



Home Learning Introduction: Topic 11 Let's go out of this world - Space!

We hope you are all keeping safe and well. These may be of help to you, particularly if you are trying to manage several children's needs or have limited access to the Internet. *Page 1: activities – no IT needed Page 2: web links - if you have internet access and some extension.*

Wellbeing and Building Resilience

For resources to support this please click this link to our Padlet: <https://padlet.com/HLTWellbeing/jukwcst2scmfbd7t> or use this QR code:



Being Kind

Being Kind to Yourself – Everybody Worries

So much has happened to us in such a short period of time that it is perfectly normal to think and perhaps worry about what is happening now and in the future.

Sometimes we think that we are the only ones with a worry! Everybody at some point in their lives will have a worry of some kind. I wonder what SpaceX astronauts Doug Hurley and Bob Behnken worried about on their journey to the International Space Station recently?

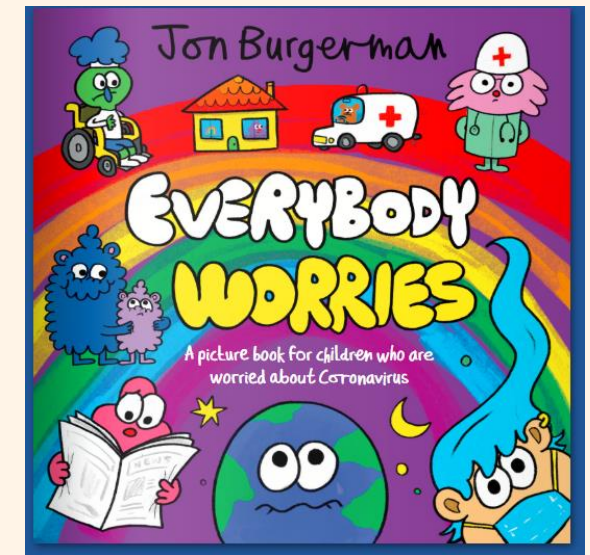
Worries are not the same for everyone. What are your worries during this time?

What should we do with our worries? How do our worries make us feel inside?

Here are some ways that could help if you were feeling worried:

- Tell an adult – sharing a worry is so important as you might find someone else feels the same! Sharing how you feel will help in making you feel better.
- Draw or write down how you feel.
- Take three deep breaths; in and out.

In addition, make sure you eat well and get a good night's sleep!



Read the story Everybody Worries by Jon Burgerman online: <https://en.calameo.com/read/000777721945cfe5bb9cc?authid=Xu9pcOzU3TOx>

The great dilemma, questions to think and talk about (Philosophy for children: P4C)

If a British Astronaut was the first person to discover a planet could they claim that it belonged to Britain? What about if there was life on there?

Space Junk: There is lots of rubbish in space that has been caused by humans. Do you think humans should be able to go to space if they can't look after Earth?

Space exploration is believed to be important as future generations may not be able to live on Earth. Do you think governments should be paying towards this or should it be privately funded? Should the opportunity to travel to space be equal and fair to all and how do we make it that way?

Co-ordinates

NASA are monitoring a Mars rover (a motor vehicle) on an area of Mars. They have a map and have plotted where activity has been detected.



Here is the start of the map. Used squared paper and draw a 10 x 10 square. Write 0-8 along the y axis and 0 then A-H along the x axis.

The Mars rover detected the following activity. Plot these on the map.

- Signs of moisture at C7
- Movement at B2
- Darkened area at A1, H8
- A green looking substance at E9

What else might the Mars rover have detected on Mars? Tell an adult and get them to plot them on your map.

Different time zones

The Earth rotates 360° every 24 hours (roughly) meaning that while it is daylight on one side of the Earth, it is night on the other side

Washington DC - USA	08.21
London - UK	13.21
Sydney - Australia	23.21

-How many hours ahead of Washington DC, is London?

-If it is 10 am in the morning in London, what time will it be in Sydney?
-What is the time difference between Washington DC and Sydney?

