Coverage
<ul style="list-style-type: none"> Talk about the differences between materials and changes they notice. Recognise some similarities and differences between life in their country and life in other countries.

<ul style="list-style-type: none"> Recognise some environments that are different to the one in which they live.
Suggested CIL Investigation Stations Ideas for EYFS Team
<ul style="list-style-type: none"> Looking at birds nests, match nest to bird. Best way to protect an egg from cold/overheating/bad weather Monsoon proof roof Minibeast habitats Building spaghetti towers

Autumn 2
Nursery Rhymes (Expressive Arts & Design & Communication & Language)
Linked Statements from Development Matters for Science Coverage
<ul style="list-style-type: none"> Explore the natural world around them, making observations and drawing pictures of animals and plants. Start taking part in some group activities which they make up for themselves, or in teams.
Suggested CIL Investigation Stations Ideas for EYFS Team
<ul style="list-style-type: none"> Life cycle of Frogs using Five Little Speckled Frogs as stimulus. Floating and sinking using Five Little Ducks as stimulus. Keeping things warm using Baa Baa Black Sheep as stimulus. Blindfolded activity based on using Three Blind Mice. Matching animals & offspring based on Old MacDonald's Farm Evaporation based on Incy Wincy Spider.

Autumn 2
Celebrations (Understanding the World & Expressive Arts & Design)
Linked Statements from Development Matters for Science Coverage
Suggested CIL Investigation Stations Ideas for EYFS Team
<ul style="list-style-type: none"> Sorting Christmas materials into categories (tinsel, bells, decorations) Labelling parts of a reindeer Planting mini Christmas trees and decorating Making snowman slime Marshmallow catapult Icicle ornaments using pipe cleaners and sugar solution to create crystals. Grow own Christmas tree (out of cress!)

Spring 1
Superheroes (PSE Development & Communication & Language)
Linked Statements from Development Matters for Science Coverage
Suggested CIL Investigation Stations Ideas for EYFS Team
<ul style="list-style-type: none"> Material suitability for different super powers - stretch for elasta-girl, flame resistant for someone who fights fire. Make a superhero float Free the superhero from ice block Save the superhero from the spiders web in tuff tray Supersized marshmallow experiment Magnetic pins in a superhero using magnet to make them move.

Spring 2
Going on a Journey (Physical Development & Understanding the World)
Linked Statements from Development Matters for Science Coverage

<ul style="list-style-type: none"> • Explore the natural world around them. • Describe what they see, hear and feel whilst outside. • Recognise some environments that are different to the one in which they live. • Understand the effect of changing seasons on the natural world around them. • Use all their senses in hands-on exploration of natural materials. • Explore collections of materials with similar and/or different properties • Talk about what they see, using a wide vocabulary • Explore and talk about different forces they can feel • Talk about the differences between materials and changes they notice
Suggested CIL Investigation Stations Ideas for EYFS Team
<ul style="list-style-type: none"> • Gingerbread man crossing the river - floating and sinking • Magnets attached to photos of different forms of transport, using magnets to move them. Lead to an exploration of magnetic and non-magnetic items. • Rockets launching into space. Stick a piece of large drinking straw and blow through the straw to make the rocket fly. • Making paper helicopter, adding different weights to the bottom of the paper helicopter. • Teddy is going on a journey to a friend's house but it's raining - how can we keep Teddy dry?

Summer 1
Creations (Expressive Arts and Design)
Linked Statements from Development Matters for Science Coverage
<ul style="list-style-type: none"> • Explore the natural world around them.
Suggested CIL Investigation Stations Ideas for EYFS Team
<ul style="list-style-type: none"> • Wax crayon and watercolours - wax repelling water. • Crazy cornflour slime • Skittles and water investigation • Mixing food colouring and foam • Making firework pictures blowing through straws • Fizzing colours baking soda and vinegar pictures • Water balloon filled with paint pictures (outdoors!) • DIY puffy paint • Rainbow rubber eggs

Summer 1
Circus (Physical Development & PSE Development)
Linked Statements from Development Matters for Science Coverage
<ul style="list-style-type: none"> • Show resilience and perseverance in the face of challenge.
Suggested CIL Investigation Stations Ideas for EYFS Team
<ul style="list-style-type: none"> • Circus coloured slime • Rock candy crystals from the circus • Dancing popcorn kernels • Mini Acrobats on the tightrope (how can you balance the object?) • Shadow puppets show

Summer 2
The Animal Kingdom (Understanding the World)
Linked Statements from Development Matters for Science Coverage
<ul style="list-style-type: none"> • Talk about what they see, using a wide vocabulary. • Understand the key features for the life cycles of a plant and an animal.

- Begin to understand the need to respect and care for the natural environment and all living things.
- Know that there are countries in the world and talk about the differences they have experienced or seen in photos.
- Recognise some similarities and differences between life in this country and life in other countries.
- Explore the natural world around them.
- Describe what they see, hear and feel whilst outside.
- Recognise that some environments are different to the one in which they live.
- Understand the effect of changing seasons on the natural world around them.

Suggested CIL Investigation Stations Ideas for EYFS Team

- Matching animals and their offspring
- Make a ladybird habitat
- Sorting nocturnal and diurnal animals
- Predator and prey role play
- Sorting animals into their different habitats.