

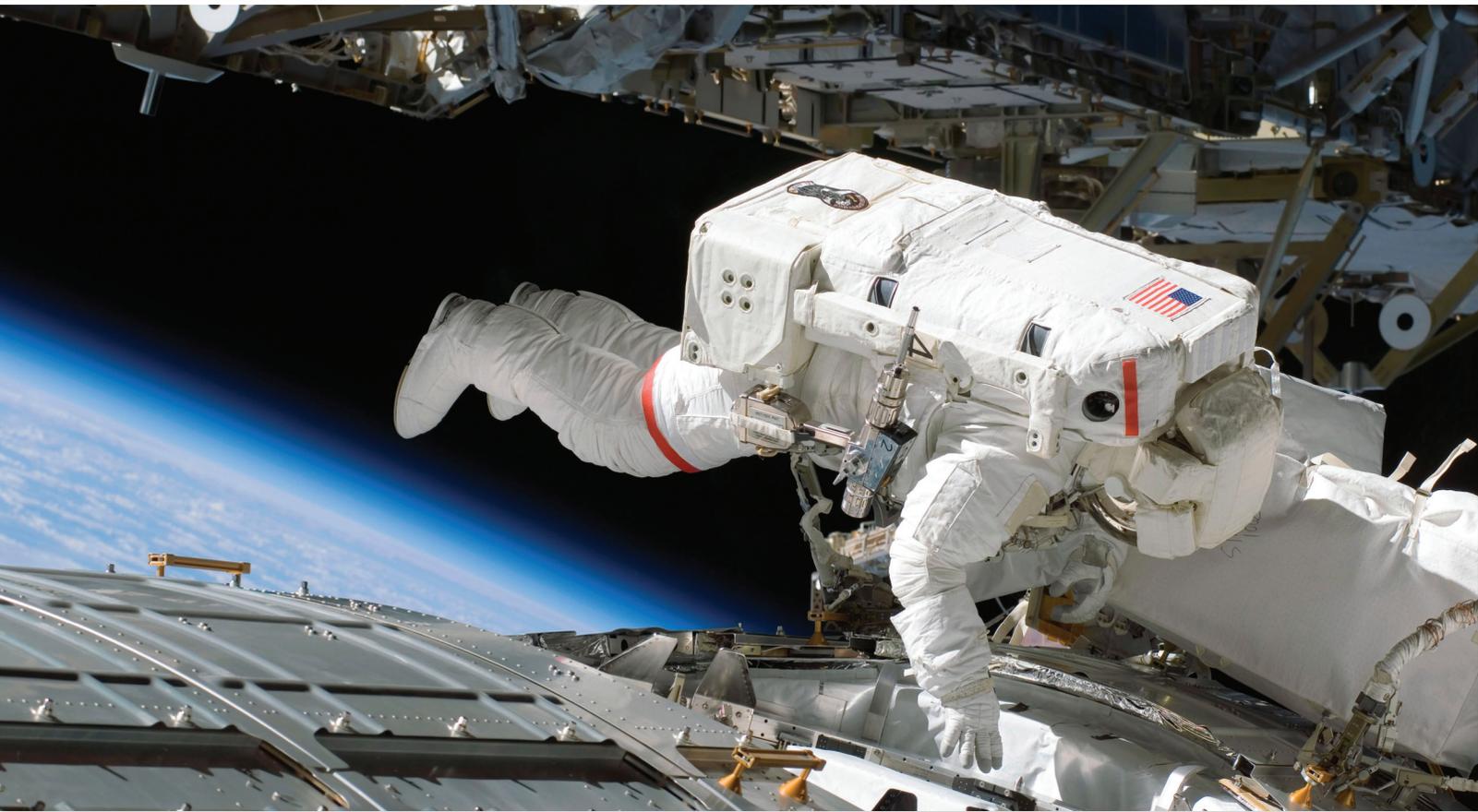
11 SPACE AND BEYOND

OBJECTIVES

FUNCTIONS: sympathizing about past situations

GRAMMAR: speculating (past, present, and future); cause and effect linkers

VOCABULARY: space idioms; adjectives commonly used to describe movies



READING

1 SPEAKING Look at the photo and discuss in pairs.

- 1 Can you describe what's happening in the picture?
- 2 How would you feel if you were the astronaut?
- 3 If you were offered the chance to go into space, would you take it? Why or why not?