-When it is morning time in Washington DC, it will be afternoon in London - sometimes, always, never?

Ratio

The sun is 109 times wider than the earth. If you are making a model of the earth and the sun and the diameter of your earth is 10 cm smaller than the diameter of your sun must be 10x109 =

1090cm or 10.9 m!
The ratio of the diameter of earth: sun is 1:109

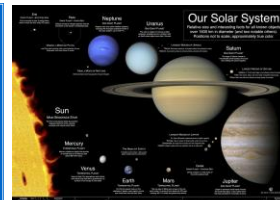
-What will the sun model diameter be if the earth model diameter is 5cm? 7cm? 2cm? 2mm?
-What will the earth model diameter be if the sun model diameter is 3.27m? 654cm? 1.199m?



Topic 11: Let's go out of this world - Space!

#hackneyhomelearning @hackneysuccess Hackney

Your mission this week is to be a space scientist, finding out all about the earth, the planets and the stars. Follow the NASA Space X mission and 2 astronauts Doug Hurley and Bob Behnken to the International Space station on the news or at <https://www.nasa.gov/spacex>
Saturday June 20th is the **Summer solstice**, the longest day of the year. Find out when the sun is going to rise and set. How many hours daylight we will have.



Monday 22nd June is Windrush Day, commemorates the MV Empire Windrush ship which brought people to England from the Caribbean in 1948 and symbolises how Caribbean migration has made our society richer and more diverse. <http://www.windrush70.com/> Hackney Museum [click here](#):

We often describe new experiences or place as being 'alien', where you are is so different from what you are used to that you feel like an alien from out of space. This is how Floella Benjamin describes arriving in London from Trinidad

"... grim looking buildings shrouded in fog. Waterloo Station was a thronging mass of rush hour commuters, the men in bowler hats, carrying umbrellas, the women in dark blue, grey or black coats. It was all so disorientating, but more was to come as Marmie led us down the terrifying escalators to the tube train.

By the time we arrived at our new home, 1 Mayfield Avenue, Chiswick, we were well and truly traumatised."

How do you think the first people on Windrush felt coming to the UK? Why do people move from their homes to go somewhere new? Think about times when you have felt out of place. How could people have supported you and made you feel welcome?



Literacy National Writing Day 24th June

Write a letter to a person currently living in a care home #MyDearNewFriend, Write a poem about a thing you really love.

Create a new planet!

We are just a small part of the solar system and the universe and there is so much we have not yet discovered in space. Time to imagine! Imagine that you have discovered and travelled to a new planet. Use your senses to describe the planet:

What are you going to call it? What does it look like: shape / colour? What grows or lives there? What can you see/hear/feel on your planet? What does it feel like to touch parts of the planet? What might be the rules or laws on your planet? How do you want people to look after it?

Do you want to write: A description of it? A story about it? A fact-file about it?

You could make the new planet using play doh, Lego or junk modelling or add it to the Marble Galaxy artwork in the Creative Art section.

Space Plan After

Heading into Space takes years of planning and preparation. You are going to plan your own trip into space. What do you need to consider first to becoming an astronaut? Write a plan of what you need to do! Are you fit enough? What other languages do you think you need to speak? Do you work well in a team? How well do you communicate messages and directions to others? Why would need to practice becoming an astronaut underwater? What food would you need to plan for to take with you? If you could take one personal item with you, what would it be? What medical training do you think you would need? How long do you think it would take to train to be an astronaut?



Our Solar system

We live on planet Earth which orbits a star that we call the sun. There are 7 other planets which also travel around the sun. The 4 planets, including Earth, closest to the sun are rocky and the 4 furthest away are made mostly of gases.

Make a fruit solar system! You need: 1 watermelon, 1 large grapefruit, 1 large apple 1 orange (slightly smaller than apple) 2 cherry tomatoes, 1 blueberry, 1 peppercorn

Look at the hints below to match the items to a planet!

