

SCIENCE NEWS

KILLER COPPER



SCIENTISTS investigating how the new coronavirus survives on different surfaces have found that copper appears to stop it spreading.

It's not entirely surprising, as it was already known that other viruses were killed within minutes by the metal. The coronavirus survived for just four hours, whereas on steel and plastic it was found to last for up to 72 hours.

Other countries are already using it in public places and we are now likely to see copper used much more widely in shops and on public transport.

Professor Bill Keevil of Southampton University says that doorknobs, stair rails and grab rails on trains and buses should all have copper in them, to help in the fight against the coronavirus.



AT LAST BLAST OFF!

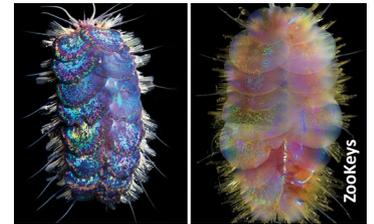
The SpaceX craft blasts into space to link up with the ISS

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.

ELVIS LIVES!



DEEP at the bottom of the Gulf of California, scientists have discovered four new species of scale worms that are glittery!

The four new worms belong to a group nicknamed 'Elvis worms', after famous American singer Elvis Presley, as their shiny scales look like the sequins on some of the singer's suits.

Marine biologist Greg Rouse spotted some of them "wiggling and then fighting and biting each other," adding that nothing like it had ever been seen before in similar worms.

"It's hard to believe that the deep sea is still largely unexplored and teeming with mysterious animals," said study leader Avery Hatch.



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

GLOSSARY

International Space Station (ISS) — A large spacecraft in orbit around the Earth where crews of astronauts and cosmonauts live to help us to learn more about living and working in space. It is also a unique science laboratory. Several nations worked together to build the ISS

Crew Dragon capsule — A human-rated capsule capable of ferrying up to seven astronauts

Elvis Presley — An American singer, dancer and actor regarded as one of the most significant cultural icons of the 20th century. He is often referred to as the "King of Rock and Roll"

marine biologist — A person who studies all aspects of life in the sea and the environment on which it depends

SCIENCE NEWS



Questions on ‘Killer copper’

Part A: Find and explain the facts

A1. Use the words in the boxes to fill the gaps in the sentences.

Scientists investigating how the new _____ survives on different _____ have found that _____ appears to stop it spreading. It’s not entirely surprising, as it was already known that other _____ were killed within _____ by the _____. The coronavirus survived for just _____ hours, whereas on steel and _____ it was found to last for up to _____ hours.

viruses	coronavirus	72	metal	minutes
surfaces	plastic	four	copper	

Part B: Deduce and infer information

B1. How might the findings of this investigation help in the fight against the new coronavirus?

Part C: Analyse the writing and presentation

C1. Suggest an alternative picture to accompany this article and justify your choice in terms of how it will appeal to the reader.

Questions on ‘At last blast off!’

Part A: Find and explain the facts

A1. Identify whether the following statements are true or false. If false then provide the correction.

Statement	True or false?	Correction (if applicable)
The SpaceX Crew Dragon is a spacecraft.		
It launched on Friday and has successfully docked with the International Space Station (ISS).		
The ISS orbits the Earth 250 miles above us while travelling at 17,000mph.		
Crowds gathered in Texas to see the launch.		
The launch was postponed earlier in the week due to a technical fault.		

A2. Who are the following people?

Elon Musk	
Doug Hurley and Bob Behnken	

Part B: Deduce and infer information

B1. Why was this spacecraft launch a “special and historic flight”?

B2. Suggest why NASA was willing to pay \$55 million (£43 million) per seat for their astronauts to fly the SpaceX Crew Dragon.

Part C: Analyse the writing and presentation

C1. Look at the following sentence: “They were rewarded with a spectacular sight as the craft soared into the sky.” Analyse how language is used to make this sentence effective.

Questions on ‘Elvis lives’

Part A: Find and explain the facts

A1. What have scientists discovered deep at the bottom of the Gulf of California?

A2. Who said the following?

They were “wiggling and then fighting and biting each other”.	
“It’s hard to believe that the deep sea is still largely unexplored and teeming with mysterious animals.”	

Part B: Deduce and infer information

B1. Elvis Presley was a singer, so why is he mentioned in this article?

B2. Explain the headline ‘Elvis lives!’

Part C: Discussion task

C1. “Ocean exploration is more exciting and more important than space exploration and should receive as much funding.” Do you agree or disagree with this statement? Justify your view.

SCIENCE NEWS



Questions on 'Killer copper'

Part A: Find and explain the facts

A1. Use the words in the boxes to fill the gaps in the sentences.

Scientists investigating how the new _____ survives on different _____ have found that _____ appears to stop it spreading. It's not entirely surprising, as it was already known that other _____ were killed within _____ by the _____.

The coronavirus survived for just _____ hours, whereas on steel and _____ it was found to last for up to _____ hours.