2 SPEAKING Discuss in small groups.

- 1 If there is life on other planets, what do you think it is like?
- 2 Would it be a good idea to make contact with extraterrestrial life forms? Explain your reasons.

3 Read the article quickly. Are any of your opinions mentioned in the article?

4  2.26 Read the article again and listen. Mark the statements T (true) or F (false). Then work with a partner and correct the false statements.

- 1 Whether there is life on other planets is a question that divides people.
- 2 Stephen Hawking is completely sure that we are not alone in the universe.
- 3 Hawking believes that the majority of life forms on other planets will be very basic.
- 4 He says that any alien visitors to Earth would clearly have more advanced technology than we do.
- 5 He believes alien visitors might try and make Earth their new home.
- 6 He uses an example from history to illustrate his point.

5 SPEAKING Work in pairs and answer the questions.

- 1 What do you think would most impress aliens visiting our planet?
- 2 What would least impress them?

They might not come in peace . . .

Whether there is life on other planets is one of the great mysteries of our time. Some people are sure that other life forms exist and say they may have already visited us. There are people who believe that aliens must have built things like the pyramids because of the technology involved. A significant number of people claim to have seen strange spaceships in the sky, and some even claim that they have been abducted by aliens. Of course, there are also many people who believe that other life forms can't exist and that Earth is the only inhabited planet in the whole universe.

One man who thinks that other forms of life are almost certain to be "out there" is one of the world's most famous scientists, Stephen Hawking. And he thinks we should be worried, very worried. He believes that aliens are very likely to exist – but instead of trying to find them, we should be doing everything we can to hide from them. He thinks they might not be quite as friendly as we like to imagine.

The universe, Hawking explains, has 100 billion galaxies. Each one of them contains hundreds of millions of stars. In such a big place, Earth can't be the only planet with life on it. Most life forms, he thinks, will be simple, single-celled organisms – the sort of life that has lived on Earth for most of its history. But with so many different life forms out there, some could be intelligent, and some could even be dangerous. And if they are out there, Hawking believes that contact with them might be the end for us.

If aliens have the technology to travel the extensive distances required to reach us, then, in his opinion, they are bound to have the technology to build better weapons than us. They might only see Earth as a place with valuable resources. They may simply come to Earth, take what they want, destroy the rest, and then leave again. He argues, "We only have to look at ourselves to see how intelligent life might develop into something we wouldn't want to meet."

Hawking warns that trying to make contact with other life forms might be "a little too risky." He said, "If aliens ever visit us, I think the result will be like when Christopher Columbus first landed in America, and that didn't turn out very well for the Native Americans."

Hawking is not the only one who believes there is intelligent life in outer space. Lord Rees, another famous scientist, recently asserted that aliens could be so advanced that they might exist in forms that are too complicated for us to understand. So maybe it's time to forget our ideas of little green men who "come in peace," turn off the radio signals we're sending into space, forget about sending rockets outside of our solar system, and hope that we really are alone in the universe.



TRAIN TO THINK

Spotting flawed arguments

There are many different ways that people can try to convince you that something is true without using actual evidence. Here are three common ways:

- A **The ignorance argument:** Not being able to disprove something doesn't mean it's true. It may be true, but you can't say for certain unless there is evidence.
- B **Judging by emotions:** Just because someone has strong emotions or deeply held beliefs doesn't mean that what they say is true. Think carefully about their argument, and don't let their emotions persuade you.
- C **Quoting an authority:** Sometimes experts or their work is quoted and used as evidence that something is true. But these people can make mistakes, too. Or their work could be taken out of context. Be careful – "experts" are often used in advertising to try to sell things to you!

