

Great Chart Primary School

Curriculum Skills Map Science



September 2018

We aim to provide creative and co-operative ways for the pupils to learn together so that all can succeed. As such we follow a skills based curriculum and we have aimed to create a document based around the key skills we see as relevant for life in the 21st Century. We believe that a curriculum heavily based on knowledge is no longer relevant, as knowledge is now so readily available at our fingertips. Instead, we want to foster in our pupils a love of learning, and develop their creativity and critical thinking through skills such as collaboration, research, problem solving, presentation, evaluation and reflection. These skills are reflected through the objectives identified in each subject area to help us develop confident, excited and proud learners who will be our leaders of the future and become a dynamic, adaptable workforce with high levels of reasoning and problem solving skills.

Teaching and learning within our school, as far as possible, is taught through a cross curricular approach to enable the children to make connections between their learning, leading to a deeper learning experience. Links are made wherever possible between subjects, however we recognise that Science, PE and RE will often need to be taught in a discrete manner.

Curriculum Skills Map- Science- Year 1 Working Scientifically

Observing Closely	Performing Tests	Identifying and Classifying	Recording Findings
<p>Can they discuss what they can see, touch, smell, hear or taste?</p> <p>Can they use simple equipment to help make observations?</p>	<p>Can they perform a simple test?</p> <p>Can they describe/ explain what they have done?</p>	<p>Can they identify and classify things they observe?</p> <p>Can they think of some questions to ask?</p> <p>Can they answer some scientific questions?</p> <p>Can they give a simple reason for their answer?</p> <p>Can they explain what they have found out?</p>	<p>Can they show their work using pictures, labels and captions?</p> <p>Can they record their findings using standard units?</p> <p>Can they record some information in a chart or table, or using IT?</p>
<h3>Year 1 Greater Depth</h3>			
<p>Can they find out by watching, listening, tasting, smelling and touching?</p>	<p>Can they give reasons to their answers?</p>	<p>Can they discuss similarities and differences?</p> <p>Can they explain what they have found out using scientific vocabulary?</p>	<p>Can they make accurate measurements?</p>

Curriculum Skills Map- Science- Year 1 Plants and Animals, including Humans

Plants	Animals	Including Humans
<ul style="list-style-type: none"> • Can they describe and name the petals, stem, leaf, bulb, flower, seed, stem and root of a plant? • Can they identify and name a range of common plants and trees? • Can they name the trunk, branches and root of a tree? • Can they discuss what they can see, touch, smell, hear or taste? 	<ul style="list-style-type: none"> • Can they identify some of the differences between different animals? • Can they identify living and non-living things? • Can they identify and name a variety of common animals? • Can they describe how an animal is suited to its environment? • Can they explain what they have found out? • Can they identify and name a variety of common animals that are carnivores, herbivores and omnivores? • Can they identify and classify things they observe? • Can they give a simple reason for their answers? • Can they discuss what they can see, touch, smell, hear or taste? 	<ul style="list-style-type: none"> • Can they name the parts of the human body and link them to their senses? • Can they name the parts of an animal's body? • Can they name a range of domestic animals? • Can they compare the bodies of different animals? • Can they identify and classify things they observe? • Can they give a simple reason for their answers? • Can they talk about what they <see, touch, smell, hear or taste>?

Year 1 Greater Depth

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| <ul style="list-style-type: none"> • Can they begin to describe what each part of a plant does? (e.g. roots, stem, leaves, petals, pollen) | <ul style="list-style-type: none"> • Can they begin to classify animals according to a number of given criteria? • Can they point out differences between living things and non-living things? | <ul style="list-style-type: none"> • Can they name some parts of the human body that cannot be seen? • Can they say why certain animals have certain characteristics? • Can they name a range of wild animals? |
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Curriculum Skills Map- Science- Year 1 Everyday Materials and Seasonal Changes

Everyday Materials (classifying and grouping)

