



## Phase 2 HALLI'S LESSON

**PSHE Lesson:**

*Taking care of your own universe*

**Literacy:** *Descriptive Writing*

**Mathematics:** *Triangles*

**Science:** *Orbits*

**History:** *Space Race 2*

**Art:** *Planet Personalities*

PSHE

# Lesson 2

Taking care of your own universe



**Halli**



A very observant Beastie able to see far and wide. But whilst she is always looking out for others she forgets to look out for herself.

Take the time to speak with your child about how Halli is feeling, why she may be feeling this way and if we have ever felt the same. Then explore how we can help her or ourselves.

## HOW TO HELP

### HORIZON HAT

Whoever wears the Horizon Hat is always able to keep an eye on themselves as well as others no matter where they happen to be looking.

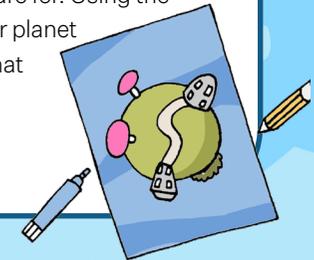
**Translation:**

Self care is so important and whilst it is good to look after others as well, you will always be number one.



### DISCOVER YOUR PLANET

Everyone is a universe unto themselves full of ideas, creations, possibilities and wonder. But one planet in particular represents you perfectly and is yours and yours alone to care for. Using the planet templates, create your planet and fill it full of the features that you define.



## DISCUSSION POINTS

- In what ways could Halli better look after herself?
- Can we think of five reasons why it is good to look after yourself as well as others?
- What is self care, and what are some ways in which you can practice it?

## Tips

You can use different materials to make your planet really unique, colourful and lovely just like you.

Have a preliminary discussion about how our planets might look, why that might be and what kinds of things could represent certain characteristics.

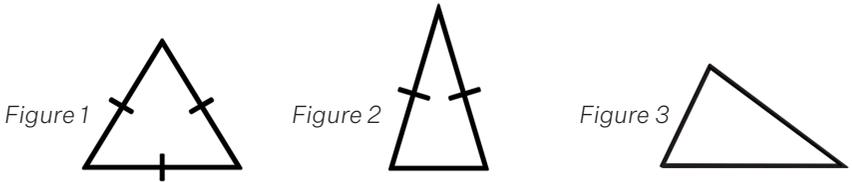
## ACTIVITY

Objectives	Alien Thesaurus	Extra Information
<p><b>Lesson 1 – Parent/Child Version.</b></p>	<p><b>STARTING ACTIVITY – (5 minutes)</b>                      Together with your child recap on the fact file you created in the previous lesson about the Sun. Give your child a few minutes to think of 4 words that they could use to describe what they have learnt about the Sun and tell a partner or share with you.</p>	<p><b>Materials Required:</b></p> <ul style="list-style-type: none"> <li>✓ Their fact files from last week</li> <li>✓ A thesaurus</li> </ul>
<p><b>L.O:</b></p> <p>To Select Appropriate Vocabulary to Describe Their 'Alien'.</p> <p>To Use a Thesaurus Effectively in Order to Extend Their Vocabulary.</p>	<p><b>MAIN TEACHING – (10 minutes)</b>                      Talk to your child about extending their vocabulary and how a thesaurus helps us to find different words for the same concept. Take some examples of words that your child have used to describe the Sun and describe it using the thesaurus to find alternative words (<i>for example: hot - blistering</i>).</p> <p><b>MAIN TASK – (40 minutes)</b>                      Ask your child to look back at their individual fact files with the information about their chosen planet. Ask them to imagine they have just found out that there is alien life on the planet they have researched.</p> <p>Encourage your child to think carefully about what their planet is like and what this would mean the aliens would need to be like to live there (<i>for example: the temperature, the air etc</i>). Your child should then design an alien and write sentences to describe it. Your child need to be able to use a thesaurus effectively so they must take words from the thesaurus when describing their alien.</p> <p><b>Plenary – (5 minutes)</b>                      Have your child share their aliens with you or another member of the family. Ask them to discuss the new words they found in the thesaurus and what they mean. See if they can come up with additional words for the alien, then ask them to share with you.</p>	<p><b>Key Words:</b>                      Thesaurus                      Descriptive                      Alien                      Habitat</p> <p><b>Differentiation:</b>  <i>Additional support:</i> If required provide your child with words to describe an alien, they then have to find different words to describe the same concept using the thesaurus.</p> <p><b>Success Criteria:</b></p> <ul style="list-style-type: none"> <li>✓ I can use a thesaurus to find new words to describe an alien.</li> <li>✓ I can use a thesaurus to find new words to describe an alien. I can put these new words into a sentence about the alien.</li> <li>✓ I can use a thesaurus to find new words to describe an alien. I can put these words into a sentence about the alien, and write a descriptive paragraph about what the alien looks like and why it looks this way.</li> </ul>