1 Read the quotations and match them with explanations A–C above.

- 1 "I saw this scientist on TV. He says that we should eat more fatty foods."
- 2 "I really dislike politicians and never believe anything they say."
- 3 A "I didn't take your phone."
B "You must have taken it. I didn't see anyone else in the room."

2 **SPEAKING** Work in pairs. For each of the statements below, create three different flawed arguments (A, B, and C) to support it.

- 1 Spiders make good pets.
- 2 Tall people are healthier.
- 3 Money always brings unhappiness.

The man in the pet store says I should buy a tarantula from him because they are really easy to take care of.

Spiders really are the most fascinating creatures on the planet. I love them.

I can't think of any reason why we shouldn't get one.

GRAMMAR

Speculating (past, present, and future)

1 Complete the sentences with the words in the list. Then complete the rule.

must have | bound to | certain to | very likely
might be | can't be | may have already

- They _____ visited us.
- Aliens _____ built things like the pyramids.
- He believes that aliens are _____ to exist.
- Earth _____ the only planet with life on it.
- Other forms of life are almost _____ be "out there."
- Contact with them _____ the end for us.
- They are _____ have the technology to build better weapons than us.

RULE: To speculate we often use the modal verbs *might, may, could, must, and can't*.

- *might, may,* and ¹ _____ refer to possibility
- ² _____ refers to a perceived impossibility
- ³ _____ refers to a perceived certainty

When we refer to past events, the modals are followed by ⁴ _____ + past participle.

When we refer to present or future events, the modals are followed by ⁵ _____.

We can also use *be + bound to / ⁶ _____ to / likely to* to speculate about past, present, and future events.

2 Match the sentence pairs.

- They must have gotten lost.
- They can't have gotten lost.
- Jim's certain to know a good restaurant.
- Jim's bound to be late.
- The forecast says it's likely to rain.
- You must be hungry.
- You can't be hungry.
- a He eats out all the time.
- b He always is.
- c So take an umbrella.
- d You haven't eaten all day.
- e They're more than two hours late.
- f We just had lunch.
- g They've made this trip hundreds of times.

Pronunciation

Sentence stress: modals for speculation

Go to page 121.



3 **SPEAKING** How possible do you think these things are? Discuss with a partner and put them in order of probability.

- humans landing on Mars in the next ten years
- a world free of pollution
- you going abroad on vacation this year

I don't think humans are likely to land on Mars in the next ten years.

Why not? We might invent new spaceships.

Workbook page 100

FUNCTIONS

Sympathizing about past situations

1 Match the sentences and the replies.

- Andy didn't pass his driving test.
- So when I went to check in, I realized I'd left my passport at home.
- The movie had already started by the time they got there.
- a *What a shame.* They must have been disappointed.
- b *Poor thing.* He must have been upset.
- c *How awful.* You must have been so annoyed.

2 Put the conversation in order.

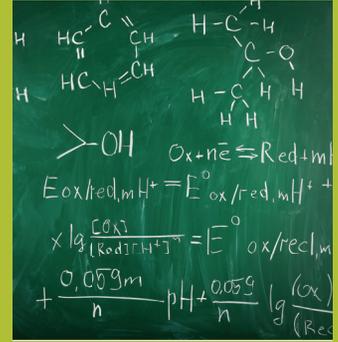
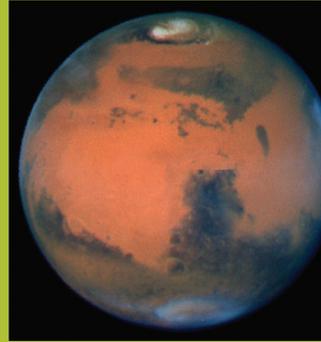
- AMY I wasn't. I didn't even have a book with me.
- 7 AMY You won't believe what happened to me on my way home.
- AMY I didn't get home until midnight. My mom was waiting up for me.
- AMY It was. And to make things worse, my phone was dead.
- AMY She was. And of course, I couldn't call to let her know what was happening.
- AMY I missed my train and had to wait three hours for the next one.
- TOM *Oh no.* You had to wait for three hours? How awful. That *must have* been boring.
- TOM What? You poor thing. You *can't have* been happy about that.
- TOM Oh dear. She *must have* been worried.
- TOM What happened?
- TOM So you must have gotten home really late.

