

# Year R: : Materials Our Learning Leaves Curriculum – Science

	Required prior knowledge	Knowledge to be explicitly taught	How knowledge will be built upon
Substantive knowledge	<ul style="list-style-type: none"> <li>Enjoys playing with small-world models such as a farm, a garage, or a train track.</li> <li>Notifies detailed features of objects in their environment.</li> <li>Explores objects by linking together different approaches: shaking, hitting, looking, feeling, tasting, mouthing, pulling, turning and poking.</li> </ul>	<ul style="list-style-type: none"> <li>Children describe what different material feels like</li> <li>We can choose different material to suit different purposes</li> <li>Materials can be heavy, light, rough, smooth, hard, soft.</li> <li>If you push or pull an object, it will move.</li> </ul>	<ul style="list-style-type: none"> <li>A material is any substance that has a name.</li> <li>When we want to make something we need to choose the best material for the job.</li> <li>The property of a material is something about it that we can measure, see or feel and helps us decide whether or not it is the best material.</li> <li>Most materials have more than one property and can be natural, man-made, strong, weak, heavy, light in weight, rough, smooth, shiny, dull, hard, soft, flexible, brittle, magnetic, non-magnetic.</li> <li>Materials exist in three states: a solid, a liquid or a gas.</li> <li>A force is a push or pull.</li> <li>Sometimes forces cause objects to move, and sometimes forces slow, stop, or change the direction of an object's motion.</li> <li>Air, magnetic and gravitational are all examples of force.</li> </ul>
Disciplinary knowledge	<ul style="list-style-type: none"> <li>Beginning to ask simple questions</li> <li>Uses simple sentences</li> </ul>	<ul style="list-style-type: none"> <li>Explore collections of materials with similar and/different properties</li> <li>Children learn new vocabulary to describe different material</li> <li>Children explore forces, for example rolling balls in different directions, jumping, playing with magnets.</li> </ul>	<ul style="list-style-type: none"> <li>Children explore how things work</li> <li>Explore changing states of matter</li> <li>Learn new vocabulary</li> <li>Use talk to work out problems and organise thinking.</li> <li>Explain how things work and why they might happen</li> <li>Talk about the differences between materials and changes they notice.</li> <li>Explore and talk about different forces they feel.</li> </ul>
Key Drivers	<p><b>Culture and Diversity</b> - which helps pupils to develop enquiring minds about the wider world –</p> <ul style="list-style-type: none"> <li>Exposure to diversity will boost creativity, innovation, decision-making, and problem-solving skills.</li> </ul> <p><b>Environment and Community</b> - which helps to instil in our pupils a respect for our environment and for our local and wider communities –</p> <ul style="list-style-type: none"> <li>Children are surrounded by many different materials in their learning environment. They are encouraged to respect and appreciate the learning stimuli they have been provided with.</li> </ul> <p><b>Creative arts and physical development</b> - which helps our pupils to express themselves and excel as holistic learners. –</p> <ul style="list-style-type: none"> <li>Children are engage with creative play by taking on different roles.</li> <li>Children develop their fine motor skills through mark making and creating.</li> </ul> <p><b>Learning to learn</b> - which helps pupils to concentrate and focus and build resilience as learners –</p> <ul style="list-style-type: none"> <li>Learning becomes more effective when children explore.</li> <li>Children learn through playing and interacting with the world around them</li> </ul>		