**Reflection**

**Child's Progress**

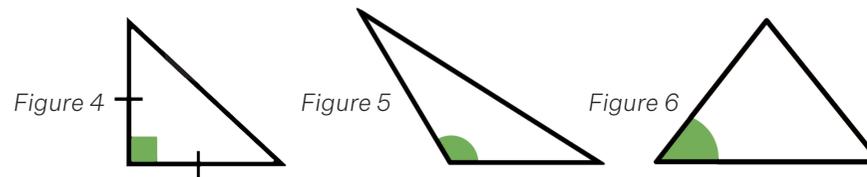
Objectives	Geometry	Extra Information
<p><b>Lesson 2 – Parent/Child Version.</b></p>	<p><b>STARTING ACTIVITY – (10 minutes)</b>                      Display on the board the three figures below. Ask your child if they can point out the differences between each of these triangles.</p> <p>Lead your child to the conclusion that the first triangle has all sides being equal and is called an 'Equilateral' triangle, that the second triangle has two sides being equal and is called an 'Isosceles' triangle and that the third triangle has no equal sides, called a 'Scalene' triangle. Highlight that the dashes on some of the sides of the triangles are used to indicate that the sides have equal length.</p> <div style="text-align: center;">  <p>Figure 1      Figure 2      Figure 3</p> </div> <p>Have several different types of triangle pre-drawn on the board, or ask your child to volunteer to do so, then name which type of triangles they are, adding dashes through the appropriate sides of the triangles, until your child is comfortable with the three type</p> <p>Have your child go through the first 6 questions on the supplementary worksheet, naming the type of triangle.</p> <p><b>MAIN TEACHING – (15 minutes)</b>                      With your child having completed the first portion of the worksheet, display on a piece of paper the figures below. Explain that the box in the corner of the first triangle means that that corner is a 'Right Angle'. Tell your child that 'right angle' is the same as saying 90 degrees and that it always results in two 'Perpendicular' lines.</p> <p>Continued on the next page...</p>	<p><b>Materials Required:</b></p> <ul style="list-style-type: none"> <li>✓ Pens</li> <li>✓ Paper</li> <li>✓ Maths Worksheet</li> </ul> <p><b>Key Words:</b>                      Equilateral                      Isosceles                      Scalene                      Right Angle                      Perpendicular                      Acute                      Obtuse                      External/Internal</p> <p><b>Differentiation:</b>                      If your child is struggling with the sum of angles in a triangle take them aside from the main group and go through the proof with them again. Assure them that it is true that the angles add up to 180 in a triangle and so it's just subtraction and addition, before returning them to the main group.</p> <p>If your child finishes the worksheet quickly allow them to extend their knowledge by working out the internal angles of larger regular polygons on their own.</p>

## Objectives

## Geometry

## Extra Information

Now explain that the curved line in the corner of the other two triangles represents the angle between the two sides that the curved line touches. Ask your child if they notice anything about these two angles when compared to the right angle in the first triangle. Lead them towards the idea that the angle in figure 2 is larger or wider than a right angle - telling them that this, and any angle between 90 and 180 degrees is called an 'Obtuse' angle, and the angle in figure 3 is smaller or sharper than a right angle, telling them that this, and any angle under 90 degrees is called an 'Acute' angle.



Draw several angles on a piece of paper and together name the types of angles until your child are comfortable with these three types. It may help to provide your child with the following tips to remember the meaning behind each angle or better yet have them make up some of their own (displaying them to support your child through the next task):

- ✓ **Right Angle** - can be thought of going 'right' up, or 'right' out from the end of another line
- ✓ **Acute** - another definition for acute is severe or sharp so they can picture a severe or sharp angle. Or it can help to think of a-cute, or small, angle.
- ✓ **Obtuse** - another definition for obtuse can be something that is not sharp or blunt, so it can help to think of a more blunt angle.

### MAIN TASK – (25 minutes)

Have your child go through questions 7 to 12 on the supplementary worksheet, naming the types of angles.

### Success Criteria:

- ✓ I can name the different types of triangle.
- ✓ I can name the different types of angles within a triangle.
- ✓ I can work out the value of an angle in a triangle based on the sum of its other angles.

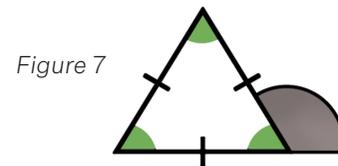
## Objectives

## Geometry

## Extra Information

### Mini-Plenary

With your child having completed the second section of the worksheet display the figure below on a piece of paper. Explain that the figure represents an equilateral triangle and that another property of an equilateral triangle is that, just like any regular polygon all of its angles are also equal.



Tell your child that they will be working out what these angles are and to do so they have to imagine the external angles of the triangle as well. Explain that to get the external angle you extend one of the lines in an angle beyond where they meet (using the figure drawn on a piece of paper as a reference.) The external angle is the new angle created between the two lines. This is shown in the figure by the shaded angle. Explain that this shaded angle would also be the same on each corner of the triangle because all the internal angles are equal.

Now ask your child to imagine standing at one corner of the triangle looking out towards this extended line. If they were to turn through the external angle they would then be facing another corner of the triangle. If they then walked to this corner and did the same thing, turning through the external angle, they would come to the third corner. If they did this one more time they would be back to where they were and facing the same direction.

Once your child are comfortable with this ask them how many degrees they turned. Remind them that there are 360 degrees in one full circle and that if they ignore the walking to each corner, they have just turned a complete circle. Ask them then, what they know about the sum of all three external angles, reiterating that those three angles must be equal to a full circle. Explain that the three angles must add up to 360, and if they are all equal, each angle must equal  $360/3$  or 120 degrees.

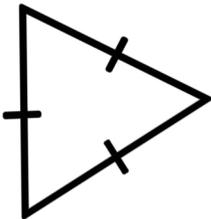
Objectives	Geometry	Extra Information
	<p>Tell your child they should now be able to calculate what the internal angles of the triangle must be. Explain that the angle of a straight line is equal to 180 degrees and they can see that the internal angle plus the external angle equal a straight line. Explain that therefore the internal angle = 180 minus the external angle (120) = 60 degrees.</p> <p>Tell your child that the sum of the internal angles will never change, even if the individual angles themselves change. Explain that this means we know that the sum of angles in every triangle will always add up to 180 (e.g 60 degrees x 3 corners).</p> <p>With your child comfortable with this proof, display on a piece of paper a series of triangles with the values of two angles displayed and together work out the value of the remaining angles. Have your child go through questions 13 to 18 on the supplementary worksheet, writing down the values of the angles.</p> <p><b>PLENARY – (10 minutes)</b></p> <p>Tell your child that this process of working out the value of internal angles by looking at the external angles can be done for any regular polygon, but that even for irregular shapes the external angles will always add up to 360 degrees.</p> <p>Ask your child to draw regular polygons. Then together workout the internal angles.</p>	

## Geometry - Worksheet

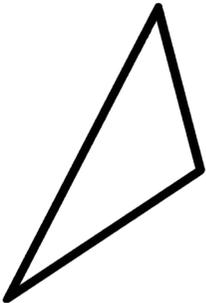
Task - Name the types of triangles below, choosing from Equilateral, Isosceles or Scalene.