Mercury is the smallest planet in the Solar System and the closest planet to the Sun. Jupiter is the biggest planet in the Solar System. Saturn is the second biggest planet in the Solar System. There are two pairs of similar-sized planets out of these four: Uranus, Earth, Venus and Neptune. Can you work out which pairs belong together and match them to the right items? One item should remain for Mars.



How big is the sun and the moon?

The sun is a star at the centre of our universe and although the Sun is nearly 150 million km away from us and huge, you can measure its size from your living room, by making a pinhole camera: an astronomical device!

You will need: a cereal or shoebox, some aluminium foil, sticky tape, a sheet of white paper, a ruler and a pin or needle. Cut a 2x2cm square out of the centre of one of the short sides of the box. Place the aluminium foil over the cut-out and tape it down. Use a pin or needle to pierce the foil. Line the inside of the opposite end of the box with the white paper.

Measure the length of the box, from the hole to the sheet of paper. Point the foil-covered front end towards the Sun, being careful to never look directly at it! An image of the Sun will appear on the piece of paper and you can measure it with a ruler. No calculate the Sun's diameter: Diameter of Sun = size of image ÷ length of box x 149,600,000km You can use the same method for the Moon, but replace the number at the end with 384,000km.



We have day and

night because the Earth spins on its axis and different parts of the planet are facing towards the Sun. It takes 24 hours to turn all the way around, and we call this a day.



On a sunny day, record where the sun is in the morning, lunchtime and the evening? Look at an object in the park or your garden at these times (or make a shadow stick) – how do the shadows change? At home, shine a torch or light on a toy each side and directly above draw the shadow of the toy each time.



Humanities

Space Quiz

- Who was the first person in space? *Soviet born Yuri Gagarin, Alan Shepard from America or Andy Thomas from Australia?*
- Who was the first human to set foot on the moon? *Neil Armstrong, Buzz Aldrin or Tim Peake?*
- Who was the first African American woman in space? *Mae Jemison, Ellen Collins or Sally Ride?*
- Who was the first British ESA astronaut to visit the ISS? *Buzz Aldrin, Sir Isaac Newton or Major Tim Peaks?*
- Who is the founder of SpaceX – the space exploration company working with NASA? *Sir Richard Branson, Elon Musk or James Earl?*

Answers on page 3!

People in history: Galileo 1564 -1642

An Italian astronomer, physicist and engineer. He used his newly invented telescope to discover four of the moons circling Jupiter. He believed in the 'Copernicus' (another famous astronomer) theory that Earth and all other planets revolve around the Sun (rather than the other way around!)

Think of 5 questions to ask him!

The Space Race!

For many years, the USA and USSR (Now Russia and 14 other countries) were in a race to conquer space. In 1957, Russia sent Sputnik, the first artificial satellite, into space. This was the start of the space race. President Kennedy of the USA promised to send an American to the Moon. This happened in 1969 when Neil Armstrong, Buzz Aldrin and Michael Collins landed on the moon.

Here are some more firsts in space: **Katherine Johnson:** Female African-American Mathematician

Whom worked out calculations for the first spaceflight in 1961, but she was not allowed to put her name in any research. She had to use the name of a male colleague!

Helen Sharman: 18th May 1991 The first Briton in space. She applied to a radio advert saying: 'Astronauts wanted no experience necessary'. She went to space for 8 days. She is often referred to as the first British woman in space, but she was the first British person!

Dr Mae Jemison: First African-American woman in space in 1992. Could you write an advert to be an astronaut or a NASA mathematician? Think of the qualities that all these people had to have as women and/or BAME people

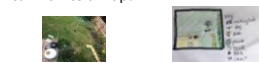
You could put them into a timeline too!



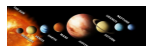
Earth from Space

Satellites travel in space and take images of the Earth. We call it a "bird's eye view," like you view it from above. Apollo 11 was the shuttle that took the first men to the moon. Neil Armstrong from Apollo 11 said: "It suddenly struck me that that tiny pea, pretty and blue, was the Earth. I put up my thumb and shut one eye, and my thumb blotted out the planet Earth. I didn't feel like a giant. I felt very, very small."


