

Peover Superior Endowed Primary School

KS1 Science Curriculum



These are the skills that children need to learn to make progress:

- observe and explore to generate ideas, define problems and pose questions in order to develop investigations and products
- engage safely in practical investigations and experiments and gather and record evidence by observation and measurement
- apply practical skills to design, make and improve products safely, taking account of users and purposes
- communicate and model in order to explain and develop ideas, share findings and conclusions
- to continually make systematic evaluations when designing and making, to bring about improvements in processes and outcomes.

	Which skills are the children learning?	What Core Knowledge will the children acquire? Y1	What Core Knowledge will the children acquire? Y2
KS1	1. to investigate their local environment and use their findings to inform actions to care for and improve it. Further skills: 3. to explore simple electrical circuits and find out how electricity is used in the home, at school and in some products	Working scientifically <ul style="list-style-type: none"> asking simple questions and recognising that they can be answered in different ways observing closely, using simple equipment performing simple tests identifying and classifying using their observations and ideas to suggest answers to questions gathering and recording data to help in answering questions. 	
	2. to explore ways of looking after living things and keeping them alive and healthy Further skills: 5. to apply scientific knowledge and understanding to grow healthy plants and explain how humans and other animals stay fit and healthy 6. to investigate the physical characteristics of the local environment and the living things in it, comparing them with those from another locality	Plants <ul style="list-style-type: none"> identify and name a variety of common plants, including garden plants, wild plants and trees, and those classified as deciduous and evergreen identify and describe the basic structure of a variety of common flowering plants, including roots, stem/trunk, leaves and flowers. 	All living things and their habitats <ul style="list-style-type: none"> 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 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.
	Animals, including Humans <ul style="list-style-type: none"> identify and name a variety of common animals that are birds, fish, amphibians, reptiles, mammals and invertebrates 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 (birds, fish, amphibians, reptiles, mammals and invertebrates, and 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. 	Plants <ul style="list-style-type: none"> 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. 	Animals, including Humans <ul style="list-style-type: none"> 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 (water, food and air) describe the importance for humans of exercise, eating the right amounts of different types of food, and hygiene.

<p>1. to investigate their local environment and use their findings to inform actions to care for and improve it.</p> <p>Further skills: 2. to investigate the effects of different forces and how they can use these to move mechanical parts or objects in specific ways 3. to identify, group and select materials using properties and behaviours that can be tested, and identify and group living things using observable features and other characteristics 4. to investigate what happens when materials are mixed, and whether and how they can be separated again</p>	Everyday Materials	<ul style="list-style-type: none"> 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 find out how the shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching. 	Uses of everyday materials	<ul style="list-style-type: none"> identify and compare the uses of a variety of everyday materials, including wood, metal, plastic, glass, brick, rock, paper and cardboard compare how things move on different surfaces.
<p>3. to explore simple electrical circuits and find out how electricity is used in the home, at school and in some products 4. to explore sources of light and sound and how we sense them</p> <p>Further skills: 1. to investigate how light and sound travel and how shadows and sounds are made</p>	Light	<ul style="list-style-type: none"> observe and name a variety of sources of light, including electric lights, flames and the Sun associate shadows with a light source being blocked by something. 		
			Sound	<ul style="list-style-type: none"> observe and name a variety of sources of sound, noticing that we hear with our ears recognise that sounds get fainter as the distance from the sound source increases.
<p>1. to investigate their local environment and use their findings to inform actions to care for and improve it.</p>	Seasonal Changes	<ul style="list-style-type: none"> observe changes across the four seasons observe and describe weather associated with the seasons and how day length varies. 		

How will the children be enabled to do this? 'Breadth of Learning'

a. When investigating science and design and technology children should:

- share their expertise in subjects that interest them and respond to relevant and current issues, locally and in the national media
- apply their knowledge and understanding in real-life contexts, relating it to the world around them and visiting places to learn about science and design and technology
- work with experts and enthusiasts to find out how science and design and technology are used and applied in day-to-day life.

b. Children should use investigations and designing and making activities to:

- explore a range of familiar and less familiar contexts, environments and products
- develop practical skills that will help them to carry out investigations and to make functional products from their design ideas.
- use design and technology contexts to develop scientific understanding and apply their scientific knowledge to inform their designing and making
- work collaboratively towards a common goal by sharing ideas, making compromises, negotiating and providing feedback.

c. When applying their knowledge and understanding of science and design and technology children should:

- think creatively and inventively about how things work, identify patterns and establish links between causes and effects
- test their ideas through practical activities and review their own and others' ideas and investigations, designs and products
- carry out their own investigations, deciding what kind of evidence to collect and what equipment and materials to use
- suggest the results they expect and explain their observations and the significance and limitations of the conclusions they draw.

d. When developing their own design ideas children should:

- explore ways of improving designs for products, mechanisms, structures, systems and control
- investigate different materials, and use them to provide functional solutions to meet user needs, evaluating and refining their products as they work.