



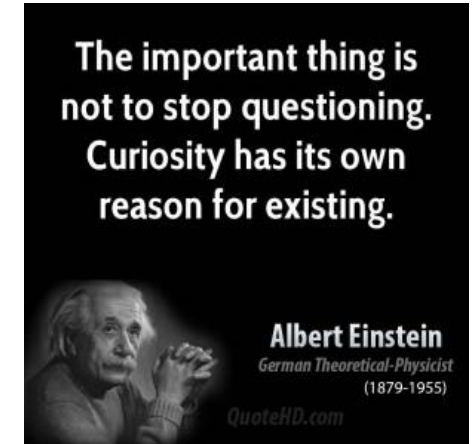
## Pinewood Infant and Nursery school

### The roots to grow and the wings to fly

Responsibility Resilience Independence Curiosity Respect Kindness Honesty Self-belief

Our vision for Science for our children is to:

- enable our children to *experience and observe phenomena, looking closely at the natural and human constructed world around them*
- encourage our children to be *curious* and ask *questions* about what they notice
- help them to develop their understanding of scientific ideas by using different types of *scientific enquiry* to answer their own questions, including *observing changes* over a period of time, *noticing patterns, grouping and classifying things*, carrying out simple *comparative tests*, and finding things out using *secondary sources of information*
- enable them to use simple *scientific language* to talk about what they have found out and communicate their ideas to a range of audiences in a variety of ways
- ensure they learn about science through the use of *first-hand practical experiences* and that the outdoors is used as much as possible
- help them to understand that they can use *secondary sources*, such as books, photographs and videos to discover more about science
- give them *opportunities that encourage a true love of science and the world around them*





# Outdoor Environment

*We are so lucky to have such an outstanding outdoor environment in which children can develop their scientific skills and knowledge. When planning for science staff make use of our outdoor area as much as possible and where appropriate, to provide children with a wide variety of stimulating learning experiences. We have a school gardener who supports our children with planting and growing and our own school pond where we can observe life cycles and habitats.*





# What does Science at Pinewood look like?

- Hands-on and practical
- First hand experiences
- Visits and visitors
- Science days
- Outdoor learning
- School pond
- Planting and growing
- Knowledge and skills document
- I can... statements for children
- Use of explorify
- IWB as introduction to sessions
- Key vocabulary
- Working scientifically symbols
- Floor books
- Cross-curricular links



## Animals including humans

- I can understand that animals, including humans, have babies/offspring that grow into adults
- I can find out about and describe what animals, including humans, need to live and survive
- I can talk about how and why exercise, different foods and good hygiene are important for our bodies

I can use the key vocabulary: offspring, reproduction, growth, child, young, old, life cycle, exercise, heartbeat, breathing, hygiene, germs, disease, protein, meat, fish, vegetable, fruit, carbohydrates, dairy, fat, sugar



## Science

observe changes

Research

carry out tests

looking for patterns

grouping things



Learning Objectives	KS1	KS2	KS3
Identify and name a variety of common animals including fish, amphibians, reptiles, birds and mammals	Identify and name a variety of common animals including fish, amphibians, reptiles, birds and mammals	Identify and name a variety of common animals including fish, amphibians, reptiles, birds and mammals	Identify and name a variety of common animals including fish, amphibians, reptiles, birds and mammals
Describe and compare the structure of a variety of common animals (fish, amphibians, reptiles, birds and mammals, including pets)	Describe and compare the structure of a variety of common animals (fish, amphibians, reptiles, birds and mammals, including pets)	Describe and compare the structure of a variety of common animals (fish, amphibians, reptiles, birds and mammals, including pets)	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 human body is associated with each sense	Identify, name, draw and label the basic parts of the human body and say which part of the human body is associated with each sense	Identify, name, draw and label the basic parts of the human body and say which part of the human body is associated with each sense	Identify, name, draw and label the basic parts of the human body and say which part of the human body is associated with each sense

Learning Objectives	KS1	KS2	KS3
Identify and name a variety of common plants including deciduous and evergreen trees	Identify and name a variety of common plants including deciduous and evergreen trees	Identify and name a variety of common plants including deciduous and evergreen trees	Identify and name a variety of common plants including deciduous and evergreen trees
Describe and compare the structure of a variety of common plants (including deciduous and evergreen trees)	Describe and compare the structure of a variety of common plants (including deciduous and evergreen trees)	Describe and compare the structure of a variety of common plants (including deciduous and evergreen trees)	Describe and compare the structure of a variety of common plants (including deciduous and evergreen trees)
Identify, name, draw and label the basic parts of a plant and say which part of the plant is associated with each function	Identify, name, draw and label the basic parts of a plant and say which part of the plant is associated with each function	Identify, name, draw and label the basic parts of a plant and say which part of the plant is associated with each function	Identify, name, draw and label the basic parts of a plant and say which part of the plant is associated with each function