3 Think of an annoying thing that happened to you recently. Make notes about what happened.

4 **SPEAKING** Work in pairs. Tell each other your stories and sympathize.

LISTENING

1 **SPEAKING** Discuss in pairs. What would aliens learn about humans based on these pictures?



2 **2.29** You're going to hear someone talking about the Voyager mission. What was special about the Voyager mission? What did the spaceship take with it?

3 **2.29** Listen again and complete the sentences.

- Voyager I and II were originally sent into space to explore _____ and _____.
- Each of the Voyager spaceships contained _____.
- The idea was that aliens could learn about the _____ from the information.
- The discs contained _____ in 55 different languages.
- As an example of animal life on Earth, sound recordings of wild _____ were sent.
- Most of the music that was chosen was _____.
- Aliens will know how to use the discs because they contain _____.
- We probably won't know what any aliens think of all this for at least _____ years.

THINK SELF-ESTEEM

Who we are

1 **SPEAKING** Work in pairs. You are on a committee to decide what to put on a new disc to be sent up on the next Voyager. Decide on the following things:

- three pieces of music
- three sound clips
- three books
- five images
- one special item

2 **SPEAKING** Compare your ideas with another pair and decide on a final list. Justify your choices.

VOCABULARY

Space idioms

1 Match the sentence pairs.

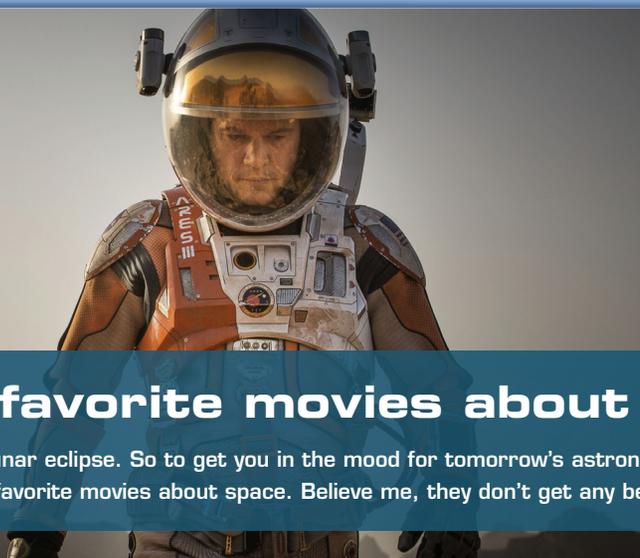
- Jen's been accepted into Cambridge University.
 - You can count on Mike.
 - The special effects in the new *Star Wars* movie are amazing.
 - Anyone can boil an egg.
 - We very rarely go to the movies.
 - He thinks every girl he meets is "Miss Right."
- a They're *out of this world*.
 b *It isn't rocket science*.
 c *Once in a blue moon*, I'd say.
 d He's very *starry-eyed*.
 e She's *on cloud nine*.
 f He's very *down to earth* and reliable.

2 Match the expressions in italics in Exercise 1 with the definitions.

- hardly ever
- not complicated or difficult
- really happy
- incredible
- overly romantic / overly optimistic
- normal (not at all pretentious)

READING

1 Read the blog. Which film does the writer consider the greatest space movie of all time?



My all-time favorite movies about space

It isn't every day you get a full lunar eclipse. So to get you in the mood for tomorrow's astronomical event, I'm suggesting a few of my all-time favorite movies about space. Believe me, they don't get any better than this.