When Tim Peake was in space, he took photos of Earth from space. Can you imagine that you are in space looking down at where you live. What would you see? Draw a bird's-eye map of your world!



Ways to remember the planets! We can use a mnemonic! My very eager Mum just served us noodles – the planets, in order, are Mercury, Venus, Earth, Mars, Jupiter, Saturn, Uranus, Neptune! Make up some of your own! *Pluto was renamed as a dwarf planet in 2006.*



Topic 11: Let's go out of this world – Space!

These are links to websites – please practise Internet safety with your children whilst accessing these websites. 

Useful websites for parents and carers:	<p>1. In response to the coronavirus lockdown and backed by the Government, The Oak National Academy website, is a new collection of high-quality lessons and online resources. For more information for parents and carers: click here</p> <p>2. The National Education Union has published a new website for providing advice, latest news and resources for parents and carers on the Coronavirus crisis: Wellbeing, building resilience and PSHE:</p> <p>1. Everybody Worries by Jon Burgerman: click here</p> <p>2. Talking to children who are worried about coronavirus: click here</p> <p>3. The CAMHS Alliance for Hackney has produced a comprehensive list for parents and carers click here</p>
Films and TV shows	Wall-E, Star Trek, Hidden Figures, Star Wars, Race to Witch Mountain, Mars Needs Moms, Lego Movie 2, the Second Part, E.T, Ice Age 5, Muppets from Space, Spark: A space tail
Websites	<p>Space topic support http://www.nicurriculum.org.uk/curriculum_microsite/SEN_PMLD_thematic_units/dep/docs/IB_WB_Files/IB_Overview/To_Infinity_and_Beyond.pdf</p> <p>https://www.stem.org.uk/system/files/elibrary-resources/2017/01/077%20Training%20Brochure%202017.7.pdf</p> <p>Space Junk: https://www.nhm.ac.uk/discover/what-is-space-junk-and-why-is-it-a-problem.html</p> <p>Space and Earth Scheme: https://twotempleplace.org/wp-content/uploads/2017/12/Year-5-Science-Earth-Space-D.pdf</p> <p>Mission Space: https://www.youtube.com/playlist?list=PLmTANlv-GyUvTXBry-z8Mpqg2-mX8D4</p> <p>https://learning.sciencemuseumgroup.org.uk/wp-content/uploads/2019/02/SMG-Learning-Activities-No-Pressure.pdf Science museum has many resources and experiments including designing a 'Rugged Rover' on their app.</p>

Religious Education

Some religions believe that a God created the universe but many scientists believe that it was part of the 'Big Bang' - an explosion that created the universe 14 billion years ago- Where do you and your family think the world came from?

BBC teach KS2 summary: <https://www.youtube.com/watchv=ARYWE8e50yM> KS1: <https://www.bbc.co.uk/bitesize/clips/z62hyrd>

Big Bang information: <https://www.dfindout.com/uk/space/stars-and-galaxies/big-bang/> Many cultures/religions have their own creation stories such as the Australian Aborigines who believe in the 'Dreamtime' and the Rainbow Serpent. Maoris believe that New Zealand was fished out of the sea by.

Maui: <https://www.pbslearningmedia.org/resource/echo07.lan.stories.maui/maui-and-the-creation-of-the-islands/> The Mayans believed that two Gods made the world in stages, starting with animals : <https://www.youtube.com/watch?v=CmCr4acWmY>

Different creation stories: <https://www.khanacademy.org/partner-content/big-history-project/what-is-big-history/origin-stories/a/origin-story-iroquois>

Which stories do you like and can you find any others? What similar ideas can you notice between the theory of the Big Bang and other creation stories?

How may believing that there is no Creator, change the way people treat the environment?

What other reasons may people have for looking after the world? Is it really our world? Who's world is it?


















