

SCIENCE NEWS

AT LAST BLAST OFF!

The SpaceX craft blasts into space to link up with the ISS



Getty

THE SpaceX Crew Dragon spacecraft finally launched on Saturday, and has successfully docked with the International Space Station (ISS).

Crowds had gathered in Florida for a second time, following a postponed launch earlier in the week due to bad weather. They were rewarded with a spectacular sight as the craft soared into the sky. The company that created SpaceX, owned by the billionaire businessman Elon Musk, has been sending rockets into space for a number of years, but this was a special and historic flight. The two NASA astronauts aboard, Doug Hurley and Bob Behnken, were the first to go into space from US soil in almost ten years. It was also the first time that a manned spacecraft has been launched by a private company rather than a country or group of countries, who have until now paid for all space travel. NASA, the US space organisation, bought the seats for the astronauts in the same way that we buy seats on aeroplanes – except the cost is thought to be around \$55 million (about £43m) per seat!

On Sunday, the spacecraft successfully docked with the ISS, which orbits the Earth 250 miles above us while travelling at 17,000mph. The astronauts will stay there with other scientists for about three months, carrying out experiments. They will then return in a Crew Dragon capsule that will enter the Earth's atmosphere and parachute into the Atlantic Ocean.



Doug Hurley (far right) and Bob Behnken (second right) with other crew on board the ISS

A FLYING FUTURE

THE world's largest electric plane has made its first flight.

The all-electric eCaravan, which can carry nine people, took off from a Washington airport and managed to stay in the air for 28 minutes.

The plane is more environmentally-friendly and costs less to operate than normal planes. It's hoped it will be in commercial use in 2021.



MagniX

LICENCE TO DRILL

PICTURES of the HS2 tunnel boring machines have been unveiled. They will help create the route for HS2, Britain's next high-speed railway. The giant machines will drill under areas of natural beauty, like the Chiltern Hills. They are as long as five football pitches and will run non-stop for three-and-a-half years.



SCIENCE MUSEUM GROUP

This report is from the Science Museum in London

A LOT has changed since humans first travelled to the moon in an Apollo command module, but the new Crew Dragon spacecraft (right) looks surprisingly similar to those used more than 50 years ago.



© Science Museum Group

Crew Dragon craft and the Apollo command module (inset)

The Crew Dragon designed by SpaceX took off on NASA's Demo-2 mission on 30 May.

Like the famous Apollo capsules, the new spacecraft has a cone-shaped design but is more elongated (stretched). It is also larger and can carry up to seven astronauts, while the Apollo 11 command module only had room for a cosy three. And unlike the Apollo 10 capsule that was brought to the Science Museum shortly after its mission, the Crew Dragon will be reused!

Find out more at blog.sciencemuseum.org.uk/crew-dragon.



GLOSSARY

commercial – Money-making
Chiltern Hills – A range of chalk hills in southeast England running through Oxfordshire, Buckinghamshire, Hertfordshire and Bedfordshire
docked – When a craft joins with another

HS2 – High speed railway
NASA – National Aeronautics and Space Administration
postponed – Re-arranged
tunnel boring – Digging out tunnels
unveiled – Shown in public



SCIENCE NEWS

1. Match the **headline** to the **type of transport** being reported in the news stories. Then identify the **headline technique** the journalist has used.

Rail travel	At last blast off!	Alliteration – where words start with the same sound
Space travel	Licence to drill	Rhyme
Air travel	A flying future	Pun – changing a word in a well-known phrase

● Look at the article **‘Licence to drill’**.

2a. Explain what a tunnel boring machine is.

2b. How does the journalist explain just how big these machines are?

3. If you were interviewing a member of HS2 about the tunnel boring machines, what questions would you like to ask? Write three questions.

● Look at the article **‘A flying future’**.

4. The plane called the eCaravan is powered by electricity. Identify **pros** and **cons** of this plane compared with normal planes.

● Look at the article **‘At last blast off’**.

5. The SpaceX Crew Dragon spacecraft launched on Saturday. Why was this a special and historic flight? Give two reasons.

6. Why did the journalist use the word **‘finally’** in the sentence below?
 ‘The SpaceX Crew Dragon spacecraft **finally** launched on Saturday’.

7a. Fill in the missing numbers about this mission.

