

Activity Sheet

Dear Teacher/Parent

We do hope you enjoyed the show! Here are a few activities for you to do with your children after you have seen the performance. Most of these exercises are drama based and are good for developing speaking and listening skills.

Key
Stage
2

All activities are appropriate for Key Stage 2 pupils



Warm Up

Gail and Stefan embark on a long journey in space towards the planet Mars. Imagine you are an astronaut getting ready for a journey in space. What items would you take with you? Consider all the things you'll need to keep you healthy and entertained on such a long journey. Which personal items would you not want to leave behind?

With the whole class, go around in a circle with each child starting a sentence "We are going on a space mission and I am taking... (mime an action of their chosen item and say a reason). The next pupil in the circle repeats the sentence, and continues by copying the first mime, and then adding their own action with a reason. Continue around the circle with each child repeating the entire sequence and adding their own on top.

Extend this into a literacy exercise by asking the class to write about the items they are taking into space.

Try to invent new items to take on the journey and write about these. Express your reasons for these particular items? What purpose will they serve on a long journey in space?

Inventions from Space

A lot of items we use on an everyday basis were originally invented for space travel:

Cordless tools – Originally developed to help astronauts drill for moon samples.

Smoke detectors – First used in space stations to detect toxic vapours.

TV Satellite dish – Developed by NASA, the satellite was used to correct errors in the signals coming from a spacecraft.

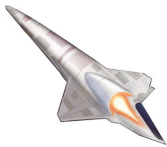
Fire fighter equipment – The fire resistant fabric found on the equipment was originally developed for use in space suits.

Thermal gloves and boots – The heating element found in thermal clothing was adapted from a spacesuit designed for the Apollo astronauts.

Ear thermometer – The technology was developed to detect the birth of stars.

Medical imaging – Developed by NASA to process signals from spacecrafts to produce clearer images.

Hand-held video cameras – Were created to be small enough to attach to the legs of the lunar lander (Moon landing in 1969).



Drama Exercise

Design and create your own Spacecraft, either in pairs or individually. What special features and components would this require in order to travel through space?

In groups, ask the children to create a Spacecraft using their bodies. Add sound effects and movement to bring this to life.

In the play, the astronauts lift off from Earth and continue to travel through space. Ask the class to start the launch of the spacecraft, to begin their journey. How will they react with the noise and feeling of travelling at such a great speed? What do you see once the spacecraft has left Earth's atmosphere?

Continue this exercise by researching facts about the Solar System, neighbouring Galaxies and Orion's Belt Stars.

What might the class see as they travel away from Earth and into the Universe?



Improvisation Exercise

In a clear room, create the environment found on the surface of Mars. How would you move and walk around the room? How will your body react to the conditions?

Gravity on Mars is far less than that on Earth. Remember your feet will not stick to the ground, and you are able to jump higher than that on Earth. Move around the space and try to recreate the conditions. What might this feel like?



Translation Exercise

Gail and Stefan plan to land on Mars. Who or what might they meet on the planet? Imagine you live on Mars and you do not speak English or any human language. In pairs take it in turns to create a new language and way of communicating. What would you say to Gail and Stefan? What might you tell them about Mars?

In pairs, pupil A must speak gibberish but gesture through body language/mime about what they are saying and pupil B has to translate. They can then form groups with another pair; pupil A will mime their speech and pupil B has to translate the conversation. Continue with the conversation for as long as possible, try communicating with movement as well as sound. How can you convey your thoughts without words?



Write your own message to the future!

Polka Theatre is working with three local schools on a unique drama and multi-media project that will enable students to write messages to their future selves in 2035. The messages created by the students will form part of an interactive exhibition around Polka during *Mission to Mars*.

Get your class to write their own messages to themselves in the future. Think about what you want to tell yourself. Consider what you might want to become in 2035. Stefan wrote a letter to himself in the year 2010 explaining what he wanted to be when he grew up. What information would you provide in your letter to your future self? Make a time capsule and place all the pupil's messages into it.



Mission to Mars

Polka Theatre has teamed up with Unlimited Theatre to create *Mission to Mars*. To complement the play, Unlimited will be running a five week educational 'alternative reality game' with 5 schools taking part. Each class are enrolled as members of a space agency training program. They will undertake their own mission to mars and the class will be faced with different activities/tests as part of their training. The pupils involved will learn about the different jobs and roles of astronauts and scientists on a spacecraft.

With your own class, imagine the pupils have accepted their own mission into space. Research the different roles of the scientists required for space travel. What do you think they will be faced with on their journey?



Mars Facts

	Mars	Earth
Average distance from the Sun	142 million miles	93 million miles
Average speed while orbiting the Sun	14.5 miles per second	18.4 miles per second
Diameter	4,220 miles	7,926 miles
Length of year	687 Earth days	365.25 days
Length of day	24 hours 37 minutes	23 hours 56 minutes
Gravity	.375 that of Earth	2.66 times that of Mars
Temperature	-62.8 degrees C	13.9 degrees C
Atmosphere	Mostly Carbon Dioxide and some water vapour	Nitrogen, Oxygen, Argon, others
Number of Moons	2	1

Other facts



Mars was named after the Roman god of war.



The largest volcano in the Solar System is on Mars. It is called Olympus Mons.



Mars is believed to have had water flowing around it like Earth once. It may have had a blue sky too. However, it is unlikely that it had grass, trees and plants like Earth has now.



Mars has seasons like Earth. This is caused by the tilt of the planet's axis, at a similar angle to the tilt of Earth's axis.



The Sun appears about half the size on Mars as it does from Earth.



Website Resources

The following websites are useful resources full of activities and facts:

Unlimited Theatre

www.unlimited.org.uk/home/

Unlimited Theatre keep blog entries from the development and research they did with the European Space Agency on the production

www.unlimited.org.uk/blog/

NASA website

www.spaceplace.nasa.gov/en/kids/

European Space Agency website

www.esa.int/SPECIALS/Mission_Possible/SEMFEOW797E_0.html

Greenwich Royal Observatory

www.nmm.ac.uk/places/royal-observatory

Leicester Space Centre

www.spacecentre.co.uk

London Science Museum

www.sciencemuseum.org.uk/visitmuseum/galleries/space.aspx

Resource website

<http://www.space.com/mars/>

Resource website

<http://www.solarviews.com/eng/mars.htm>

Resource website

www.bobthealien.co.uk/marswelcome.htm

Activities available

www.bobthealien.co.uk/marsmiss.htm

Activities available

www.exploratorium.edu/mars/index.html

