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| Class | 3rd Class | Theme | Space and technology |
| Unit | 5 | Subtheme | Rockets and space life |
| Unit genre | Explanation | Oral text type | Oral report |
| Vocabulary | Tier 1 examples: space, rocket, spacecraft, space station, fireworks, astronaut, space suit, planet, Jupiter, Saturn, countdown, lift offTier 2 examples: technology, solar system, warfare, launched, satellite, exploration protective, visor, mission, shuttle, probe, propel, galaxy, lunar |
| Lesson resources | Multimedia links |

Fortnightly plan



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| Lesson 1 | CountdownDigital poster (Story mode) Digital poster (Explore mode): Talk and discussion Word study: ‘Astronaut’Pair talking task: Which one am I? | Lesson 3 | Digital poster (Explore mode): Talk and discussion Group talking task (Oral report): Calling Expedition 59 |
| Lesson 2 | Digital poster (Story mode): RecapDigital poster (Question mode) Over and out | Lesson 4 | Digital poster (Poem mode): ‘Message from a Mouse, Ascending in a Rocket’ |

Lesson 1

Countdown

Play the sound effects of a rocket launching/space sounds, e.g. <https://www.youtube.com/watch?v=KfYto9Szei8>

Ask students the following questions:

* What do these sounds remind you of?
* What do we call what the person is saying? (Countdown)
* What is unusual about a countdown? (Counting backwards)

Digital poster (Story mode)

Play either the Story mode 1 (starters) or Story mode 2 (flyers) for the class, depending on the ability level.

Digital poster (Explore mode): Talk and discussion

Go to the Explore mode of the poster. Ask students the following questions:

* How many words about space and rockets did you hear in the story? (e.g. Space, rocket – a vehicle that launches into space, launch, mission – a journey into space to gather scientific information/data, exploration, spacecraft, space probes, satellites, space station, space walk, space suits, space shuttle, etc.)
* What spacecraft can we see on the poster? (Rocket, probe, satellite, space station, rover). Encourage the students to name and locate the spacecraft using words rather than pointing. (E.g. there is a space satellite in the third picture down on the right of the poster, there is a space station in the picture above the astronaut, there is a space rover in the picture beside/to the left of/adjacent to Saturn; between, underneath, etc.)
* How are spacecraft put into space? (e.g. They are launched or propelled with force from the launch pad)
* Why do rockets travel to space? (To explore, do experiments, go on a mission)
* What kinds of clothes do the astronauts wear? (Space suits). Why? (To protect them from the dangers of space). When do astronauts wear space suits? (When they go for space walks). How are they different from ordinary clothes? (e.g. Bulky, heavy, helmet, gloves, boots, visors, packs containing oxygen, computer equipment …)
* What kinds of objects are moving around in space? (e.g. Planets, asteroids, satellites – artificial bodies which orbit around the earth or moon to collect information, galaxies – collections of star systems)
* What is the most unusual thing about being in space for humans? (Weightlessness caused by weaker gravity – a force that attracts a body towards the centre of the earth)

Word study: ‘Astronaut’

Tell students that the word *astronaut* is derived from Greek words meaning ‘space’ and ‘sailor’.

* Ask students which bit of the word they think refers to sailor (‘naut’) and if they can think of another word with ‘naut’ (**nautical**, referring to sailors and the sea)
* Point out that the word astro means ‘stars’ or ‘space’ and ask students if they can think of another word like ‘astro’(astral, asteroid, astronomy)
* Explore the words *lunar* – relating to the moon – and *solar* – relating to the sun – if appropriate.

Pair talking task: Which one am I?

Divide students into pairs. Without naming it, each child in turn describes one of the images of a spacecraft or astronaut on the poster. Their partner must guess which spacecraft/astronaut it is and indicate where it is located. Scaffold the students to produce complex sentences containing two/three items of information about the image, e.g.:

**Child A:** The spacecraft I am looking at is long and slim/slender, has a pointed top and looks like/resembles an arrowing flying through the sky.

**Child B:** I think you are looking at the XXX which is in the picture beside/near/adjacent to/above/below/between/ on the top/bottom/right/left).

Students then switch roles:

**Child B:** The astronaut I am looking at is upside-down, has a red shirt with a picture on it and seems to be floating in the spacecraft.

**Child A:** I think you are looking at the XXX who is XXX.

Lesson 2

Digital poster (Story mode): Recap

Play either the Story mode 1 (starters) or Story mode 2 (flyers) for the students again. Make sure they understand all of the vocabulary.

Digital poster (Question mode)

Go to the Question mode of the poster. Listen to each question and discuss the answers with the students briefly.

