



# Newlathes Nursery & Infant School

## Science Long Term Plan



	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Reception	<p>I can describe the basic human life cycle.</p> <p>I can identify and name some of the parts of my body.</p>	<p>I can describe the life cycle of a tree.</p> <p>I recognise there are different seasons in the year and name some of the features.</p> <p>I understand that seeds look different and can describe how they move around.</p> <p>I can make observations of the year around me.</p>	<p>I can think about what I need to wear in cold weather.</p> <p>I can describe different environments.</p> <p>I can think about different materials (snow and ice) and notice changes.</p> <p>I can think about which animals live in Antarctica.</p> <p>I can go on a Winter Walk and observe signs of Winter.</p>	<p>I can choose the correct material to make a bear out of.</p> <p>I can describe the life cycle of a farm animal.</p> <p>I can compare different living things.</p>	<p>I can identify signs of spring.</p> <p>I can name the four seasons.</p> <p>I can say how the weather might change in spring.</p> <p>I can name and recognise different types of insect.</p> <p>I can observe things over time.</p> <p>I can make observations about how things change.</p> <p>I know the life cycle of a butterfly.</p> <p>I know what plants need to grow.</p> <p>I can label the parts of a plant.</p>	<p>I can identify the four seasons.</p> <p>I can talk about the weather in different seasons.</p> <p>I can talk about the habitat of different animals.</p> <p>I know which animals live at the UK seaside.</p> <p>I can talk about rubbish and recycling and how this effecting the Earth.</p> <p>I understand what recycling is and what can and can't be recycled.</p> <p>I can talk about the similarities and differences between different environments.</p>

**Seasons - Autumn**

I can name the four seasons.  
I know some trees lose their leaves.  
I know days begin to get shorter.

**Materials**

I can name some different every day materials; *wood, plastic, glass, metal, water, rock.*

I can sort them into groups.

**Investigations -**

- Touching and feeling materials - organising them by touch.
- Looking at different leaves with magnifying glasses to observe changes.
- Comparing materials for a job, brick, straw and paper houses.

**Working Scientifically**

- I can identify and classify.  
- I can compare simple tests.  
- I can use my observations and ideas to suggest answers to questions.

**Materials**

I can explain what material objects are made from.  
I can explain why a material might be used for a specific job looking at properties.  
I know the difference between an object and the material from which it's made.

**Investigations -**

*Gloves investigation- Using gloves made from different materials. Can children feel the coldness of the ice through the different materials?*  
Working Scientifically  
- I can compare simple tests.  
- I can use my observations and ideas to suggest answers to questions.

**Seasons - Autumn - Winter**

Nature of seasons- Looking at deciduous and evergreen tree. (children can visually see the changes)

**Seasons - Winter**

I know it gets colder in winter.  
I know how to look after myself in winter.  
I know that the shortest day is in winter,

**Animals including Humans**

I can name the parts of the body I can see.  
I can draw and label parts of the body.  
I can identify the main parts of the human body that link to the senses.

**Investigations -**

- taste, touch and smell tests.
- Does holding your nose affect your taste? (using crisps)

**Working Scientifically**

- I can gather and record data.  
- I can use my observations and ideas to suggest answers to questions.

**Animals**

I can identify and name a variety of common animals, birds, fish, amphibians, reptiles, mammals.  
Identify and name a variety of 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)

**Investigations:**

- How many worms come to the surface within a hoop when the ground is watered?

**Working Scientifically**

- I can identify and classify.

**Seasons - Spring**

I can recognise that plants and trees begin to show new growth in spring.

**Plants**

I can name the parts of a plant (petals, stem, leaf, bulb, flower, seed and root).

I can identify and name a range of common plants and trees.

I can name the trunk, branches, root and leaves on a tree.

I can recognise deciduous and evergreen trees.

**Investigations -**

- growing a bean plant.
- Compare and contrast veg and fruit (above ground, below ground and on a tree).
- Look at different plants closely to identify and group them.

**Working Scientifically**

- I can observe closely using simple equipment.  
- I can identify and classify.  
- I can use my observations and ideas to suggest answers to questions.

**Seasons - Summer**

I can name the four seasons.  
I know that the summer can be hot and that there will be less rain.  
I know the sun can be harmful.  
I can keep myself safe in the sun.  
I know the length of day gets longer in Spring and Summer.

**Investigations -**

- Weather charts.
- My shadow over the day.

**Working Scientifically**

- I can gather and record data.  
- I can compare simple tests.  
- I can use my observations and ideas to suggest answers to questions.

**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.

Working scientifically.  
Ask simple questions and recognise that they can be answered in different ways  
Identify and classify  
Use their observations and ideas to suggest answers to questions

**Living things and their habitats**

Identify and name a variety of plants and animals in their habitats, including micro-habitats  
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.

**Investigation - Fat or fur? Which keeps polar animals warm?**

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

**Everyday materials**

Identify and compare the suitability of a variety of everyday materials, including wood, metal, plastic, glass, brick, 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.

**Find out about Charles Macintosh (waterproof fabric)**

**Investigation - which material is best for water proofing an Indian house.**

**Material investigation into squashing, bending, twisting and stretching.**

Working scientifically.  
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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 in answering questions.

**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 (food, water, air)**

**\*Recap omnivore, herbivore, carnivore (tricky vocab from year 1)**

**Describe the importance for humans of exercise, eating the right amounts of different types of food, and hygiene.**

**Investigation - Observing and tracking fish growth and development (throughout the year)**  
ICT link - create branching database for different animals.

Working scientifically.  
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  
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**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.

**Investigation - growing sunflower**  
**Already living plants, changing the conditions.**  
**What are the best conditions for a plant? (light, water etc)**  
**Investigating where the seeds are in different fruits and vegetables.**

Working scientifically.  
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 in answering questions

**Animals, including humans**

Describe the importance for humans of exercise, eating the right amounts of different types of food, and hygiene.

Discuss medicines and staying safe.

**Investigation -PE week - Can the person with the longest legs jump the highest?**  
**Creating a healthy meal.**  
**Moki band investigation**

Working scientifically.  
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Perform simple tests  
Identify and classify  
Use their observations and ideas to suggest answers to questions  
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Environment- Recycling -  
Classification of  
materials, how can we  
recycle, what is  
recycling?, children can  
sort into the correct  
materials to recycle.

**Reception**  
Bubbles  
Smell test  
Sound Balloons

**Reception investigation area:**  
Is it magnetic?  
Sorting materials  
Identifying patterns - on animals or natural objects  
Sorting Moshi monsters.

**Year 1**  
Hoopsters  
Lava lamps

**Year 2**  
Parachutes  
Biscuit Dunking

Science day