_____ astronauts travelled in the spacecraft, they were the first to go into space from US soil in almost _____ years. NASA bought seats for the astronauts at _____ pounds each.
 The spacecraft docked at the International Space Station, which travels at _____ mph orbiting _____ miles above the Earth.
 The astronauts will be carrying out experiments at the International Space Station for approximately _____ months.

7b. Are you surprised at the price of a seat on the spacecraft? Explain your reasons.

8. Explain how the two NASA astronauts, Doug Hurley and Bob Behnken, will return to Earth.

● Look at the article **‘Report from the Science Museum London’**.

9. The article compares the New SpaceX Crew Dragon spacecraft with the Apollo capsules from the 1960s. Identify the **similarities** and **differences** between the new ‘SpaceX Crew Dragon’ and the Apollo capsules.

10a. Which new method of transport would you most like to travel on and why?

HS2 railway (High speed railway) eCaravan (all-electric aeroplane) SpaceX Crew Dragon (Privately owned spacecraft)

10b. These articles are all about new approaches to transport. What do you think the transport of the future will be like?

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Pros	Cons

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Similarities	Differences

10a. Which new method of transport would you most like to travel on and why?

- HS2 railway (High speed railway)
- eCaravan (all-electric aeroplane)
- SpaceX Crew Dragon (Privately owned spacecraft)

10b. These articles are all about new approaches to transport. What do you think the transport of the future will be like?

TEACHER ANSWERS

AIM OF THE NEWS COMPREHENSIONS: News reports are unique non-fiction texts. Being real, they naturally engage students, and with the range of topics that are covered, help to develop pupils' knowledge and understanding of the wider world outside the classroom. The reports are ideal for short, focused comprehension or discussion activities. Along with the opportunity to find fascinating facts and appreciate the opinions of those involved, there is plenty to be inferred and deduced to understand in more depth what is being reported. Like authors, journalists play with language, so news 'stories' are rich nuggets of text to investigate and provide the opportunity for literacy programmes.

TEACHER ANSWER GUIDE: The teacher answers are intended to provide a quick reference guide. Suggestions are given for the 'Expected response' or starting point that pupils could give. The 'Development' then gives more in-depth ideas that students can work towards as they develop their reading comprehension skills.

For a list of the reading skills used, please email schools@firstnews.co.uk.

SCIENCE NEWS

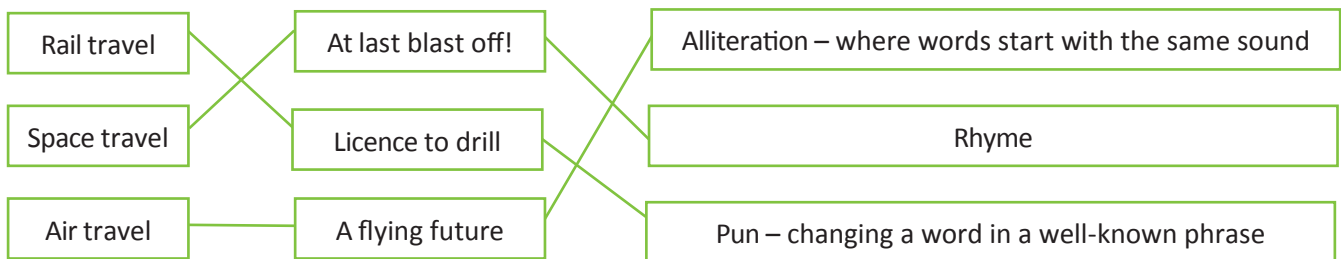
1. Match the headline to the type of transport being reported in the news story. Then identify the headline technique the journalist has used.

READING SKILLS

Find and explain information (NC 2a)

Identifying language choices (NC 2f & 3)

Expected response



● Look at the article 'Licence to drill'.

2a. Explain what a tunnel boring machine is.

READING SKILL

Find and explain information (NC 2a)

Expected response

- A very large machine that drills tunnels.

2b. How does the journalist explain just how big these machines are?

READING SKILL – Recognise effects of language choices (NC 2f & 3)

Expected response

- We are told that the drill is as long as five football pitches.

Development

- The journalist compares the length of the drill with something that the reader is likely to know to help the reader appreciate and visualise just how huge this drill is.