Learning Objectives	KS1	KS2	KS3
Identify and name a variety of common animals including fish, amphibians, reptiles, birds and mammals	Identify and name a variety of common animals including fish, amphibians, reptiles, birds and mammals	Identify and name a variety of common animals including fish, amphibians, reptiles, birds and mammals	Identify and name a variety of common animals including fish, amphibians, reptiles, birds and mammals
Describe and compare the structure of a variety of common animals (fish, amphibians, reptiles, birds and mammals, including pets)	Describe and compare the structure of a variety of common animals (fish, amphibians, reptiles, birds and mammals, including pets)	Describe and compare the structure of a variety of common animals (fish, amphibians, reptiles, birds and mammals, including pets)	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 human body is associated with each sense	Identify, name, draw and label the basic parts of the human body and say which part of the human body is associated with each sense	Identify, name, draw and label the basic parts of the human body and say which part of the human body is associated with each sense	Identify, name, draw and label the basic parts of the human body and say which part of the human body is associated with each sense

Learning Objectives	KS1	KS2	KS3
Identify and name a variety of common plants including deciduous and evergreen trees	Identify and name a variety of common plants including deciduous and evergreen trees	Identify and name a variety of common plants including deciduous and evergreen trees	Identify and name a variety of common plants including deciduous and evergreen trees
Describe and compare the structure of a variety of common plants (including deciduous and evergreen trees)	Describe and compare the structure of a variety of common plants (including deciduous and evergreen trees)	Describe and compare the structure of a variety of common plants (including deciduous and evergreen trees)	Describe and compare the structure of a variety of common plants (including deciduous and evergreen trees)
Identify, name, draw and label the basic parts of a plant and say which part of the plant is associated with each function	Identify, name, draw and label the basic parts of a plant and say which part of the plant is associated with each function	Identify, name, draw and label the basic parts of a plant and say which part of the plant is associated with each function	Identify, name, draw and label the basic parts of a plant and say which part of the plant is associated with each function

## How will you find out the answer to your question?

- ★ observe the changes over time
- ★ look for a pattern
- ★ group and classify things
- ★ carry out a simple tests and compare
- ★ use secondary information



## experiment

observe

what? how? what if? why?

be curious

The important thing is not to stop questioning. Curiosity has its own reason for existing.

Albert Einstein



## Science in the EYFS

Science in the Foundation Stage comes under the Understanding the World (mostly the natural world). Children engage in both incidental science learning through their play both inside and outside and also adult led STEM sessions. We make cross-curricular links where appropriate.



Many of our EYFS topics allow us to make links to science learning:

- *Pets*
- *Keeping healthy*
- *Our bodies*
- *Birds*
- *Seasons*
- *Minibeasts*
- *Life cycles- caterpillars, frogs and chicks*
- *Farms*





## Science in KS1

*In KS1 we follow the Science National Curriculum and our knowledge progression document. Our children engage in science lessons which are cross curricular where appropriate.*



## Seasonal changes

*In Year 1 classes visit the local area called the Hobbucks each season. Each class adopts a tree and the children observe changes to it throughout the year.*



*In year 1 we go on seasonal walks to the Hobbucks.*

*We adopt a tree and visit each season to see how it changes.*





## Growing and planting at Pinewood.

We are so lucky to have a fantastic gardener in Ron who works regularly with our children on growing and planting in our schools grounds. We have won various rewards through Arnold in Bloom for our outdoor area. Growing and planting is an important part of our curriculum. Sometimes we eat or sell what we have grown, there is nothing yummier than freshly boiled potatoes with butter.





## Trips and visitors

*We have many trips for the children throughout the year and across the year groups. We also have many visitors into school for the children to engage with. Both of these enhance our children's science learning and provide them with valuable practical, hands on and first hand experiences.*

- Sherwood Pines
- White Post Farm
- Brackenhurst
- Hobbucks local woods
- Space centre
- Pets
- Wonderful worms
- Life Education bus
- RSPCA
- Unusual pet visits – African snail, tortoise

Staff CPD

- Science co-ordinator networks termly
- Staff meetings termly for updates and moderation
- Informal discussions