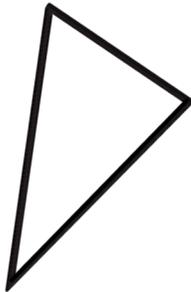
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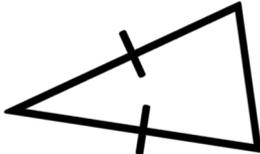
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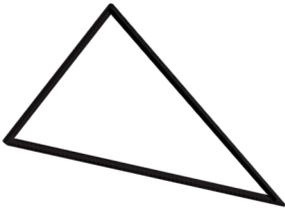
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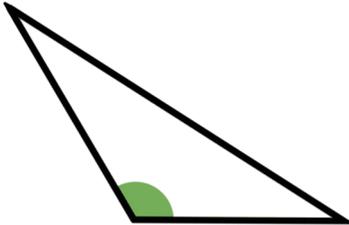
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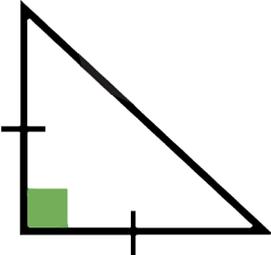
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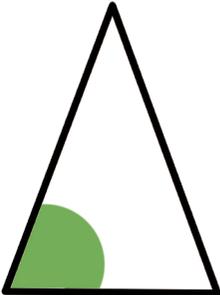
Task - Name the type of angle in the marked angles in the triangle below, choosing from Right Angle, Acute and Obtuse.



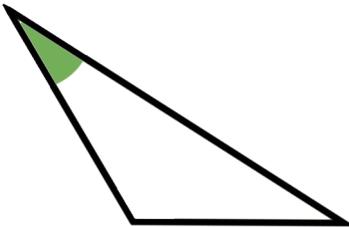
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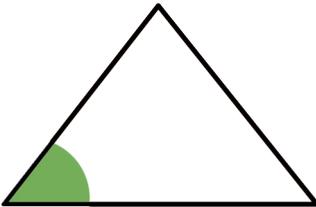
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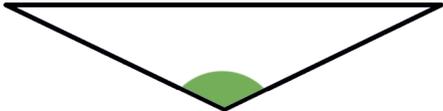
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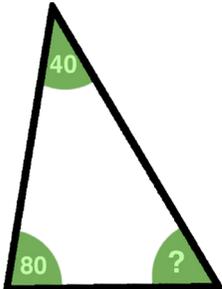
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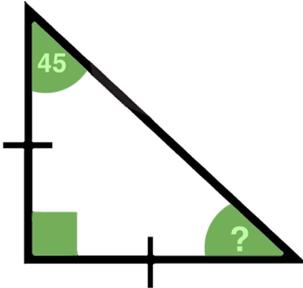
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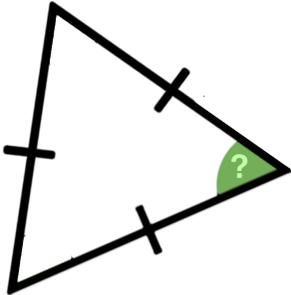
Task - Find the missing (?) angle in the triangles below.



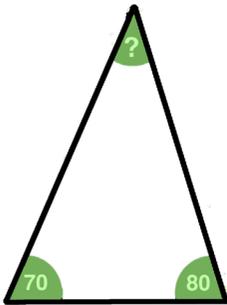
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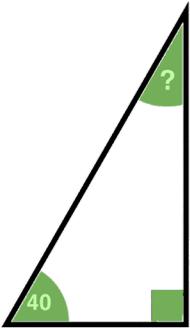
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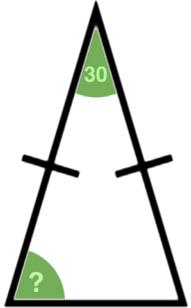
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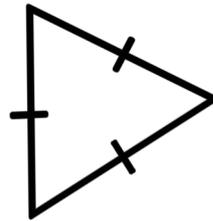
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## Geometry - Answers

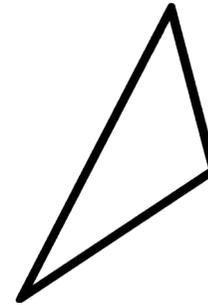
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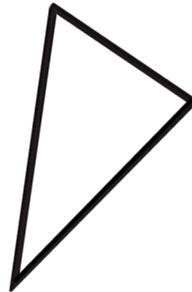
Isosceles



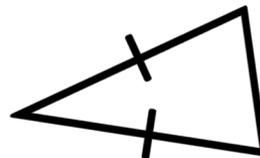
Equilateral



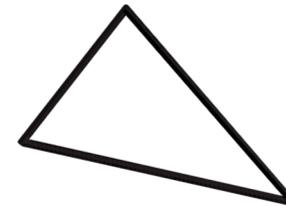
Scalene



Scalene



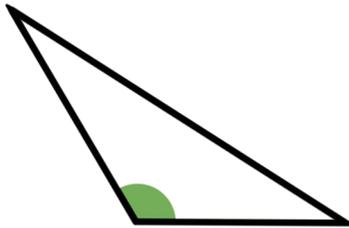
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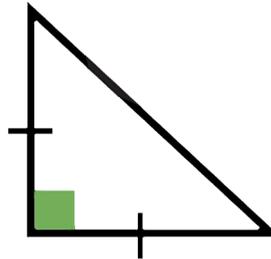
Scalene