- Windrush day** <https://www.windrushday.org.uk/community/history/baroness-floella-benjamin-on-coming-to-england/>
- <https://www.bbc.co.uk/newsround/43793769>
- <https://mailchi.mp/ffc89d14e5e7/free-windrush-day-quiz-for-children>
- <https://love.lambeth.gov.uk/windrush-day-2020/#:~:text=At%2010%3A27am%20on%20Monday,on%20the%20original%20Empire%20Windrush.>
- https://windrushfoundation.com/wp-content/uploads/2019/06/WindrushFoundationEduPack2018_R10R4.pdf
- <https://www.nationalarchives.gov.uk/education/resources/bound-for-britain/>

Literacy

Wednesday 24th June National Writing day [Click for link](#)

Design your own planet: Hackney pirate <https://www.piratesofthegalaxy.com/> Literacy Shed <https://www.literacyshed.com/the-sci--fi-shed.html> Would you like to be an astronaut? https://www.esa.int/kids/en/learn/Life_in_Space/Astronauts/Would_you_like_to_be_an_astronaut Constellation website: <https://www.dkfindout.com/uk/space/constellations/> NASA stargazing: <https://spaceplace.nasa.gov/starfinder/en/> or use apps. Videoclip explaining popular constellations: <https://www.youtube.com/watch?v=MZfihapOgg> Video explaining Great Bear: <https://www.youtube.com/watch?v=1sZ15UeS9w> Different constellation stories: <http://www.tcoe.org/scicon/instructionalguide/constellations.pdf>

Books <https://www.booksfortopics.com/space-ks1> <https://www.booksfortopics.com/space-ks2> Book trust books about space: [click here](#)

EYFS and R	<p>Goodnight Spaceman: Michelle Robinson </p>	<p>Aliens Love Underpants: Claire Freedman </p> <p>Animals in the sky: Sara Gillinham </p>	<p>Look up! Nathan Bryon  Illustrators: Dapo Adeola</p>
KS1 Y1-Y2	<p>The dinosaur that pooped a planet: Dougie Poynter and Tom Fletcher </p> <p>Man on the Moon: Simon Bartram </p>	<p>Space Dog: Toys in Space Mini Grey </p>	<p>Beegu: Alexis Deacan </p> <p>Space race: Malorie Blackman </p>
KS2 Y3-Y6	<p>The skies above my eyes: Charlotte Guillain illustrated Yuval Zommer </p> <p>Hello is this Planet Earth: Tim Peake </p>	<p>Hidden Figures: Margot Lee Shetterly </p> <p>A galaxy of her own: Amazing stories of women in space: Libby Jackson </p>	<p>Phoenix: S.F Said </p> <p>The many worlds of Albie Bright: Christopher Edge </p>

Maths

STEM Principia mission: <https://www.stem.org.uk/resources/elibrary/resource/102104/principia-mission-maths-space>

Time zones: <https://www.mathsisfun.com/time-zones-world.html>

X axis and Y axis: <https://www.theschoolrun.com/what-are-x-axis>

Co-ordinates: <https://www.topmarks.co.uk/Search.aspx?q=coordinates>

KS2 Co-ordinates: <https://www.bbc.co.uk/bitesize/topics/zgthvcw/articles/z96k9qt>

Ratio: <https://www.bbc.co.uk/bitesize/topics/zsq7hyc/articles/z8kfnbk#:~:text=A%20ratio%20shows%20how%20much%20is%20stated%20is%20important.>

Science (also apps for stargazing)

Our Place in Space: <https://www.ourplaceinspace.co.uk/>

Our Solar System: <https://www.stem.org.uk/resources/elibrary/resource/35495/our-solar-system-suitable-home-teaching#&gid=undefined&pid=1>

What is the solar system? <https://www.bbc.co.uk/bitesize/topics/zdrd2p/articles/ztsqj6f>

Pinhole camera: <https://www.nationalgeographic.org/activity/build-a-sunspot-viewer/>

