



# Churchfields Infants' School: Year One curriculum information

## Science



Outlined below is a summary of the skills children will work on during each half term in Year One, along with some activities children will complete, key vocabulary that will be taught and ideas of how parents can help to develop this learning at home.

*Please note that disciplinary knowledge (scientific enquiry) is carefully threaded through each of our units throughout the year to enable our pupils to question, predict and observe like scientists.*

Half Term	Substantive Knowledge	Activities	Key Vocabulary	How can you help at home?
<b>Autumn 1</b>  <b>Getting Together</b>	<b>Seasonal Changes (x2)</b> -Developing an understanding of the four seasons -Seasonal observations/changes (autumn) -Describing weather and weather patterns	-Observations/ photographs (crab apple tree) -Weather charts and tables (including symbols) -Weather reports  <u>Link texts:</u> *Leaf Man - Lois Ehlert *Storm - Sam Usher *Tree: Seasons Come, Seasons Go - Patricia Hegarty and Britta Teckentrup	weather sunny rainy raining shower windy snowy cloudy hot warm cold storm thunder lightning hail sleet snow icy frost puddles rainbow	-Talk about the seasons together; look at photographs and explore videos showing changes: <a href="http://www.bbc.co.uk/bitesize/topics/zkvv4wx/articles/zcx3gk7">www.bbc.co.uk/bitesize/topics/zkvv4wx/articles/zcx3gk7</a> <a href="http://www.bbc.co.uk/teach/class-clips-video/science-ks1-ks2-wonders-of-nature-the-changing-seasons/zh4rkmn">www.bbc.co.uk/teach/class-clips-video/science-ks1-ks2-wonders-of-nature-the-changing-seasons/zh4rkmn</a> -Can you begin to collect and capture photographs of somewhere near to where you live as it changes throughout the year? -Watch weather reports together and discuss key concepts/ideas -Create a weather chart to observe and record daily weather types/patterns



		<p>*Who Sank the Boat - Pamela Allen</p> <p>*Not a Stick - Antoinette Portis</p> <p>*The Adventures of a Plastic Bottle: A Story About Recycling - Alison Inches</p> <p>*Extra Yarn - Mac Barnett and Jon Klassen</p> <p>-The True Story of the 3 Little Pigs! - Jon Scieszka</p>	<p>stretchy</p> <p>stiff</p> <p>bendy</p> <p>waterproof</p> <p>absorbent</p> <p>rough</p> <p>smooth</p> <p>shiny</p> <p>dull</p>	
<p><b>Autumn 2</b></p> <p><b>Music and Light</b></p>	<p><b>Seasonal Changes (x2)</b></p> <p>-Seasonal observations/changes (winter) – link to Autumn 1</p> <p>-Developing an understanding of how day length varies (and linking this with seasons)</p> <p><i>Revision:</i></p> <p><i>-Developing an understanding of the four seasons</i></p>	<p>-Observations/ photographs</p> <p>-Discovery Dog getting lost in the dark – which material is best to show up at night?</p> <p>Designing a reflective collar</p> <p><u>Link texts:</u></p> <p>As per Autumn 1</p>	<p>As per Autumn 1</p>	<p>As per Autumn 1</p>
			<p>sense</p>	

	<p><b>Animals including Humans (x4)</b></p> <p>-Identifying, naming, drawing and labelling body parts</p> <p>-Developing an understanding of senses and what our senses are used for</p> <p>-Exploring and classifying using our senses</p>	<p>-Collecting data/measurements (e.g. If somebody has big feet, do they also need larger gloves?)</p> <p>-Sensory exploration (feely bag)</p> <p>-Senses workshop/stall (e.g. fruits and vegetables for classifying and sorting)</p> <p><u>Link texts:</u></p> <p>*Little Explorers: My Amazing Body Ruth Martin and Allan Sanders</p> <p>* Me and My Amazing Body - Joan Sweeney and Ed Miller</p>	<p>eye</p> <p>ear</p> <p>nose</p> <p>mouth</p> <p>hand</p> <p>foot/feet</p> <p>senses</p> <p>arm</p> <p>leg</p> <p>head</p> <p>neck</p> <p>knee</p> <p>see</p> <p>hear</p> <p>smell</p> <p>touch</p> <p>different/difference</p> <p>body/bodies</p> <p>change</p> <p>grow</p> <p>move</p> <p>adult</p> <p>young</p>	<p>-Practise learning/identifying the main parts of the body (e.g. head, eyes, ears, mouth, nose, shoulders etc.)</p> <p>-Perhaps you could learn or sing a song such as 'Heads, Shoulders, Knees and Toes' together</p> <p>-Discuss our senses; can you do a tasting sense activity to explore different textures and likes/dislikes?</p>
<p><b>Spring 1</b></p> <p><b>Emotions</b></p>	<p><b>Seasonal Changes (x2)</b></p> <p>-Understanding and explaining shadows</p> <p><u>Revision:</u></p> <p>-Weather types (with a focus on rain)</p>	<p>-Drawing shadows (outside with chalk through different points in the day) or creating shadow frames</p> <p>-“What would happen if it never rained?” – raincloud investigation</p> <p><u>Link texts:</u></p> <p>As per Autumn 1</p>	<p>As per Autumn 1</p>	<p>-You could create shadow puppets to put on a shadow puppet show together; this might be linked to your favourite storybook</p>