## Geometry - Answers

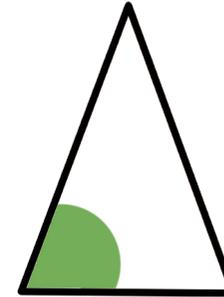
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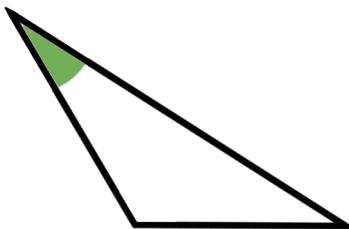
Obtuse



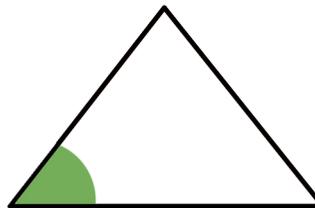
Right Angle



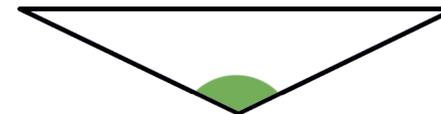
Acute



Acute



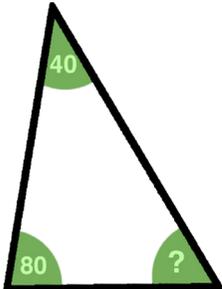
Acute



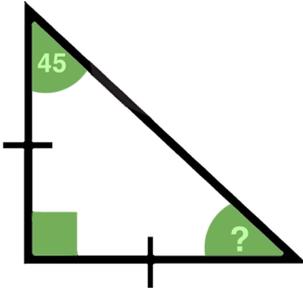
Obtuse

**Geometry - Answers**

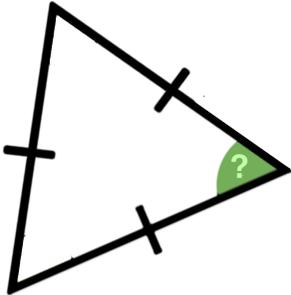
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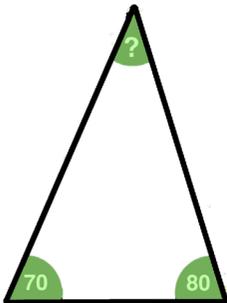
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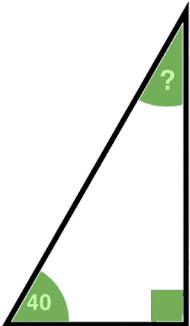
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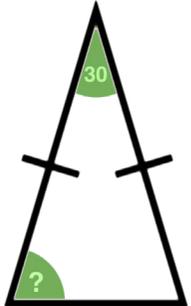
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— 30 —



— 50 —



— 75 —

# Halli's Lesson - Mathematics



**Reflection**

**Child's Progress**

Objectives	Orbits	Extra Information
<p>Lesson 1 – Parent/Child Version.</p>	<p><b>MAIN TEACHING – Orbs Orbiting Orbs. (10 minutes)</b>                      Start the lesson by asking your child to define a 'year.' Any response of 365 days should be met with the question of why it is that many days. Explain that a year is defined as the amount of time it takes the Earth to orbit the Sun. Ask them to define 'orbit,' leading them towards the idea of an object moving around another object.</p> <p>Draw on the board a large circle and write 'Sun' in the centre, draw a smaller circle above this one and in the middle write 'Earth', and finally draw an arrow starting and ending at the 'Earth' travelling around the 'Sun'. Remind them that in a full diagram of the solar system they would need to include the other planets. Use this opportunity to check your child know the name of the planets. Remember Pluto is no longer a planet but a dwarf planet.</p> <p>Tell them that the Sun is a star just like many of the other stars they can see at night, just much, much closer, and that all of the planets in our solar system orbit the Sun. Ask your child if they know why the Earth orbits the Sun and not the other way around.</p> <p>Acknowledge any mention of gravity or difference in mass. Explain that it was in fact a trick question. Tell your child that the two objects actually orbit a common point, with that common point being closer to the heavier object - this is called the barycentre. If they are confused assure them that we will now be performing an experiment to demonstrate this principle.</p> <p><b>MAIN TASK – (20 minutes)</b>                      Activity Breakdown:</p> <ol style="list-style-type: none"> <li>① Take your bowl and using the marker pen, make a large mark on the inside of the bowl 2cm below the rim to make a target orbit.</li> <li>② Make small circle mark in the centre of the bowl, this will be our star.</li> <li>③ Tape a sheet of paper to the table, to make sure it doesn't move.</li> <li>④ Place the bowl on the piece of paper.</li> <li>⑤ Tape a marker pen to the bowl with the tip only just marking the paper.</li> </ol>	<p><b>Materials Required:</b></p> <ul style="list-style-type: none"> <li>✓ Large bowl</li> <li>✓ 3 Balls of different weights (e.g. marble, golf ball, pea)</li> <li>✓ Marker Pens</li> <li>✓ Tape</li> <li>✓ Paper</li> <li>✓ Bed sheet</li> <li>✓ 1Kg weight</li> <li>✓ Several light balls of the same size (e.g. marbles)</li> </ul> <p><b>Key Words:</b></p> <p>Gravity                      Orbit                      Solar System                      Perpendicular                      Vacuum                      Satellite</p> <p><b>Success Criteria:</b></p> <ul style="list-style-type: none"> <li>✓ I can understand how an object orbits another object.</li> <li>✓ I can understand and explain how two objects orbit each other.</li> <li>✓ I can understand and explain stable orbits in orbital systems.</li> </ul>
<p><b>L.O:</b></p> <p>To Understand How Objects in Space Orbit One Another.</p>		

