

## **Science - Physics Long Term Plan.**

**Science - Whole School Overview** Planning is progressive with learning revisited from Nursery up to Year 2 to ensure children have deeper understanding of a concept. Knowledge and understanding of Physics is progressively built upon across the school and through the academic year, gradually extending the breadth of content. Although science is taught weekly in discrete lessons, children have the opportunity to explore scientific concepts throughout the year in our indoor and outdoor provision. Learning is moved from short term to long term memory as the key concepts are revisited throughout the children's time at Uplands. Our school uses the objectives from The National Curriculum as a basis for planning Science alongside the Chris Quigley Essentials Curriculum.

	Nursery	Reception	Year 1	Year 2
Term 1	<p><b>Seasons</b> Night and day Autumn Signs Weather Clothes</p> <p><b>Forces</b> Explore forces Magnets Sink and float</p>	<p><b>Seasons</b> Autumn Notice the features of autumn and the weather</p> <p><b>Forces</b> Using magnets Explore how materials can be changed by twisting, scrunching, bending, snapping, pulling, squashing Floating and Sinking Shadows Light travelling through materials</p>	<p><b>Seasonal changes</b> Observe changes- Autumn leading to Winter Observe and describe weather associated with Autumn and how day length varies Use opportunities to record the weather</p> <p><b>Working Scientifically</b> Pupils to keep records of how plants have changed over time, for example the leaves falling off trees. Keep records of how weather changes over time.</p>	<p><b>Seasonal changes:</b> Organise images or objects from each season into categories. Explain your categories Autumn leading to Winter– signs, animal behaviour, weather, clothes, day length</p> <p><b>Identifying and classifying</b> Use observations to suggest answers to questions <b>Working Scientifically</b> Keep records of how plants change over time Keep records of how weather changes over time.</p>
Term 2	<p><b>Seasons</b> Night and day – differences Times of day – morning, afternoon Winter - signs, clothes Spring – signs, clothes</p> <p><b>Forces</b> Magnetic toys Discuss floating and sinking Shadows</p>	<p><b>Spring</b> Features of spring and the weather Notice and talk about how animals behave Compare with Autumn</p> <p><b>Forces</b> Using magnets – compare magnetic and non-magnetic items Explore that materials can be changed by twisting, scrunching, bending, snapping, pulling, squashing Floating and Sinking Shadows Light travelling through materials</p>	<p><b>Seasonal changes</b> Notice the features of Winter and Spring Clothes, weather, animal behaviour Compare to Autumn</p> <p>Provide opportunities to record the weather Observe how length of day increases.</p>	<p><b>Seasonal changes:</b> Time of day linked to position of the sun Compare and contrast weather and day length across Winter leading to Spring. Identify patterns in day length across the four seasons. <b>Asking simple questions and recognising that they can be answered in different ways.</b> <b>Observing closely using simple equipment.</b> <b>Performing simple tests.</b> Keep records of how plants change over time Keep records of how weather changes over time.</p>
Term 3	<p><b>Seasons</b> Night and day – differences Times of day – morning, afternoon Summer - signs, clothes, weather</p> <p><b>Forces</b> Compare magnetic and non-magnetic Materials – twisting, scrunching, bending</p>	<p><b>Seasons</b> Summer – weather/clothes/ Compare with Autumn and spring Notice and talk about how animals behave</p> <p><b>Forces</b> Magnets – compare magnetic and non-magnetic items Explore and observe how materials can be changed by twisting, scrunching, bending, snapping, pulling, squashing Similarities and differences Floating and Sinking Shadows Light travelling through materials</p>	<p><b>Seasonal changes</b> Notice the features of Spring and Summer Observe weather Provide opportunities to record the weather Observe how length of day increases.</p>	<p><b>Seasonal changes</b> Time of day linked to position of the sun Compare and contrast weather and day length across Winter leading to Spring. Identify patterns in day length across the four seasons</p>