3. If you were interviewing a member of HS2 about the tunnel boring machines, what questions would you like to ask?

Write three questions.

READING SKILLS

Ask questions to help understanding (NC 2b)

Develop personal ideas from reading News stories (NC 6, 7 & 8)

Personal responses, such as:

- When will the drilling start?
- Are the machines noisy?
- Will the drilling affect the environment on the surface?
- How long/big are the tunnels?
- How many machines are there?
- How do the machines work? Are they manual or automatic?
- How are the machines powered?
- How much do the machines cost?

● Look at the article **'A flying future'**.

4. The plane called the eCaravan is powered by electricity. Identify pros and cons of this plane compared with normal planes.

READING SKILL - Infer information and justify with evidence from text (NC 2c & 8)

Expected answer

Pros	Cons
More environmentally friendly	They only have nine passengers
Cheaper to run	They only fly for short journeys/short length of time

● Look at the article **'At last blast off'**.

5. The SpaceX Crew Dragon spacecraft launched on Saturday. Why was this a special and historic flight?

Give two reasons.

READING SKILL – Infer information and justify with evidence from text (NC 2c & 8)

Expected answer

- It is the first time a manned spacecraft has been launched by a private company instead of an organisation run by a country or group of countries, such as NASA.
- It has been almost ten years since a spacecraft was launched from the USA.

6. Why did the journalist use the word 'finally' in the sentence below?

'The SpaceX Crew Dragon spacecraft finally launched on Saturday'

READING SKILL – Understand vocabulary in context (NC2a)

Expected answer

- The journalist uses the word finally because the launch had to be postponed due to bad weather, meaning it didn't go ahead when it was meant to and people had to wait.

7a. Fill in the missing numbers about this mission.

READING SKILL

Find and explain information (NC 2a)

Correct answers

Two astronauts travelled in the **spacecraft**, they were the first to go into space from US soil in almost **ten** years.

NASA bought seats for the astronauts at **43** million pounds each.

The spacecraft docked at the International Space Station which travels at **17,000mph** orbiting **250** miles above the Earth.

The astronauts will be carrying out experiments at the International Space Station for approximately **three** months.

7b. Are you surprised at the price of a seat on the spacecraft? Explain your reasons.

READING SKILLS

Infer information based on own knowledge (non-text based inference) (NC 6, 7 & 8)

Develop personal ideas from reading news stories (NC 6, 7 & 8)

Personal responses, such as:

- Yes! It is a huge amount of money, but obviously it is going to cost a lot to develop the technology involved. There must have been lots of skilled engineers involved in this project.

8. Explain how the two NASA astronauts, Doug Hurley and Bob Behnken, will return to Earth.

READING SKILL

Find and explain information (NC 2a)

Expected response

- They will return in a Crew Dragon capsule

Development

- The capsule will enter the Earth’s atmosphere and then will use a parachute to land in the Atlantic Ocean.

● Look at the article ‘**Report from the Science Museum London**’.

9. The article compares the New SpaceX Crew Dragon spacecraft with the Apollo capsules from the 1960s. Identify the similarities and differences between the new SpaceX Crew Dragon and the Apollo capsules.

READING SKILL - Infer information and justify with evidence from text (NC 2c & 8)

Possible answers include:

Similarities	Differences
They are both cone-shaped	The SpaceX Crew Dragon is more elongated
They look very similar	The SpaceX Crew Dragon is larger
They are both spacecraft	The SpaceX Crew Dragon will be reused instead of going to the museum straight away

10a. Which new method of transport would you most like to travel on and why?

- HS2 railway (High speed railway)
- eCaravan (all-electric aeroplane)
- SpaceX Crew Dragon (Privately owned spacecraft)

READING SKILL - Develop personal ideas from reading News stories (NC 6, 7 & 8)

Personal responses, such as:

- I would like to go on the SpaceX Crew Dragon because it would be amazing to be an astronaut and go into space. This is the most exciting because not many people can say they have been on a spacecraft.

10b. These articles are all about new approaches to transport. What do you think the transport of the future will be like?

READING SKILL – Develop personal ideas from reading News stories (NC 6, 7 & 8)

Personal responses, such as:

- I think in the future ordinary people will be able to go on spacecraft and visit the moon or orbit the Earth as a holiday or activity.
- I think drones and driverless vehicles will play a big part in the transport system in the future.