

# Holway Park long term plan Science The Source 2018-2019

Within The Source we have children at all key stages. We plan our science lessons in accordance to the year groups of children in each class. Science lessons are taught in accordance with the children's Communication stage. We have three communication stages:

1. Social Partner stage
2. Language partner stage.
3. Conversation Partner stage

Children will only be able to access the Science objectives for their year group if they are at the Conversation Partner stage. Children assessed at the Social and Language Partner stage will have their science delivered through the critical areas of each communication stage.

Lessons for all communication stages will be taught in line with the goals from the Autism Attention Bucket and the 7 areas of engagement.

**Autism Attention Bucket:**

**Stage 1: Focus attention**

**Stage 2: Sustain attention**

**Stage 3: Take turns and re-engage.**

**Stage 4: Shift attention, re-engage and world independently.**

**Seven Areas of engagement:**

1. Responsive
2. Curious
3. Discover
4. Investigate
5. Anticipation
6. Initiation
7. Persistence

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KS1	KS 1	LKS2	LKS2	UKS2	UKS2
Y1	Y2	Y3	Y4	Y5	Y6
<p><b>Animals (inc Humans)</b> Senses. Identify and compare common animals Identify and name basic body parts</p>	<p><b>Animals (inc Humans)</b> Healthy Humans Basic needs of animals and Offspring Simple food chains and Habitats</p>	<p><b>Animals (inc Humans)</b> On the Move (HTY4)  Animal skeletons and nutrition</p>	<p><b>Animals (inc Humans)</b> Eating (HT Y3) Digestive system and teeth Food chains</p>	<p><b>Animals (inc Humans)</b> (sex and relationships) Describe changes as humans develop and mature</p>	<p><b>Animals (inc Humans)</b> (sex and relationships) Health and Lifestyles, including the circulatory system</p>
<p><b>Everyday Materials</b> Distinguish between objects and materials Identify and name common materials Describe some properties of some materials Compare and classify Materials</p>	<p><b>Use of Everyday Materials</b>  Identify and compare uses of different materials</p>	<p><b>Rocks and Soils</b>  Classification of rock types Simple understanding of fossilisation</p>	<p><b>States of matter</b> (Separating Solids and liquid/Hot and Cold)  Changes of state The water cycle</p>	<p><b>Properties of changes and Materials</b> Classify materials according to a variety of properties  Understanding mixtures and Solutions  Know about reversible changes; identify irreversible</p>	

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<p><b>Seasonal Changes</b> <b>Light (NS)</b> Optional link to Topics Observe and name some light sources</p>	<p><b>Use of Everyday Materials</b> (intro to forces) Compare things moving on different surfaces <b>Sound (NS)</b> Optional link to Topics Observe and name a variety of sound sources Recognise that sound gets fainter with distance</p>	<p><b>Forces and Magnets</b> (Attracting and Stretching) Simple forces, including magnetism <b>Sun and Shadows</b> Sources of light; shadows and reflections</p>	<p><b>Circuits and Conductors</b> Understand simple circuits and conductors  <b>Sound</b> Sounds as vibrations</p>	<p><b>Forces</b> Gravity/resistance/ levers pulleys gears Introduce gravity, resistance and mechanical forces  <b>Earth and Space</b> Understand location and interaction of Sun, Earth and Moon</p>	<p><b>Electricity</b> Electricity: investigating circuits  <b>Light</b> Light and shadows; the eye</p>
<p><b>Plants</b> (Living and Growing) Identify basic plants Identify basic plant parts (root, leaves, flower, etc)</p>	<p><b>Plants</b> Growing plants (water, light, warmth)</p>	<p><b>Plants</b> Plants, including parts, lifecycle and requirements for life</p>	<p><b>Living things and their Habitats</b></p>	<p><b>Living things and their Habitats</b></p>	<p><b>Evolution and Inheritance</b> Evolution and Adaptation</p>
	<p><b>Living Things and Habitats</b> Differentiate living, dead and non-living</p>		<p>Classify living things</p>	<p>Life cycles of plants and animals (including mammal, insect, bird, amphibian)</p>	<p><b>Living things and their Habitats</b> Classification, including micro organisms</p>

See also additional links to topics

**Green biology**    **Blue Chemistry**    **Orange Physics**

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## Working Scientifically

Recommend one investigation per half term

### YEAR 1 & 2

- Ask simple questions and recognising that questions can be answered in different ways
- **Observe closely**, using simple equipment
- Perform simple tests
- Identify and classify
- Use observations and ideas to suggest answers to questions

### YEAR 3 & 4

- Ask relevant questions and use different types of scientific enquiry to answer them
- **Set up** simple practical enquiries, comparative tests and fair tests
- Make systematic and careful observations and, where appropriate, taking accurate measurements using standard units and a range of equipment including thermometers and data loggers
- Gather, record, classify and present data in a variety of ways to help in answering Questions
- Record findings using simple **scientific language**, drawings, labelled diagrams, keys, bar charts and tables
- Report on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions
- Use results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions
- Identify differences, similarities or changes related to simple scientific idea and

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	<p>processes</p> <ul style="list-style-type: none"><li>• Use straightforward scientific evidence to answer questions or to support their findings</li></ul>
<b>YEAR 5 &amp; 6</b>	<ul style="list-style-type: none"><li>• Plan different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary</li><li>• Take measurements and use a range of scientific equipment with increasing accuracy and precision</li><li>• Record data and results of increasing complexity using scientific diagrams and labels, classification keys, tables and bar and line graphs</li><li>• Use test results to make predictions to set up further comparative and fair tests</li><li>• Use simple models to describe scientific ideas</li><li>• Report and present findings from enquiries, including conclusions, causal relationships and explanations of results, in oral and written forms such as displays and other presentations</li><li>• Identify scientific evidence that has been used to support or refute ideas or arguments</li></ul>