Objectives	Orbits	Extra Information
	<ul style="list-style-type: none"><li>⑥ Place one of the balls (representing a planet) in the bowl and rotate the bowl until the ball is consistently hitting the target that you made earlier.</li><li>⑦ Still rotating the bowl, maintaining the orbit, slowly lower the bowl to the sheet of paper, tracing the movement of the bowl.</li><li>⑧ Repeat steps 3-6, changing the colour of the marker pen and using a different weighted ball.</li></ul> <p><b>Mini-Plenary:</b> Discuss the experiment with your child, explaining that the traced circle represents the movement of the bowl (the movement of the sun) and would be the same size wherever the pen had been taped. Ask them to compare the different sizes of their traced circles, they should notice that with the heavier balls the circles were bigger. Explain that this is because with the heavier objects more force is required to keep them in orbit and that this is true for planets and stars as well.</p> <p>Explain that because both the planet and the star are moving, they actually orbit a common point. In Astronomy this is called the Barycentre (from the Ancient Greek for heavy and centre). Explain that because the Sun is so massive (heavy) and the Earth so much smaller, the amount the sun moves is relatively little.</p> <p>Ask your child why they think the Earth doesn't simply fall into the Sun or fly off into space. This question may inspire spirited discussion and if there is time, let the discussion carry on, acknowledge any mention of gravity, but end the discussion by telling your child that they will be performing a demonstration to find out.</p> <p><b>SECONDARY TASK – (25 minutes)</b> Activity Breakdown:</p> <ul style="list-style-type: none"><li>① Suspend the bed sheet by all four of its corners, ensuring it's taut when tying it off.</li><li>② Place the 1kg weight in the centre of the sheet, causing the sheet to bend in the middle.</li><li>③ Take a marble and roll it across the sheet.</li></ul>	

Objectives	Orbits	Extra Information
	<p>④ Repeat step 3 several times, rolling the marble towards the weight, perpendicular to the bend in the sheet, faster, slower, varying your roll in as many ways as you can think and observe the differences.</p> <p><b>Mini-Plenary:</b> Explain that the weight represents the sun, the marbles represent the earth, and the sheet represents the effect of the sun's gravity on the earth. Have your child discuss their observations. Lead them towards these findings: When rolled perpendicularly to the bend in the sheet the marble begins to orbit the weight but spirals towards it; When rolled faster (with more energy) the ball either orbits for longer or leaves the sheet; When rolled slower -with less energy- the ball either orbits for less time or falls straight towards the weight.</p> <p>Ask your child if they can think of any differences between our demonstration and the earth actually orbiting the sun. Acknowledge any mention of the sheet, especially any mention of friction or vacuums. Ask them if they know what a vacuum is, explain that a vacuum isn't a vacuum cleaner, though they do create vacuums. Explain a vacuum is nothing, that it is literally an area with nothing in it, not even air.</p> <p>Tell your child that when a vacuum is created on earth it creates a suction effect as the air rushes in to fill the gap, however in space there is nothing to fill the gap. However as space is mostly made up of nothing, it is a giant vacuum. Explain that the key difference between our demonstration and the real thing is that our demonstration took place on a sheet, there was friction between the marble and the sheet that caused the marble to slow down and fall towards the weight.</p> <p>Tell them that in space there is no friction because it's a vacuum, and once the object is moving there is nothing that will slow it down except gravity or it hitting another object. Take time to discuss how this could be translated to our demonstration, ask them to imagine a marble that never slowed down, explain that if the weight was removed (the gravity of the sun taken away) the marble (Earth) would continue rolling across the sheet and, if the sheet was infinitely big, it would roll forever.</p> <p>But the sheet is curved by the weight (gravity) and so the direction the marble moves is also curved. If weight was heavier, the marble would fall. If the marble was faster it would escape the bend in the sheet. But if the weight bends the sheet just enough the marble instead circles the weight forever. Tell them that is called a stable orbit.</p>	

<b>Objectives</b>	<b>Orbits</b>	<b>Extra Information</b>
	<p><b>PLENARY – (5 minutes)</b> Tell your child that in space almost everything orbits something else. Explain that a galaxy is billions of stars orbiting a black hole, each of those stars probably has planets orbiting them, and each of those planets probably has moons orbiting them.</p> <p>If there is time, allow a discussion about the size of the universe and describe a black hole - an object that has a gravity so powerful that even light -the fastest thing in the universe- can't travel fast enough to escape it. Ask your child for other examples of orbits, if they are struggling, lead them towards the idea of satellites, the ISS (International Space Station), the asteroid belt or the rings of Saturn.</p>	



**Reflection**

**Child's Progress**

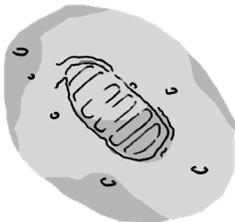
Objectives	Space Race	Extra Information
Lesson 2 – Parent/Child Version.	<p><b>Guidance</b> – Remind your child of the previous exercise and that it was half of the Space Race time-line.</p> <p><b>STARTING ACTIVITY – (10 minutes)</b>            Explain to your child that we will be continuing the timeline from the previous lesson. Begin by introducing Elon Musk and see if your child knows what company he runs and what that company does? Recap on the previous lesson to see if your child can remember who was the first man to walk on the moon, and who invented the aeroplane. If that was too easy see if they can remember the name of the first chimpanzee and the first dog in space.</p> <p><b>MAIN TEACHING – (20 minutes)</b>            In this second Space Race lesson we will be travelling from just after man first landed on the moon all the way to present day (2020) as man takes yet another giant leap towards improved space travel and one small step towards walking on Mars.</p> <p>The Space Race between Germany, the USSR and the USA slowed down quite considerably following our trip to the moon, with Germany falling off the radar and the USA's NASA taking the reins of space exploration for many years. See if your child know where NASA is based and if they can remember what their logo looks like. See if they can draw it.</p> <p>In 2002, tech entrepreneur Elon Musk, co-founder of PayPal and Tesla, founded Space X in a bid to revolutionise space technology, and eventually launched its first crewed mission to the International Space Station.</p> <p>Explain that we will be travelling through time from Neil Armstrong all the way to Elon Musk's SpaceX/NASA mission.</p> <p><b>MAIN TASK – (25 minutes)</b>            Now have the previous time line visible with the last lesson's events still attached throughout history. We will now be working from 1969 to 2020, present day. And your child will have to place the images where they think they belong on the timeline.</p> <p>You can either ask them to tell you where to stick the images or split them into teams and give them a few images each. To make things a bit easier make sure your child is aware that this lesson covers between 1969 - 2020.</p>	<p><b>Materials Required:</b></p> <ul style="list-style-type: none"> <li>✓ Timeline from previous lesson</li> <li>✓ Paper</li> <li>✓ Pens</li> <li>✓ Pencils</li> </ul> <p><b>Key Words:</b></p> <p>Elon Musk            Mars            NASA            Entrepreneur            PayPal            Tesla            Space X            International Space Station            Voyager            Jupiter            Uranus            Neptune            GPS            Ronald Regan            Rover            Sojourner            Robot            NEAR            Eros            Spirit            Opportunity            Curiosity            Perseverance            Red Planet</p>
<p><b>L.O:</b></p> <p>To Learn About the History of Space            Travel up Until Modern Day Space Travel.</p>		