	<p><b>Everyday Materials (x4)</b></p> <p>-This unit builds on the earlier work carried out in Autumn 2, enabling children to draw on previous learning and apply this through a range of relevant investigations</p> <p><i>Revision:</i></p> <p><i>-Identifying and naming a variety of everyday materials</i></p> <p><i>-Describing properties of materials</i></p> <p><i>-Distinguish between an object and the material from which it is made</i></p> <p><i>-Testing and selecting materials for a given purpose/criteria</i></p>	<p>-Testing materials for transparency (torch)</p> <p>-Testing the absorbency of different materials (floating flowers)</p> <p>-Testing waterproof materials (mending a torn umbrella or creating a waterproof jacket)</p> <p>-“How does ice change as it melts?” investigation (play figures frozen in ice with an investigation to release them, or recording the changes as ice melts)</p> <p><u>Link texts:</u> As per Autumn 1</p>	<p>As per Autumn 1</p>	<p>-You could read the story of 'The Three Little Pigs'; discuss the materials which the houses were made from (and their properties). Can you design and create a new home for them? Perhaps you could use a hairdryer to test that it would withstand the wolf's puff!</p>
<p><b>Spring 2</b></p> <p><b>Fire! Fire!</b></p>	<p><b>Seasonal Changes (x1)</b></p> <p>-Developing understanding of seasons to include months of the year</p> <p>-Seasonal observations/changes</p>	<p>-Observations/ photographs</p> <p><u>Link texts:</u> As per Autumn 1</p>	<p>As per Autumn 1</p>	<p>-You could work with your child to recap the seasons and learn the months of the year; which months are associated with each season?</p>

	<p>(spring) – link to Autumn 1 and Autumn 2</p> <p><b>Scientific Enquiry (x4)</b>  <i>Revision:</i>  <i>-This unit builds on the substantive knowledge (primarily from the 'Everyday Materials' work), but also provides further opportunities for the development of disciplinary knowledge and encouraging children to think like scientists</i></p>	<p>-Bubble investigation (linking to work on everyday materials)          -Constructing a bridge to escape from the fire (linking to work on everyday materials)</p>		<p>-Perhaps you could research and carry out your own scientific investigation of choice; can you make a prediction about what will happen? Can you record your results? Can you discuss the findings?</p>
<p><b>Summer 1</b></p> <p><b>All the World</b></p>	<p><b>Plants (x6)</b>          -Understanding that seeds grow into plants          -Explore and observe garden and wild plants within the immediate environment          -Identify and names common wild and garden plants and trees (including deciduous and evergreen) within the</p>	<p>-Immediate environment walk/exploration          -Leaf and bark rubbings          -Flowering plant observations (magnifying glasses) and dissection (basic structure/understanding of parts)          -Potential visit to local garden centre or setting up own garden</p>	<p>flower          leaf          stem          root          sunlight          air          water          food          leaves          trunk          branches          deciduous          evergreen</p>	<p>-You could visit a nearby park or green space – what plants and trees do you notice there?          -You could visit a nearby garden centre together; this could provide an opportunity to buy some seeds or beans to plant and grow together. How do we help them to grow? How do they change over time?</p>

	<p>immediate environment</p> <ul style="list-style-type: none"> <li>-Identify and describe the parts of a plant and labelling these</li> <li>-Recognising fruits and vegetables as varieties of plants</li> </ul>	<p>centres within classrooms (seeds or beans); make predictions about what will happen; how will we keep the plants healthy?</p> <ul style="list-style-type: none"> <li>-Set up diaries to observe growth/changes over time</li> </ul> <p><u>Link texts:</u></p> <ul style="list-style-type: none"> <li>*A Little Guide to Wild Flowers - Charlotte Voake</li> <li>*Ten Seeds - Ruth Brown</li> <li>*The Things That I Love about Trees - Chris Butterworth</li> <li>*Harry's Hazelnut - Ruth Parsons</li> <li>*The Amazing Plant Life Cycle Story - Kay Barnham</li> </ul>		
<p><b>Summer 2</b></p> <p><i><b>Into the Jungle...</b></i></p>	<p><b>Seasonal Changes (x2)</b></p> <ul style="list-style-type: none"> <li>-Seasonal observations/changes (summer) – link to previous</li> </ul>	<ul style="list-style-type: none"> <li>-Observations/ photographs</li> </ul> <p><u>Link texts:</u></p> <p>As per Autumn 1</p>	As per Autumn 1	<ul style="list-style-type: none"> <li>-You could create a poster or short clip/video about how to keep safe in the sunshine</li> </ul>

	<p>-Developing an understanding of sun safety</p> <p><b>Animals including Humans (x4)</b></p> <p>-Discovering and identifying animal families</p> <p>-Identify and name mammals, birds, amphibians, reptiles and fish (link with geography work)</p> <p>-Describe and compare the structure of common animals</p> <p>-Discovering the types of food that living things eat (herbivores, omnivores and carnivores)</p> <p>-Understanding the difference between wild animals and pets</p> <p><i>Revision:</i></p> <p><i>-Identifying, naming, drawing and labelling body parts</i></p>	<p>-Image/photograph sorting activities (hoops)</p> <p><u>Link texts:</u></p> <p><i>*RSPB: My First Book of Garden Birds - Mike Unwin and Sarah Whittle</i></p> <p><i>*Snail Trail - Ruth Brown</i></p> <p><i>*Superworm - Julia Donaldson and Axel Scheffler</i></p>	<p>animal</p> <p>pet</p> <p>mammal</p> <p>bird</p> <p>amphibian</p> <p>reptile</p> <p>fish</p> <p>herbivore</p> <p>omnivore</p> <p>carnivore</p> <p>vertebrate</p> <p>invertebrate</p>	<p>-Research different animal groups (mammals, birds, amphibians, reptiles and fish) and sort (or draw) pictures of each of these together</p> <p>-Research herbivores, omnivores and carnivores, and sort (or draw) pictures of each of these together</p>
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