- viruses
- coronavirus
- 72
- metal
- minutes
- surfaces
- plastic
- four
- copper

Part B: Deduce and infer information

B1. How might the findings of this investigation help in the fight against the new coronavirus?

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Part C: Analyse the writing and presentation

C1. Suggest an alternative picture to accompany this article and justify your choice in terms of how it will appeal to the reader.

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Questions on ‘At last blast off!’

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A1. Identify whether the following statements are true or false. If false then provide the correction.

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The launch was postponed earlier in the week due to a technical fault.		

A2. Who are the following people?

Elon Musk	<p>.....</p> <p>.....</p>
Doug Hurley and Bob Behnken	<p>.....</p> <p>.....</p>

Part B: Deduce and infer information

B1. Why was this spacecraft launch a “special and historic flight”?

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B2. Suggest why NASA was willing to pay \$55 million (£43 million) per seat for their astronauts to fly the SpaceX Crew Dragon.

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Part C: Analyse the writing and presentation

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Questions on ‘Elvis lives’

Part A: Find and explain the facts

A1. What have scientists discovered deep at the bottom of the Gulf of California?

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A2. Who said the following?

<p>They were “wiggling and then fighting and biting each other”.</p>	<p>.....</p> <p>.....</p>
<p>“It’s hard to believe that the deep sea is still largely unexplored and teeming with mysterious animals.”</p>	<p>.....</p> <p>.....</p>

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 guide to the reading skill each question is practising. Suggestions are given for a starting point for responses that students would be expected to give at the start of KS3. Further suggestions then give fuller, more developed responses that students will work towards by the end of KS3, in preparation for the non-fiction elements of GCSE English language.

Questions on 'Killer copper'

Part A

A1. Use the words in the boxes to fill the gaps in the sentences.

READING SKILL — Find and explain information

Possible answer

Starting point — some gaps correctly filled.

Developed response — all gaps correctly filled

Scientists investigating how the new coronavirus survives on different surfaces have found that copper appears to stop it spreading. It's not entirely surprising, as it was already known that other viruses were killed within minutes by the metal. The coronavirus survived for just four hours, whereas on steel and plastic it was found to last for up to 72 hours.

viruses	coronavirus	72	metal	minutes
surfaces	plastic	four	copper	

Part B

B1. How might the findings of this investigation help in the fight against the new coronavirus?

READING SKILL — Infer information and justify with evidence from the text

Possible answer

Starting point

- The discovery that copper appears to stop the new coronavirus from spreading could help in the fight against the virus because copper could be used in high-touch areas. This could help to prevent the coronavirus from surviving for long periods of time and being easily transmitted to those who touch the surfaces.

Development

- For example, Professor Bill Keevil of Southampton University says that doorknobs, stair rails and grab rails on trains and buses should all have copper in them. Indeed, other countries are already using it in public places.

Part C

C1. Suggest an alternative picture to accompany this article and justify your choice in terms of how it will appeal to the reader.

READING SKILL — Identify benefits of text organisation and presentation

Possible answer

- The article could be accompanied by a picture of someone using a door with a copper coated doorknob and push plate.

Development

- Copper has a distinctive hue, so readers would immediately notice that the door looks different. Showing an example of the copper in use in real-life terms brings the information in the article to life. Including a human using the door adds interest to the image because metal in itself is unlikely to be of interest to readers.

Questions on 'At last blast off!'

Part A

A1. Identify whether the following statements are true or false. If false then provide the correction.

READING SKILL — Find and explain information

Possible answer

Starting point-some – information correctly identified as true or false.

Developed response – information correctly identified as true or false and corrections provided where appropriate.

Statement	True or false?	Correction (if applicable)
The SpaceX Crew Dragon is a spacecraft.	True	
It launched on Friday and has successfully docked with the International Space Station (ISS).	False	It launched on Saturday.
The ISS orbits the Earth 250 miles above us while travelling at 17,000mph.	True	
Crowds gathered in Texas to see the launch.	False	They gathered in Florida.
The launch was postponed earlier in the week due to a technical fault.	False	It was postponed due to bad weather.

A2. Who are the following people?

READING SKILL — Find and explain information

Elon Musk	<p>Starting point:</p> <ul style="list-style-type: none"> • He is a billionaire businessman. <p>Development</p> <ul style="list-style-type: none"> • He owns the company that created SpaceX.
Doug Hurley and Bob Behnken	<p>Starting point:</p> <ul style="list-style-type: none"> • They are the NASA astronauts aboard the SpaceX Crew Dragon. <p>Development</p> <ul style="list-style-type: none"> • They were the first to go into space from US soil in almost ten years.

Part B

B1. Why was this spacecraft launch a “special and historic flight”?

READING SKILL — Infer information and justify with evidence from the text

Possible answer

Starting point

- It was a special and historic flight because it was the first time that a manned spacecraft has been launched by a private company.

Development

- This is seen as an important step that could lead to private customers and so-called “space tourism”. As the use of private spacecraft is expected to bring down the cost of manned space flight, this could aid space exploration.
- The flight was also significant because it is the first time that astronauts have gone into space from US soil in almost ten years. The US was the first country to land men on the moon so to see astronauts launch from US soil again would have provided a morale boost.