<https://astroedu.liau.org/en/activities/1409/safe-sun-viewer/>

http://static.lawrencehallofscience.org/diy_sun_science/downloads/diy_ss_measure_sun_size.pdf

Tim Peake talking about International Space station: <https://www.bbc.co.uk/bitesize/clips/zcxpcw>

Sky at night science experiments <https://www.skyatnightmagazine.com/advice/diy/6-simple-astronomy-experiments-do-at-home/>

<https://spaceplace.nasa.gov/classroom-activities/en/>

https://www.nasa.gov/audience/foreducators/5-8/features/F_Solar_System_Scale.html

<https://spotthestation.nasa.gov/>

Track when you will be able to see the ISS in the night sky: <https://www.timeanddate.com/astronomy/night/uk/london>

Solar system <https://www.spacekids.co.uk/solarsystem/> <https://www.bbc.co.uk/bitesize/topics/zkbbkqj>

Earth and Space: <https://www.bbc.co.uk/bitesize/topics/zkbbkqj>

Science museum exploring space: <https://www.sciencemuseum.org.uk/learning/exploring-space-school-info>

Science museum app: <https://www.sciencemuseum.org.uk/games-and-apps>

Humanities

Galileo: <https://www.bbc.co.uk/t4/each/class-clips-video/science-ks2-the-work-of-galileo-galilei/z69t39>

The Space Race: <https://www.bbc.co.uk/bitesize/clips/z8w7fr>

Katherine Johnson: <https://www.nasa.gov/audience/forstudents/k-4/stories/nasa-knows/who-was-katherine-johnson-k4>

Helen Sharman and space <https://www.bbc.co.uk/cbbc/findoutmore/find-out-more-space>

Mae Jemison: https://starchild.gsfc.nasa.gov/docs/StarChild/whos_who_level2/jemison.html

[Visit the international Space Station](#)

Maps and models of earth

Science museum: <https://www.sciencemuseum.org.uk/learning/beautiful-plan-et-3d-u-school-info>

<https://www.nationalgeographic.org/activity/explore-maps-and-models/>

Space quiz <https://www.dfindout.com/uk/quiz/space/quiz-yourself-on-stars-and-galaxies/>

Space trumps: <http://history.amazingspace.org/resources/explorations/tradinggame.html>

Stonehenge: <https://www.stonehengeskscape.co.uk/>

History of Royal Observatory : <https://www.rmg.co.uk/discover/explore/royal-observatory-greenwich>

Answers to Space Quiz questions:

1. Soviet born Yuri Gagarin, 2. Neil Armstrong, 3. Mae Jemison, 4. Major Tim Peaks, 5. Elon Musk

Creative Arts

Tate Gallery Van Gogh Starry Night <https://www.tate.org.uk/kids/explore/who-is/who-vincent-van-gogh>

Tim Peake exercise: <https://youtu.be/utaBPMeRQxA>

<https://www.youtube.com/watch?v=iY17W1Ck1Y>

Primary School Songs: Space: <https://www.bbc.co.uk/teach/school-radio/music-primary-school-ks1-ks2-songs-space-and-apollo-11/zbdv4j>

Gustav Holt: the planets <https://www.youtube.com/watch?v=Gu77tia30c> <https://www.bbc.co.uk/programmes/p02f1s7d> Short film introducing Mars. Play an instrument along: <https://www.bbc.co.uk/programmes/articles/14ZT5vjnkQRdKVsrq1x1x/mars-from-the-planets-by-gustav-holt> lesson plan for Holt: http://downloads.bbc.co.uk/tv/tenpieces/holt_lesson_plan.pdf

Spacewalk: <https://www.nasa.gov/audience/forstudents/k-4/stories/nasa-knows/what-is-a-spacewalk-k4.html>

<https://www.youtube.com/watch?v=iY17W1Ck1Y>



Learn all the names of the planets in Spanish:

<https://www.rocketlanguages.com/spanish/words/space-in-spanish>