

**Year 5 Half Termly Overview – Autumn 1**

<p>TOPIC TITLE Out of this world KEY QUESTION What is outside of our world?</p>	
<p><b>Big Impact Event</b> Science museum trip with planetarium</p>	<p><b>Celebration of Learning</b> Showing of art work, writing and trip photos booked in for Wednesday October 23<sup>rd</sup> straight after school in the hall.</p>
<p><b>Science – Space and Light</b> Knowledge Block 1: Our Solar system</p> <ul style="list-style-type: none"> <li>• A Solar system is a collection of planets, which orbit (a curved path) a star.</li> <li>• There are huge number of stars in space and therefore a huge number of solar systems</li> <li>• Our solar system consists of 8 planets, many of those planets have moons which orbit around them.</li> <li>• Earth’s moon is not a planet but is a satellite which orbits Earth. It is around a quarter of the size of Earth.</li> <li>• As the Moon orbits the Earth, the Sun lights up different parts of it, making it seem as if the Moon is changing shape. We call these the phases of the moon.</li> <li>• The Moon doesn’t emit (give off) light itself, the ‘moonlight’ we see is actually the Sun’s light reflected off the lunar surface.</li> <li>• Our solar system can be represented with a model (see diagram), but it isn’t possible to draw it to scale.</li> <li>• The planets and moons are rotating (spinning)</li> <li>• The time it takes one planet to rotate is called a day. On Earth this is 24 hours</li> <li>• The time it takes a planet to complete one orbit around its star is called a year. On Earth this is 356.25 days</li> <li>• The solar system is with a massive collection of stars called the galaxy (called the Milky way)</li> <li>• The Milky way is one of billions of galaxies in the Universe.</li> </ul> <p>Knowledge Block 2: What else is in the solar system?</p> <ul style="list-style-type: none"> <li>• Stars are huge balls of gas that produce vast amounts of light and heat.</li> <li>• Asteroids are lumps of rock that orbit a star (there are millions in between Mars and Jupiter)</li> <li>• Comets are objects that are made of ice, which melts when they get closer to the sun leaving a tail.</li> </ul> <p>Knowledge Block 3: Gravity and its effects</p> <ul style="list-style-type: none"> <li>• Gravity is force of attraction between two objects with mass (a quantity of matter)</li> <li>• The bigger the mass the bigger force it exerts</li> <li>• Gravity works over distance but gets weaker as distance increases</li> <li>• Stars, planets, moons have a very large amount of mass. They exert a gravitational attraction on each other</li> <li>• Differences in gravity result in smaller mass objects orbiting around larger mass objects, e.g., planets around stars and moons around planets</li> </ul> <p>Knowledge Block 1: How light travels</p> <ul style="list-style-type: none"> <li>• When light is emitted from a light source, it travels in straight lines until it hits an object. This can be represented by an arrow.</li> <li>• Shadows form when light hits an opaque object. The area behind the object is in darkness because light can only travel in straight lines.</li> <li>• Shadows have the same shape as the objects that cast them.</li> </ul> <p>Knowledge Block 2: How light behaves when it hits objects</p> <ul style="list-style-type: none"> <li>• When light hits a transparent object, it goes through it in a straight line so we can see a clear image through it.</li> <li>• When light hits a translucent material, it goes through it but is scattered, this means light can pass through, but we can’t see an image through it.</li> <li>• When light hits a mirrored surface, it reflects off it in straight lines, so we can see an image in the reflective material.</li> <li>• Sometimes when light hits a material it reflects off it in many different directions (it is scattered). In this case light will be reflected but no image will be seen in the material.</li> <li>• Shiny surfaces are better reflectors and rough surfaces scatter light more. Opaque objects don’t allow any light to pass through them</li> </ul> <p>Knowledge Block 3: How we see</p> <ul style="list-style-type: none"> <li>• Animals see objects when light is reflected off the object and enters the eye through the pupil.</li> <li>• The pupil changes its size to allow enough, but not too much light into the eye.</li> <li>• Too much light damages the eye and too little results in poor quality images.</li> </ul>	
<p><b>PE and Games</b> Use previous learning to perform sequences based around a theme. Develop flexibility, strength, technique, control and balance [for example, through athletics and gymnastics]</p> <ul style="list-style-type: none"> <li>• Continue to apply and develop a broader range of skills, learning how to use them in different ways and to link them to make actions and sequences of movement. They should enjoy communicating, collaborating and competing with each other.</li> <li>• Take part in outdoor and adventurous activity challenges both individually and within a team</li> </ul> <p>Play competitive games, modified where appropriate [for example, badminton, basketball, cricket, football, hockey, netball, rounders and tennis], and apply basic principles suitable for attacking and defending</p>	<p><b>PSHE +C</b></p> <ul style="list-style-type: none"> <li>• Identify strategies we can use to keep ourselves and others safe</li> <li>• Recognise ways to manage peer pressure</li> <li>• Explain the potential outcomes that may happen when we take risks</li> <li>• Recognise the impact and possible consequences of an accident or incident</li> <li>• Explain some of the risks associated with smoking (physical, social, and Olegal) and name the addictive ingredient found in cigarettes, e-cigs, etc.</li> <li>• Describe how smoking can affect your immediate and future health and wellbeing</li> <li>• Give reasons why someone might start and continue to smoke</li> <li>• Identify and use skills and strategies to resist any pressure to smoke</li> </ul>
<p><b>RE</b> Avatar or God</p> <ul style="list-style-type: none"> <li>• Does anyone know what an avatar is?</li> <li>• What’s the difference between an Avatar and God? Is there one?</li> <li>• If God came to Earth, what form would he take and why?</li> </ul>	