Objectives	Space Race	Extra Information
	<p><b>1972 - Last Man on the Moon</b> - Gene Cernan became the eleventh and final person to walk on the Moon from the Apollo 17 (America).</p> <p><b>1977 - Voyager 2</b> - Launched days before Voyager 1 to visit Jupiter, Saturn, Uranus and Neptune. It is still on its mission in the outer reaches of the Solar System to this day more, than 40 years later.</p> <p><b>1983 - Public GPS</b> - The Global Positioning System was a US Military tool until it was released to the general public by President Ronald Regan. This technology is still used today in our smartphones and tablets.</p> <p><b>1986 - Mir Space Station</b> - This first modular space station was assembled in space and had a greater mass than any spacecraft before it.</p> <p><b>1997 - Mars Rover Sojourner</b> - The cute little Mars Rover, Sojourner was the first wheeled robot to explore the dusty red planet... very, very slowly, at a speed of 0.02 mph (miles per hour).</p> <p><b>1998 - International Space Station</b> - The ISS was a huge collaborative project between five different space agencies, NASA (USA), Rocosmos (The USSR, now Russia), JAXA (Japan), ESA (Europe) and CSA (Canada) and took over from the Mir.</p> <p><b>2000/1 - Landing on an Asteroid</b> - NASA's NEAR spacecraft took on an large asteroid named Eros by orbiting it for a year, taking photos and measurements before finally landing.</p> <p><b>2012 - Man jumps from space</b> - An Austrian skydiver and daredevil became the first person to perform a supersonic freefall from the 128,000 mile high stratosphere as part of the Red Bull Stratos project.</p> <p><b>2018 - Car in Space</b> - Before launching people into space, Elon Musk shot one of his Tesla Roadsters into the skies as a test payload for a future launch. It went on to become an artificial satellite of the sun.</p> <p><b>2020 - Space X Launch</b> - In May of 2020 NASA astronauts Robert L. Behnken and Douglas G. Hurley were launched into space in a rocket built by Elon Musk, marking a new era of space travel and potentially takes a giant leap towards commercial flights.</p>	<p><b>Differentiation:</b> If your child is struggling to figure out the dates give them a hint on some major historical moments and see if they can figure out the rest.</p> <p>If it is proving to be an easy task for your child have them be the ones to stick the images up on the wall and guide you in the right direction.</p> <p><b>Success Criteria:</b></p> <ul style="list-style-type: none"> <li>✓ I know the date that the last human walked on the moon.</li> <li>✓ I know the date that the last human walked on the moon and when the Space X Launch was.</li> <li>✓ I know the date that the last human walked on the moon, when the Space X launch was and can put together a time line for all historical events in between.</li> </ul>

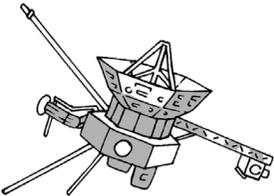
Objectives	Space Race	Extra Information
	<p><b>PLENARY – (5 minutes)</b> For those who finish first see if they can put all four of NASA's Mars Rovers in order of when they visited the red planet.</p> <ul style="list-style-type: none"><li>✓ 1997 - Sojourner</li><li>✓ 2004 - Spirit and Opportunity</li><li>✓ 2012 - Curiosity</li><li>✓ 2020 - Perseverance</li></ul>	

