

Space – Long term plan and skills progression

Year 2, Spring 2020



What is the first activity? – mind map homework to generate initial knowledge, interest and areas to research. This will be reviewed at the end of the topic.

Week 1: KW grid before the topic is filled in as a class ('What I know/Would like to know')

End of Topic: Fill in KWL to review final learning outcomes.

Stages	Stage 1	Stage 2	Stage 3	Stage 4	Stage 5
	Pre structural No real understanding of topic, fails to grasp concept	Uni structural Able to identify intended learning and follow simple instructions but limited knowledge	Multi structural Can perform and combine simple skills but not independent in using strategies for learning	Relational With limited support: able to analyse/ apply/compare and contrast/ explain and justify information gathered.	Extended abstract Fully independent in making connections between facts learned and able to reflect and draw conclusions
Key learning	To know that there are planets and stars, and know the basic difference	To be able to identify the difference between living on another planet and our own	To use some of the differences/facts to write a story/DT	To apply prior learning to understand differences/facts and to write a story/DT (with less support & input required).	I can reflect on and consolidate all of the information I have learnt about space and can communicate confidently about the planets in our Solar System, with a particular focus on Earth and its moon.
Attainment					This will include:
1.What is the solar system?	Know there are planets in the solar system	To be able to name the planets.	To know planets are different.	To give basic similarities and differences compared to earth e.g. hot, cold, size, relationship to earth, gravity.	Writing: A story retell of the book 'The Way Back Home'; A diary entry about The Man on the Moon; A factual poster about living in space.
2.What is the difference between the Earth and the Moon?	Know that the moon is not a planet, but earth is.	Know that the moon goes around the earth & this causes phases of the moon.	To know some differences between the moon & earth.	To be able to explain the relationship between the sun and the moon & gravity.	DT – A moving moon buggy with working wheels and axes.
3.(DT) Design and make a moon buggy with wheels and axels that work	To know some of the key parts of a moving vehicles (wheels, axel, chassis).	To follow a simple plan to make a moon buggy.	To add more design features to improve the initial design.	To experiment with different moon buggy designs – wheels, size of chassis, suspension (plan, do, review).	ICT - Driving a Beebot around a planned route and creating a scratch jnr program to move an astronaut into a rocket and launch the rocket.
4.(ICT) Create a simple program to follow instructions	To know that I can control a programmable toy.	I can write a set of simple instructions to move a programmable toy.	I can write a 3-step set of instruction learning from my mistakes.	To produce a more complex algorithm (specific code) to control a programmable toy with more than 5-steps.	History – Produce a timeline to show key events in Neil Armstrong's life and talk about similarities and differences in communication methods between then and now.
5.(History) Order events on a timeline and know how specific things have changed over time	To know that the first man in space happened before they were born.	I know that man first landed on the moon in 1969.	I understand why it was such an achievement to get to space and some of the key people involved.	I can order key events in the space race and know what problems needed to be overcome (e.g. eating in space, toilets, exercise).	Geography – Name and include in their own map (for Beebot activity human and physical features in the local area.

6.(Geography) identify human and physical features in the local area	I know some key features of my local area (e.g. castle, road, canal, river, park, hospital).	I can sort features by whether they are human or physical.	I know that maps use symbols to show key human and physical features.	I can create my own map using pictures and symbols.	ART – A 3D model of the solar system using papier mache (cover ½ balloons of various sizes in groups of 3/4 children & write facts for a display).
7.(Art) create a 3D model to represent a specific planet	I know the names of 3D shapes (sphere, cube, cuboid, cone).	I can use mathematical language to describe 3D shapes.	I can represent	I know facts about my planet that makes it different from earth (links to previous learning in point 1).	

What is the hook?