- **Can they distinguish between an object and the material from which it is made?**
- Can they describe materials using their senses, using specific scientific words?
- Can they explain what material objects are made from?
- Can they explain why a material might be useful for a specific job?
 - **Can they name some different everyday materials? e.g. wood, plastic, metal, water and rock**
- Can they sort materials into groups by a given criteria?
 - **Can they explain how solid shapes can be changed by squashing, bending, twisting and stretching?**

Seasonal Changes

- **Can they observe changes across the four seasons?**
- **Can they name the four seasons in order?**
- **Can they observe and describe weather associated with the seasons?**
- Can they observe and describe how day length varies?
- **Can they talk about what they: see, touch, smell, hear or taste? Can they use simple equipment to help them make observations?**

<ul style="list-style-type: none"> • Can they perform a simple test? • Can they tell other people about what they have done? • Can they talk about what they <see, touch, smell, hear or taste>? • Can they use simple equipment to help them make observations? • Can they identify and classify things they observe?88 	
<p>Year 1 Greater Depth</p>	
<ul style="list-style-type: none"> • Can they describe things that are similar and different between materials? <p>Can they explain what happens to certain materials when they are heated, e.g. bread, ice, chocolate?</p> <ul style="list-style-type: none"> • Can they explain what happens to certain materials when they are cooled, e.g. jelly, heated chocolate 	<ul style="list-style-type: none"> • Can they observe features in the environment and explain that these are related to a specific season? • Can they observe and talk about changes in the weather? • Can they talk about weather variation in different parts of the world?

Curriculum Skills Map- Science- Year 2 Working Scientifically

Observing Closely	Performing Tests	Identifying and Classifying	Recording Findings	Types of investigations
<p>Can they discuss what they can see, touch, smell, hear or taste?</p> <p>Can they use simple equipment to help make observations?</p>	<p>Can they perform a simple test?</p> <p>Can they describe/ explain what they have done?</p>	<p>Can they identify and classify things they observe?</p> <p>Can they think of some questions to ask?</p> <p>Can they answer some scientific questions?</p> <p>Can they give a simple reason for their answer?</p> <p>Can they explain what they have found out?</p>	<p>Can they show their work using pictures, labels and captions?</p> <p>Can they record their findings using standard units?</p> <p>Can they record some information in a chart or table, or using IT?</p>	
Year 2 Greater Depth				
<p>Can they find out by watching, listening, tasting, smelling and touching?</p>	<p>Can they give reasons to their answers?</p>	<p>Can they discuss similarities and differences?</p> <p>Can they explain what they have found out using scientific vocabulary?</p>	<p>Can they make accurate measurements?</p>	

Curriculum Skills Map- Science- Year 2 Living things and their habitats, Animals including Humans and Plants

Living things and their habitats	Animals, including humans	Plants
<ul style="list-style-type: none"> • Can they match certain living things to the habitats they are found in? • Can they explain the differences between living and non-living things? • Can they describe some of the life processes common to plants and animals, including humans? • Can they describe how a habitat provides for the basic needs of things living there? • Can they describe how some animals get their food using basic food chains? • Can they describe how plants and animals are suited to their habitat? <ul style="list-style-type: none"> • Finding things out using secondary sources of information. • Can they use <see, touch, smell, hear or taste> to help them answer questions? • Can they organise things into groups? 	<ul style="list-style-type: none"> • Can they describe what animals need to survive? Can they explain that animals grow and reproduce? <ul style="list-style-type: none"> • Can they explain why animals have offspring which grow into adults? • Can they describe the life cycle of some living things? (e.g. egg, chick, chicken) • Can they explain the basic needs of animals, including humans for survival? (water, food, air) • Can they describe why exercise, balanced diet and hygiene are important for humans? Can they suggest how to find things out? • Can they use prompts to find things out? • Finding things out using secondary sources of information 	<ul style="list-style-type: none"> • Can they describe what plants need to survive? • Can they observe and describe how seeds and bulbs grow into mature plants? • Can they investigate and describe the impact of removing light, soil or water from a growing or germinating plant. • Observing changes over time. <ul style="list-style-type: none"> • Can they suggest how to find things out? • Can they use prompts to find things out?