## Space Race - Reference Sheet

- 1972 -  
Last Man on the Moon



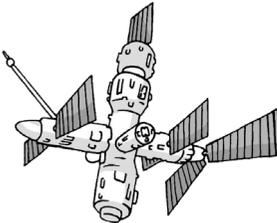
- 1977 -  
Voyager 2



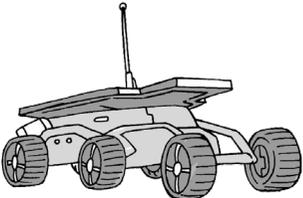
- 1983 -  
Public GPS



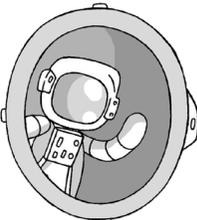
- 1986 -  
Mir Space Station



- 1997 -  
Mars Rover Sojourner



- 1998 -  
International Space Station



- 2000/1 -  
Landing on an Asteroid



- 2012 -  
Man jumps from space



- 2018 -  
Car in Space

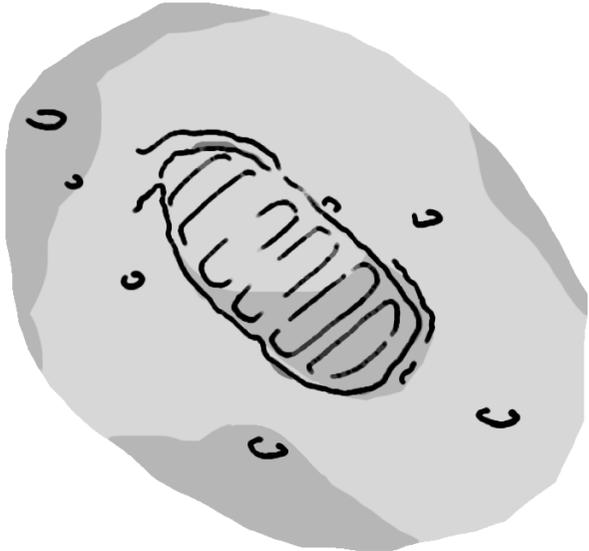


- 2020 -  
Space X Launch

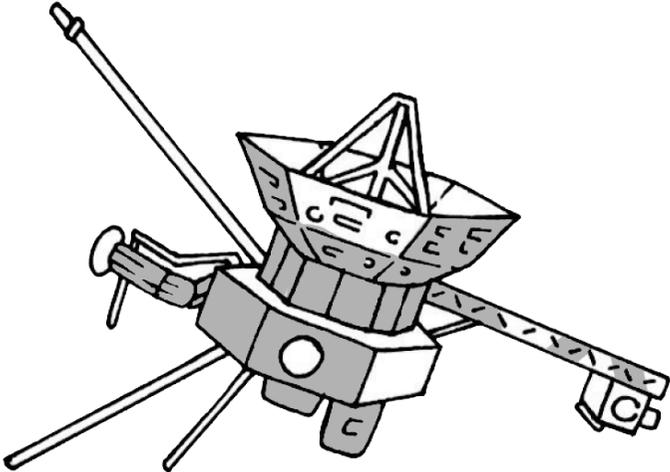


Space Race - Reference Sheet

- 1972 -  
Last Man on the Moon

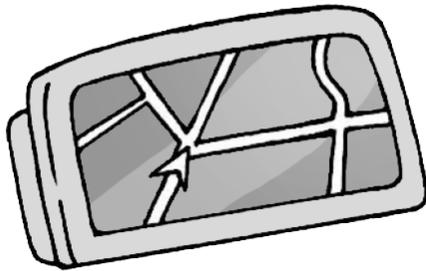


- 1977 -  
Voyager 2

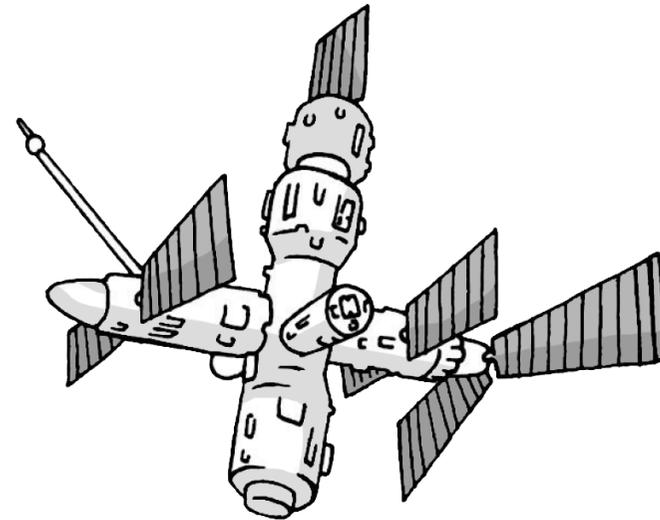


## Space Race - Reference Sheet

- 1983 -  
Public GPS

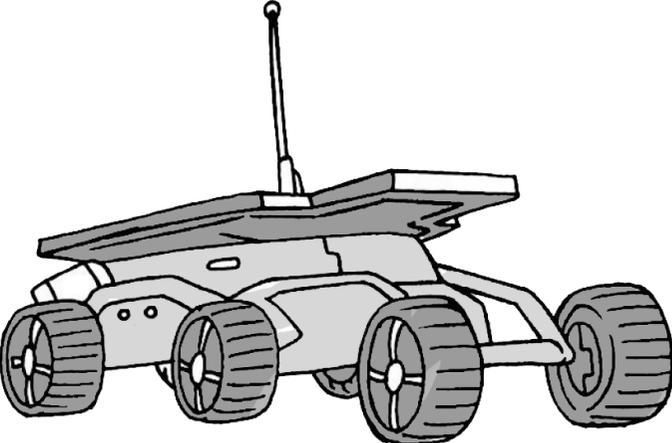


- 1986 -  
Mir Space Station

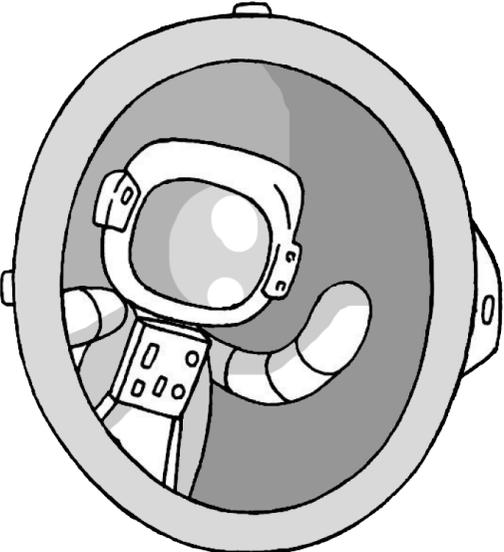


Space Race - Reference Sheet

- 1997 -  
Mars Rover Sojourner

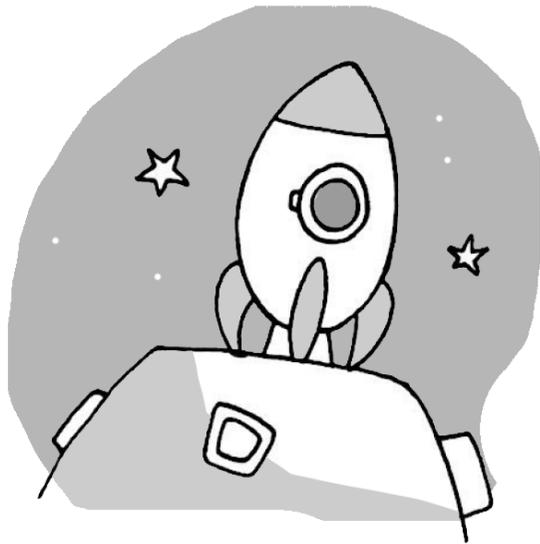


- 1998 -  
International Space Station



## Space Race - Reference Sheet

- 2000/1 -  
Landing on an Asteroid



- 2012 -  
Man jumps from space

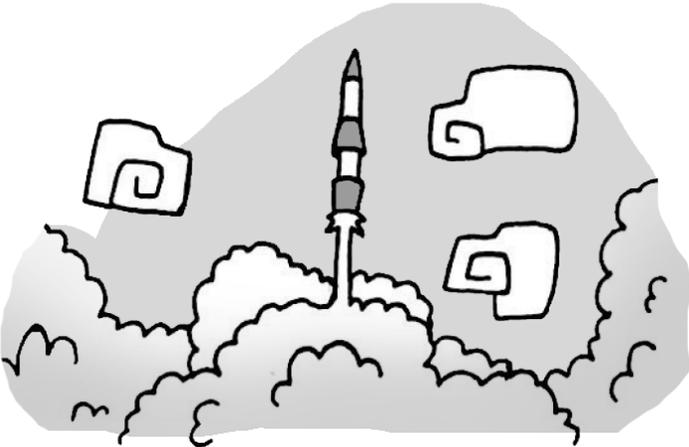


Space Race - Reference Sheet

- 2018 -  
Car in Space



- 2020 -  
Space X Launch





**Reflection**

**Child's Progress**

Objectives	Planet Personalities	Extra Information
<p>Lesson 1 – Parent/Child Version.</p>	<p><b>STARTING ACTIVITY – Our Solar System Part I (10 minutes)</b>            Make sure you have a display ready with a large cut out Sun in the centre and your child have either the planet templates from the attached worksheet or have drawn the outline of the above planets on a piece of paper ready for the lesson. To make a perfect circle they could use a compass, draw round a cup or see if they can draw a perfect circle freehand.</p> <p><b>MAIN TEACHING – Our closest Neighbours (15 minutes)</b>            Tell your child that they are going to learn about the four closest planets to the Sun and write down on a piece of paper each of their characteristics, and what kind of personality they think these planets might have. Start from the planet closest and move onto the furthest from the sun as we go. Work through each planet and ask your child if they can think of a personality trait for each planet based on its description. Work your way through all of the four planets below.</p> <ul style="list-style-type: none"> <li>✓ <b>Mercury</b> is Grey in colour and the planet <b>closest to the Sun</b> – the planet itself is both hot and cold at the same time depending on what side is facing the Sun. Imagine how confusing that would be!</li> <li>✓ <b>Venus</b> is the <b>second closest to the Sun</b> and is a very pale-yellow colour and brightest planet in our night sky. Venus gets its name from the Roman goddess of love and beauty.