Planetarium visit 16th January to launch the SPACE topic

Vocabulary – astronomy, planets, astronaut, helmet, gravity, weightlessness, thrust, aerodynamics, spacewalk, moon boots, dark, light, phases, rocket, boosters, orbit, international space station

Refer to ISS website to spot the International Space Station: <https://spotthestation.nasa.gov/>

Medium Term Planning Overview (not date / time specific & led by children's prior knowledge and interests)

Knowledge and skill being developed	Short plan - main activity	Resources needed
<p>Know the names of the planets in our Solar System.</p> <p>Literacy: Non-fiction writing Pupils should be taught to:</p> <ul style="list-style-type: none"> • develop positive attitudes towards and stamina for writing by: <ul style="list-style-type: none"> ♣ writing narratives about personal experiences and those of others (real and fictional) ♣ writing about real events ♣ writing for different purposes • consider what they are going to write before beginning by: <ul style="list-style-type: none"> ♣ planning or saying out loud what they are going to write about ♣ writing down ideas and/or key words, including new vocabulary ♣ encapsulating what they want to say, sentence by sentence • make simple additions, revisions and corrections to their own writing by: <ul style="list-style-type: none"> ♣ evaluating their writing with the teacher and other pupils 	<p>Solar System –</p> <p>name planets, label a sheet, know the order in relation to the sun. song</p> <p>display – paint in relative sizes/find facts</p> <p>Individually use chalk to create their own '3-d effect' planet</p> <p>Stars/constellations – Planetarium visit</p> <p>Non-fiction writing - living in space posters</p>	<p>Planetarium visit</p> <p>'First Space Encyclopaedia' (6 per class)</p> <p>Chalks, pictures, paper</p> <p>You-tube videos and research at All Saints during ICT?</p>

<p>♣ re-reading to check that their writing makes sense and that verbs to indicate time are used correctly and consistently, including verbs in the continuous form</p> <p>♣ proof-reading to check for errors in spelling, grammar and punctuation</p> <p>Art Use range of art techniques – size, shape, pattern, tone, texture</p>		
<p>Geography Name and locate 7 continents and 5 oceans. Basic geographical vocab. Devise a map with a basic key DT (Design, make, evaluate) explore and use mechanisms [for example, wheels and axles], in their products. ICT Understand what algorithms are... Create and debug simple programs Use logical reasoning to predict the behaviour of simple programs.</p>	<p>Moon and Earth – comparing using facts;</p> <p>phases of the Moon art</p> <p>design and make moon buggy</p> <p>use Beebots/scratch jnr to follow a planned route to move around on ‘the Moon’.</p>	<p>Resources in shared area from last time we did this topic</p> <p>Black paper, chalk, silver pencils/crayons</p> <p>Junk modelling, wheels, axels</p> <p>Beebots, Beebot mats All Saints computer suite for scratch jnr</p>
<p>Geography Use aerial photos and plan perspectives to recognise landmarks - human/physical features</p> <p>Literacy: Fiction writing Pupils should be taught to:</p> <ul style="list-style-type: none"> • develop positive attitudes towards and stamina for writing by: ♣ writing narratives about personal experiences and those of others (real and fictional) ♣ writing for different purposes • consider what they are going to write before beginning by: ♣ planning or saying out loud what they are going to write about ♣ writing down ideas and/or key words, including new vocabulary ♣ encapsulating what they want to say, sentence by sentence • make simple additions, revisions and corrections to their own writing by: ♣ evaluating their writing with the teacher and other pupils 	<p>Martian art – design own ‘showing a Martian buddy’ what is natural/manmade in our school grounds. (Map?)</p> <p>Fantastics – The Way Back Home</p>	<p>Maps, photos of local area/school grounds PPT of alien shapes to draw</p> <p>Card, felt tip pens, pictures of human/physical features.</p> <p>The Way Back Home – Oliver Jeffers (x2) FANTASTICS booklets for children to work through.</p>

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History Lives of significant people Describe differences between then and now Using timeline to order events of significant people/events Describing people/event in history Look at and use books, pictures and the internet Ask questions about the past	Neil Armstrong – Timeline/sequencing History Focus on how finding out information/communication has changed since 1969... Man on the Moon – Bob – diary writing (GR – link with Simon Bartram – Douglas the Deep Sea Diver?)	‘One Giant Leap’ - story of NA PPT life of Neil Armstrong. Man on the Moon/Douglas Deep Sea Diver – Simon Bartram (x2)
		Exit point – what are they working towards? Writing: Story, diary, factual poster about space ART – 3D planet models for classroom display (1/2 a balloon in range of sizes) DT - make moon buggy ICT – programme a Beebot around a planned route and a scratch jnr program devised.

Holiday Homework – Pre-teach

Early December 2019 - Year 2 - Research Map – Mind map to ascertain what the children know about space before we start the topic.

Inc. questions of things they would like to find out about during this topic.