<p><b>Computing – Programming</b></p> <ul style="list-style-type: none"> <li>• BASIC SEQUENCE/REPETITION</li> <li>• LOOPS</li> <li>• SIMPLE PROCEDURES</li> <li>• SELECTION (CONDITIONAL – if/then)</li> <li>• Using the Scratch program – Wizards Choice (PARSONS)</li> <li>• Identify what conditional selection means using 'if/then &amp; else'.</li> <li>• Read the code and put it in the correct order.</li> <li>• Use the code and answer questions about it.</li> <li>• Adapt the code to change the actions.</li> </ul> <p>Create a quiz that involves conditional selection code (if/then &amp; else).</p>	<p><b>Art and design – Painting</b></p> <ul style="list-style-type: none"> <li>• Control the marks made with different painting tools with confidence.</li> <li>• Create paintings from observation, experience and imagination.</li> <li>• Make increasingly accurate and detailed paintings from observation, experience and imagination, selecting appropriate media.</li> <li>• Paint for different purposes using a range of styles and media e.g. acrylic paint.</li> <li>• Identify primary, secondary, tertiary, complementary and contrasting colours.</li> <li>• Mix and match colours to create atmosphere and light effects with tints and shades.</li> <li>• Experience a wide range of paintings made by other artists from a variety of cultures relate them to their own work.</li> </ul>
<p><b>Music</b></p> <ul style="list-style-type: none"> <li>• Describe, compare and evaluate music using musical vocabulary?</li> <li>• Suggest improvements to their own or others' work?</li> <li>• Choose the most appropriate tempo for a piece of music?</li> <li>• Identify and begin to evaluate the features within different pieces of music?</li> <li>• Contrast the work of established composers and show preferences?</li> </ul>	<p><b>MFL – Greetings, Numbers 1-12 and Colours</b></p> <ul style="list-style-type: none"> <li>• Listen more attentively and for longer. Understand more of what we hear even when some of the language may be unfamiliar by using the decoding skills we have developed.</li> <li>• Communicate on a wider range of topics and themes. Remember and recall a range of vocabulary with increased knowledge, confidence and spontaneity.</li> </ul>
<p><b>Not covered</b>  <b>History, DT and Geography – not covered this half term</b></p>	<p><b>Enrichment Opportunities e.g. outdoor learning</b>  Winchester Science Museum trip  Stargazing  Light- shadow work</p>