B2. Suggest why NASA was willing to pay \$55 million (£43 million) per seat for their astronauts to fly the SpaceX Crew Dragon.

READING SKILL — Infer information based on own knowledge

Possible answer

Starting point

- It is likely that NASA was willing to pay \$55 million (£43 million) per seat for their astronauts to fly the SpaceX Crew Dragon because it meant that they would be able to launch from US soil again.

Development (Students will need to do some background research for this answer)

- NASA’s space shuttle fleet was retired in 2011 as it was very expensive to operate and maintain. NASA also wanted to focus their resources on how to launch out of low Earth orbit. However, this meant that NASA had to rely on Russian rockets in recent years and the cost per astronaut for flying with the Russians is more than the seats with SpaceX cost. Therefore, NASA would have been willing to pay SpaceX because they would be saving money and, as it is an American based company, they would be launching from the US too.

Part C

C1. Look at the following sentence: “They were rewarded with a spectacular sight as the craft soared into the sky.”

Analyse how language is used to make this sentence effective.

READING SKILL — Recognise effect of language choices

Possible answer

Starting point

- Positive vocabulary is used to make the launch of the spacecraft seem thrilling.

Development

- The adjective “spectacular” is used to describe the sight of the spacecraft launching. If something is spectacular then it is dramatic and beautiful. This shows how eye-catching and impressive the spacecraft looked.
- The verb “soared” is also used to describe the movement of the spacecraft. This suggests that the spacecraft rose dramatically and also implies that the movement was graceful.
- The idea of the crowd being “rewarded” by the sight of the launch suggests that it was worth waiting for and that those who returned after the first launch was postponed were worthy witnesses. Such use of language supports the assertion that it was “a special and historic flight.”

Questions on ‘Elvis lives’**Part A**

A1. What have scientists discovered deep at the bottom of the Gulf of California?

READING SKILL — Find and explain information

Possible answer

Starting point:

- Scientists have discovered four new species of scale worms that are glittery.

Development

- The four new worms belong to a group nicknamed ‘Elvis worms’, after famous American singer Elvis Presley.

A2. Who said the following?

READING SKILL — Find and explain information

Possible answer

Expected response

- They were “wiggling and then fighting and biting each other”. – Marine biologist Greg Rouse
- “It’s hard to believe that the deep sea is still largely unexplored and teeming with mysterious animals.” – Study leader Avery Hatch.

Part B

B1. Elvis Presley was a singer, so why is he mentioned in this article?

READING SKILL — Infer information and justify with evidence from the text

Possible answer

Starting point

- Elvis Presley is mentioned in this article because the four new worms belong to a group of worms named after him.

Development

- Elvis was very famous for his flamboyant stage outfits and the worms’ shiny scales look like the sequins on some of the singer’s suits.

B2. Explain the headline ‘Elvis lives!’

READING SKILL — Infer information based on own knowledge

Possible answer

Starting point

- The headline ‘Elvis lives’ is a reference to the fact that although the singer Elvis Presley is dead, his name lives on in the group of worms that are named after him.

Development

- Also, Elvis Presley was so famous that when he died his many fans were devastated and this led to lots of conspiracy theories suggesting that he wasn’t really dead. The headline plays on this to grab attention. The name of Elvis Presley is still famous today, so First News readers are likely to have heard of him and to understand the reference even though he died so many years ago.

Part C – discussion task

“Ocean exploration is more exciting and more important than space exploration and should receive as much funding.”

Do you agree or disagree with this statement? Justify your view.

READING SKILL — Develop opinions and provide justifications for view points

Possible answer

Agree	Disagree
<ul style="list-style-type: none"> ● The deep ocean is teeming with exotic life and unknown species. Better knowledge of deep-sea ecosystems might reveal new sources for medicine, food and energy resources. ● Our oceans affect everything. They affect our climate, health and food. Yet 95% of the ocean remains unexplored. Surely, we should know more about something we rely on so much? ● We need to focus on ocean exploration in order to protect the planet we inhabit now. Through ocean exploration we can establish the information we need to better understand environmental change. We might not need to colonise another planet if we protect this one. 	<ul style="list-style-type: none"> ● Research on the ISS has already led to improvements for life on Earth, so it is vital that such space projects continue to get the funding. For example, a solar powered refrigerator designed to support life on the moon will also be very useful in underdeveloped areas on Earth. Plus, the possibility of there being alien life is very exciting. ● Space exploration is much more exciting. People only need to look up into the night sky in order to become interested in the billions of stars and possibilities. Oceans are not as accessible to all as their wonders lie hidden. ● There is no hope of ever establishing human habitation more than about 1,000ft deep in the ocean. The pressures are too great and our known engineering techniques and building materials will not enable us to build spaces we could live in at the bottom of the ocean. Therefore, our funding needs to be used to explore the possibility of colonising another planet.