



## TSS Primary Science MTP 2022-2023 Year 5 Block 4 – Physics

Key Targets and Learning Objectives		Key Activities	Equipment
<ul style="list-style-type: none"> <li>Identify a range of forces (limited to gravity, applied forces, normal forces, upthrust, friction, air resistance and water resistance)</li> <li>Know that an object may have multiple forces acting upon it, even when at rest</li> <li>Use force diagrams to show the name and direction of forces acting on an object</li> <li>Investigate how sounds are made by vibrating sources</li> <li>Describe sounds in terms of high or low pitch and loud or quiet volume</li> <li>Investigate how to change the volume and pitch of sounds</li> <li>Know that magnets can have different magnetic strengths</li> <li>Present and interpret results using tables, bar charts, dot plots and line graphs (WS)</li> </ul>		<p>Lesson 1 – Diagnostic test. Forces – look at different types of forces. Label different images that show the direction of force.</p> <p>Lesson 2 – Investigate the distance different balls (basketball, football, tennis ball, golf ball, marble) travel down a ramp and across the ground. Record results. What forces are acting on them? Record results.</p> <p>Lesson 3 – Sound circus – carousel of different investigations into vibration.</p> <p>Lesson 4 – Phone starter (insulated materials verses materials that conduct sound). Use instruments to change the volume and pitch of sounds (music link)</p> <p>Lesson 5 – Look at the power of different magnets. Record results.</p> <p>Lesson 6 – Assessment (35 mins). Make a magnetic maze.</p> <p><b>STEM activity</b> – Make a propeller boat and test it in water.</p>	<ul style="list-style-type: none"> <li>Various balls (golf, football etc)</li> <li>Ramp</li> <li>Tape measure</li> <li>Sound circus (tuning forks, rice, table tennis balls, string etc)</li> <li>Magnets</li> <li>Card</li> <li>Plastic tub</li> <li>Wooden sticks</li> </ul>
Key vocabulary	Going Green Link	Integration of technology	
Gravity, applied force, normal force, upthrust, friction, vibrate, water, resistance, air resistance, high pitch, low pitch, volume, magnet, attract, repel, magnetic	<ul style="list-style-type: none"> <li>- Look at forces in making travel more environmentally friendly (e.g. flying at higher altitudes, aerodynamic design)</li> </ul>	<ul style="list-style-type: none"> <li>- Use of iPads to change volume and pitch of sounds (look at apps / garage band etc)</li> </ul>	