</li> <li>✓ <b>Earth</b> is the <b>third closest to the Sun</b> and the planet where you live! What do you think the personality of earth would be?</li> <li>✓ <b>Mars</b> is the reddish-brown planet that is <b>fourth closest to the Sun</b>. <b>Mars</b> is a cold and desert like planet and has a day length that is just half an hour longer than our own on Earth!</li> </ul> <p><b>MAIN TASK – (25 minutes)</b>            Tell your child that it is time to start charting (making a map of) each of these planets!</p> <p>Have your child begin decorating each of the four planets however they wish! Tell them that they could choose their own colours, materials, features, creatures absolutely anything based on the personality they think each planet might have if it were alive like we are!</p>	<p><b>Materials Required:</b></p> <ul style="list-style-type: none"> <li>✓ Paper with Sun glued to the middle (from lesson 1)</li> <li>✓ 4 circle paper cut outs per student (for making our planets)</li> <li>✓ Things to decorate our planets such as coloured tissue paper, paints, felt tips or any colouring tool.</li> <li>✓ Pencils</li> <li>✓ Paper</li> <li>✓ Glue stick</li> <li>✓ PVA glue</li> <li>✓ Glue spreaders</li> <li>✓ Compass</li> <li>✓ Blu Tack</li> </ul> <p><b>Key Words:</b>            Mercury            Venus            Earth            Mars            Charting            Personality trait            Characteristics            Neighbours</p>
<p><b>L.O:</b></p> <p>I Can Create Character And Personality For The Various Planets Of Our Solar System Using Different Materials.</p>		

Objectives	Planet Personalities	Extra Information
	<p>Maybe <b>Mercury</b> will have a blue side and a red side to show the two opposite temperatures that can occur there. Or perhaps <b>Venus</b> could have something on its face that represents beauty in your eyes. Pay attention to what colours or materials you have and get creative!</p> <p>When your child is finished, write the names of the planets on the blank sides of each so your child can refer to them in a later lesson.</p> <p>Finally, have your child place their planets around the <b>Sun</b> on the display with Blu Tack (<b>do not stick them down permanently in this lesson</b>) See if your child remembers the order in which the planets must go!</p> <p><b>PLENARY – (10 minutes)</b> Have your your child present to you or a member of the family what they decided to use for their four planets and if they can describe each of the various features they contain.</p>	<p><b>Success Criteria:</b></p> <ul style="list-style-type: none"><li>✓ I can create four of the planets from our solar system.</li><li>✓ I can create four of the planets from our solar system each with their own unique features.</li><li>✓ I can create four of the planets from our solar system each with their own unique features and place them in order of how close they are to the Sun.</li></ul>



**Reflection**

**Child's Progress**