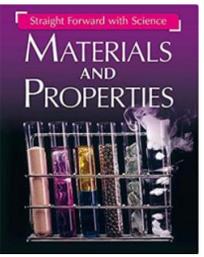
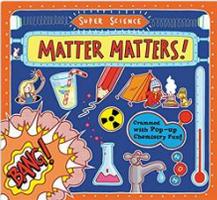
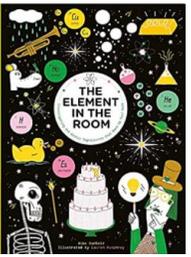
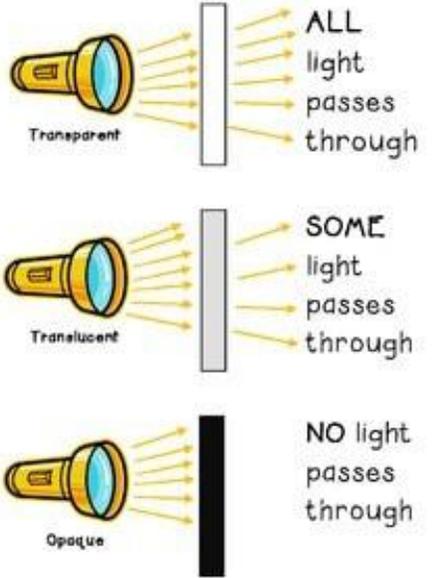


YEAR 5 SCIENCE –MATERIALS AND THEIR PROPERTIES (Spring 2)

Tier 3 Vocabulary	Knowledge Facts	Recommended Reads
<p>Material – the ‘matter’ from which an object is made.</p> <p>Properties – the characteristics or traits, e.g. hard, soft, flexible.</p> <p>Hard – not easily scratched or dented.</p> <p>Tough – durable; not easily broken.</p> <p>Rigid – stiff or firm; not flexible.</p> <p>Transparent – allows light to pass through so that objects can be clearly seen.</p> <p>Thermal – related to temperature.</p> <p>Insulator – materials that do not easily transfer heat or electricity through them.</p> <p>Conductor – materials that easily transfer heat or electricity through them.</p> <p>Dissolve – when a substance (solute) mixes with a liquid (solvent) so that it is no longer visible, creating a solution.</p> <p>Independent variable – one aspect of the investigation that is changed.</p> <p>Control variables – aspects of the investigation that are kept the same.</p> <p>Dependent variable – what happens as a result of the independent variable; the aspect of the investigation that is measured or observed.</p>	<p>The properties of a material determine its use. Properties: hard, soft, rigid, flexible, fragile, tough, transparent, opaque, magnetic, conductor, insulator.</p> <p>Magnetic materials are usually metal but not all metals are magnetic.</p> <p>Transparent materials allow light to pass through, e.g. glass windows. Translucent materials allow some light to pass through but detail cannot be seen. Opaque materials block light, creating shadows.</p> <p>Thermal insulators do not allow heat to pass through easily so can be used to keep things warm or cold.</p> <p>Electrical conductors will allow electricity to pass through them as part of an electrical circuit. Electrical wires are insulated with suitable materials.</p> <p>Some material substances will dissolve in liquid such as water, but not all. Heat can speed up the time taken for a substance to dissolve.</p> <p style="background-color: #add8e6;">National Curriculum End Points Compare and group together everyday materials on the basis of their properties, including their hardness, solubility, transparency, conductivity (electrical and thermal), and response to magnets. Give reasons, based on evidence from comparative and fair tests, for the particular uses of everyday materials, including metals, wood and plastic. Know that some materials will dissolve in liquid to form a solution.</p> <div style="text-align: center;">  <p>SOLUTE SOLVENT SOLUTION</p> </div>	<div style="display: flex; justify-content: space-around;">    </div> <div style="background-color: #e6e6fa; text-align: center; padding: 5px; font-weight: bold;">Transparent, Translucent, Opaque</div> <div style="text-align: center;"> <p>Translucent, Transparent & Opaque</p>  <p>Transparent: ALL light passes through</p> <p>Translucent: SOME light passes through</p> <p>Opaque: NO light passes through</p> </div>