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| Q1. | What were rockets first used for? |
| Q2. | Who lives on the International Space Station? |
| Q3. | In 24 hours, how many times does the International Space Station travel round the Earth? |
| Q4. | How do modern rockets help us explore space? |
| Q5. | Why were the Voyager probes sent into space? |
| Q6. | Look at the middle photo in the bottom row. Why do you think Mars is known as the red planet? |
| Q7. | Why does everything float inside a space station? |
| Q8. | Would you like to travel to space? Why or why not? |
| Q9. | Compare the photos of the planets, Saturn and Jupiter. What is similar about the planets and what is different? |
| Q10. | Why do you think humans are so curious about space? |

Over and out

Tell students that when a rocket is launched into space, the astronauts often use a special code to communicate with mission control. Ask them if they know any of the words they use, (e.g. this is XXX calling, do you copy? – can you hear me?; affirmative – yes; negative – no; roger that – I understand); over – when a sentence is finished; over and out – goodbye)

Zoom in on the image of Atlas V. Ask students what they think the astronaut might say to the scientist in mission control as the rocket is launching into the sky. Use some of the code to communicate, e.g.:

**Child A:** (an astronaut in the rocket): Calling Mission Control. do you copy? Over.

**Child B:** (a scientist in Mission Control) Affirmative, over.

**Child A:** We have successfully launched and are now heading into space. Over.

**Child B:** Roger that. What can you see out the window? Over.

**Child A:** I can see the oceans and the land all over the earth. Over.

**Child B:** Copy that. Call me again when you arrive at the space station. Over and out.

Students then switch roles.

Lesson 3

Digital poster (Explore mode): Talk and discussion

Go to the Explore mode with students again. Focus on the image of the International Space Station and ask the following questions.

* What is a space station?
* What is it used for?
* Who lives on a space station?
* How do they get there?
* What do they do there?
* How is living on a space station similar to/different from living on earth?

Play the slides on this PowerPoint presentation from NASA: <https://www.nasa.gov/specials/kidsclub/nowinspace/expedition58/index.html>

* What is the Expedition 58 crew?
* Where are they from?
* How do you know they are astronauts?
* When did they arrive at the International Space Station?
* How did they get there?
* Cosmonaut Oleg is the Commander. What is his role?
* How do you think Astronaut Anne feels about her first trip to space? What is her role on the expedition?
* What is a mission patch? Explain the design on the Expedition 58 patch.

Group talking task (Oral report): Calling Expedition 59

Divide students into groups of three. (Possible roles: co-ordinator/question asker, word wizard, designer/illustrator.) Tell each group the following:

* You are the Expedition 59 crew.
* You must prepare an oral report to present to XXXX (e.g. to the principal/another class/at assembly).
* In your report you will need to include the following information:
	+ A title (what is your report about)
	+ An introduction explaining:
* who you are, your mission on the space station (i.e. why you are there)
* when and how you got there
* a description (e.g. describe a day in the life of an astronaut on the space station)
* how you feel about spending time in space, if you would recommend it to others and why

Scaffold the students to produce a report with as many items of information as appropriate. As an extension activity tell the students to design a mission patch for their crew and then create a badge from the mission patch. Students can wear their badges as they present their oral reports.

Lesson 4

Digital poster (Poem mode): ‘Message from a Mouse, Ascending in a Rocket’

Go to the Poem mode. Play the poem, ‘Message from a Mouse, Ascending in a Rocket’ by Patricia Hubbell:

**Message from a Mouse, Ascending in a Rocket**

By Patricia Hubbell

Attention, architect!

Attention, engineer!

A message from mouse,

Coming clear:

“Suggest installing

Spike or sprocket

Easily turned by

A mouse in a rocket;

An ejection gadget

Simple to handle

To free mouse quickly

From this space-age ramble.

Suggest packing

For the next moon trip

A mouse-sized parachute

Somewhere in the ship,

So I can descend

(when my fear becomes strong)
Back to earth where I was born.

Back to the cheerful world of cheese

And small mice playing,

And my wife waiting.”

Students speak the poem with appropriate intonation and expression. Draw their attention to the run-on lines and explore their impact on the poem. Ask/state the following:

* What word in the poem tells us about going up/down?
* Why does mouse want an ejection gadget?
* Where do you think mouse would prefer to be – in space or on earth? Why?
* Can you tell the story of the poem in your own words?

Tell students to add on lines to the poem for the response to mouse’s message – who is speaking to mouse; what are they going to say to him?

Tell students to design an ‘ejection gadget’ suitable for mouse. Direct them to draw a diagram and present their design to the class.