



## Key Knowledge and Skills

### Year 4 Spring 1

Key knowledge and skills	Key vocabulary
<p>Science</p> <p>A solid keeps its shape and has a fixed volume. A liquid has a fixed volume but changes in shape to fit the container. A liquid can be poured and keeps a level, horizontal surface. A gas fills all available space; it has no fixed shape or volume. Granular and powdery solids like sand can be confused with liquids because they can be poured, but when poured they form a heap and they do not keep a level surface when tipped.</p> <p>Melting is a state change from solid to liquid. Freezing is a state change from liquid to solid. The freezing point of water is 0°C.</p> <p>Boiling is a change of state from liquid to gas that happens when a liquid is heated to a specific temperature and bubbles of the gas can be seen in the liquid. Water boils when it is heated to 100°C. Evaporation is the same state change as boiling (liquid to gas), but it happens slowly at lower temperatures and only at the surface of the liquid. Evaporation happens more quickly if the temperature is higher, the liquid is spread out or it is windy.</p> <p>Condensation is the change back from a gas to a liquid caused by cooling.</p> <p>Water at the surface of seas, rivers etc. evaporates into water vapour (a gas). This rises, cools and condenses back into a liquid forming clouds. When too much water has condensed, the water droplets in the cloud get too heavy and fall back down as rain, snow, sleet etc. and drain back into rivers etc. This is known as precipitation. This is the water cycle.</p>	<ul style="list-style-type: none"><li>• Solid</li><li>• liquid</li><li>• gas</li><li>• state change</li><li>• melting</li><li>• freezing</li><li>• melting point</li><li>• boiling point</li><li>• evaporation</li><li>• temperature</li><li>• water cycle</li></ul>
<p>Computing</p> <p>AI is a technology that can learn and that it might have a bias. Artificial intelligence (AI) is when computers and machines can do things that usually need human intelligence, like learning, solving problems, and making decisions.</p> <p>Artificial intelligence is used in many ways in our lives. It helps us find information online, play games, use voice assistants, and even control some devices at home.</p> <p>AI can be positive and negative.</p>	<ul style="list-style-type: none"><li>• Data</li><li>• Artificial Intelligence</li><li>• Algorithm</li><li>• Bias</li></ul>



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<p>I can think how AI might be used in the future. We will look at how artificial intelligence is used in music and the arts to create things.</p>	
<p>Art</p> <p>I can select appropriate media to create my artwork. (e.g. ink, watercolours, aquarelles, charcoal, graphite, pastels)</p> <p>I can create all the colours I need by mixing primary colours. I can lighten and darken paint by adding white/ black and different colour shades.</p> <p>I can use different paint strokes to create different effects and textures.</p>	<ul style="list-style-type: none"><li>• Painting</li><li>• Mixed media</li><li>• tint</li><li>• shade</li><li>• texture</li><li>• Brushes</li><li>• Primary colours</li><li>• Secondary colours</li></ul>
<p>D.T.</p> <p>All moving things have kinetic energy. Kinetic energy is the energy that something (object/person) has by being in motion.</p> <p>Air resistance is the level of drag on an object as it is forced through the air.</p> <p>The shape of a moving object will affect how it moves due to air resistance.</p>	<ul style="list-style-type: none"><li>• chassis</li><li>• energy</li><li>• kinetic</li><li>• mechanism</li><li>• air resistance</li><li>• design</li><li>• structure</li><li>• graphics</li><li>• research</li><li>• model</li><li>• template</li></ul>
<p>R.E.</p> <p>Christians and Jews both learn about God being a guide and protector from stories in the Old Testament.</p> <p>The 10 commandments are important to both Jews and Christians.</p>	<ul style="list-style-type: none"><li>• Sustainer</li><li>• Guide</li><li>• protector</li></ul>
<p>P.S.H.C.E.</p> <p>To be excluded means to be left out.</p> <p>If you, or someone else, feels like they are being excluded, they must ask for help by talking to someone like a trusted adult.</p>	<ul style="list-style-type: none"><li>• Included</li><li>• excluded</li><li>• Seeking help</li></ul>
<p>French</p> <p>To understand how Epiphany is celebrated in France</p> <p>To say the nouns of 4 family members</p> <p>To write some personal information about a family member</p> <p>To understand and say some parts of the face.</p>	<ul style="list-style-type: none"><li>• Le papa- dad</li><li>• Le frère- the brother</li><li>• Le bébé- the baby</li><li>• Le grand-père- the grandad</li></ul>



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<p>To understand simple sentences using numbers and parts of the face</p> <p>To write some simple sentences to describe an alien</p>	<ul style="list-style-type: none"><li>• La maman- the mum</li><li>• La soeur- the sister</li><li>• La grande-mère- the grandma</li><li>• La famille- the family</li><li>• Le nez- the nose</li><li>• La bouche- the mouth</li><li>• La tête- the head</li><li>• Les cheveux- the hair</li></ul>
<p>Music</p> <p>Rock and roll music uses blues chord structures, with a fast tempo and strong vocals. It was created after the second world war and it was intended to represent happiness.</p> <p>A bass line is the lowest pitch line of notes in a piece of music, and a walking bassline (where patterns of notes go up then down again) is common in rock and roll.</p> <p>Playing in time means all performers playing together at the same speed.</p> <p>Playing 'in time' requires playing the notes for the correct duration as well as at the correct speed.</p>	<ul style="list-style-type: none"><li>• Rock and roll</li><li>• Hand jive</li><li>• 1950s</li><li>• Tempo</li><li>• Dynamic</li><li>• Notation</li><li>• style</li></ul>
<p>P.E.</p> <p>To vary movement to control the ball when moving and to use both hands to perform various skills.</p> <p>To use terminology such as double dribbling, travelling, triple threat and pivoting and keep my head up to be aware of my environment.</p> <p>To know when to use a chest pass or bounce pass in basketball and to step in the direction of pass.</p>	<ul style="list-style-type: none"><li>• Attack</li><li>• Defend</li><li>• Dribbling</li><li>• Triple threat</li><li>• Double dribbling</li><li>• Travelling</li><li>• Pressure</li><li>• Shoot</li><li>• Team work</li><li>• Tactics</li><li>• Opponent</li></ul>



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To use quick passes, movement and communication under pressure.

To work as a team to find space to shoot and to communicate with team players.

To work as part of a team.

#### Key dates and other information:

Thursday 15<sup>th</sup> January - New Vic Theatre visit