Year 2 Greater Depth

- Can they name some characteristics of an animal that help it to live in a particular habitat?
- Can they describe what animals need to survive and link this to their habitats?

- Can they explain that animals reproduce in different ways?

- Can they describe what plants need to survive and link it to where they are found?
 - Can they explain that plants grow and reproduce in different ways?

Curriculum Skills Map- Science- Year 2 Materials

Classifying and grouping materials

- **Can they describe the simple physical properties of a variety of everyday materials?**
- **Can they compare and group together a variety of materials based on their simple physical properties?**
 - Can they use <see, touch, smell, hear or taste> to help them answer questions?
- **Can they use some scientific words to describe what they have seen and measured?**

Changing materials

- Can they explore how the shapes of solid objects can be changed? (squashing, bending, twisting, stretching)
- Can they find out about people who developed useful new materials? (John Dunlop, Charles Macintosh, John McAdam)
- **Can they identify and compare the suitability of a variety of everyday materials, including wood, metal, plastic, glass, brick, rock, paper, cardboard for particular uses?**
 - **Can they organise things into groups? Can they find simple patterns (or associations)?**
 - Can they say whether things happened as they expected?

Year 2 Greater Depth

- Can they describe the properties of different materials using words like, transparent or opaque, flexible, etc.?

- Can they explain how materials are changed by heating and cooling?

<ul style="list-style-type: none"> • Can they sort materials into groups and say why they have sorted them in that way? • Can they say which materials are natural and which are man-made? 	<ul style="list-style-type: none"> • Can they explain how materials are changed by bending, twisting and stretching? • Can they tell which materials cannot be changed back after being heated, cooled, bent, stretched or twisted?
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Curriculum Skills Map- Science- Year 3 Working Scientifically			
Planning	Obtaining and presenting evidence	Considering evidence and evaluating	Types of investigations
Year 3 Greater Depth			

Curriculum Skills Map- Science- Year 3 Plants and Animals, including Humans	
Animals, including humans	Plants

Year 3 Greater Depth

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Curriculum Skills Map- Science- Year 3 Rocks, Forces and Magnets, Light

Rocks	Forces & Magnets	Light
Year 3 Greater Depth		

Curriculum Skills Map- Science- Year 4 Working Scientifically

Planning	Obtaining and presenting evidence	Considering evidence and evaluating	Types of investigations

Year 4 Greater Depth			

Curriculum Skills Map- Science- Year 4 Living things and their habitats, Animals including Humans and States of Matter		
Animals, including humans	Living things and their habitats	States of Matter
Year 4 Greater Depth		

Curriculum Skills Map- Science- Year 4 Sound and Electricity	
Sound	Electricity

Year 4 Greater Depth	

Curriculum Skills Map- Science- Year 5 Working Scientifically		
Planning	Obtaining and presenting evidence	Considering evidence and evaluating
Year 5 Greater Depth		

Curriculum Skills Map- Science- Year 5 Living things and their habitats, Properties and changes to materials		
Animals, including humans	Living things and their habitats	Properties and changes to materials

Year 5 Greater Depth		

Curriculum Skills Map- Science- Year 5 Earth, Spaces and Forces	
Earth and Space	Forces
Year 5 Greater Depth	

Curriculum Skills Map- Science- Year 6 Working Scientifically			
Planning	Obtaining and presenting evidence	Considering evidence and evaluating	Types of investigations
Year 6 Greater Depth			

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Curriculum Skills Map- Science- Year 6 Living things		
Evolution and Inheritance	Living things and their habitats	Animals including humans
Year 6 Greater Depth		

Curriculum Skills Map- Science- Year 6 Electricity and Light	
Electricity	Light
Year 6 Greater Depth	