Apollo 13 (1995)

When Tom Hanks announces, "Houston, we have a problem," you know you're in for a *thrilling* ride. This movie is based on the true story of the Apollo 13 mission to the moon, which very nearly ended in disaster. One of the rocket's oxygen tanks explodes, and consequently, the three-man crew has to fight against all odds to bring their spaceship home. Of course, we know they make it, but that doesn't make it any less exciting to watch. It gets a little *sentimental* at the end, but after what they've been through, they deserve a few tears of joy.

WALL-E (2008)

Only Pixar could produce a movie about environmental destruction that manages to be light-hearted and fun. When the movie starts, the Earth is a mess as a result of mankind's greed, and the last humans have escaped in a giant spaceship into outer space. They've left behind an army of robots to clean away the garbage in the hope that one day humans can return. WALL-E is one of these robots, but his daily routine is interrupted by the arrival of EVE, a robot sent to see what progress has been made. WALL-E falls in love, but will EVE return his love, and between them, can they offer hope for the human race? Of course, this *delightful* and entertaining animated film is aimed at kids, but it can be equally enjoyed by adults.

Avatar (2009)

When it comes to *action-packed* blockbusters, James Cameron's movies are masterpieces, and the sci-fi thriller *Avatar* is no exception. Forget little green aliens, Cameron's aliens are blue and super cool. Mankind has invaded the planet Pandora because of its natural resources, and Pandora's native inhabitants are fighting back. It gets a little *far-fetched* at times, but Cameron's Pandora is *brehtaking*, and the eco-message is a reminder to all of us of how important it is that we take care of our own planet.

The Martian (2015)

I've saved the best for last. Matt Damon plays astronaut Mark Watney, who is part of a space mission to explore Mars. Due to an accident during a big storm, he gets injured and separated from the rest of the crew. Deciding that he must be dead, they return home without him. Watney must now somehow survive everything the planet can throw at him and try and find a way of making contact with his base back on Earth. Two things set this film apart from the rest: its *stunning* special effects and Damon's *memorable* performance. Although it's best seen on the big screen in 3-D, even on the small screen this is easily the best space movie of all time.

2 Read the blog again. Which movie ...

- 1 is a love story?
- 2 involves a fight between two races?
- 3 does the writer suggest might make you cry?
- 4 involves a character left on his own?
- 5 does the writer suggest contains an important lesson for us?
- 6 does the writer suggest is for all ages?
- 7 does the writer suggest is best seen at a movie theater?
- 8 is about something that actually happened?

3 **SPEAKING** Work in pairs. Discuss the questions.

- 1 Which of these movies have you seen or would you like to see?
- 2 Which movies do you think are missing from the list?
- 3 Why does the writer refer to these movies as space movies rather than sci-fi movies?
- 4 What do you think is the best sci-fi movie of all time?

GRAMMAR

Cause and effect linkers

1 Complete the sentences with the missing word or phrase. Then look back at the blog to check your answers and complete the rule.

- _____ an accident during a big storm, he gets injured and separated from the rest of the crew.
- The Earth is a mess _____ mankind's greed.
- Mankind has invaded the planet Pandora _____ its natural resources.
- One of the rocket's oxygen tanks explodes, and _____ the three-man crew have to fight against all odds to bring their spaceship home.

RULE: We use linkers such as *due to*, *as a result of*, *because of*, and *consequently* to link actions and their consequences.

Due to, *as a result of*, and ¹_____ can come at the beginning of a sentence or in the middle between the two clauses. They are followed by the reason for an action or event.

These linkers are usually followed by a noun phrase. *Due to* and *as a result of* are more formal than *because of*.

²_____ generally comes at the beginning of a new sentence or clause. It introduces the effect of the cause mentioned in the previous sentence. It is followed by a clause (subject and verb).

2 Complete the second sentence so that it has a similar meaning to the first sentence using the word in parentheses. You must use between two and five words including the word given.

- Paul ate too much. He felt sick. (result)
As a *result of eating* too much, Paul felt sick.
- Olivia didn't get into the college she wanted. Her bad grades were the main reason. (because)
_____, Olivia didn't get into the college she wanted.
- The weather was bad, so the race was canceled. (due)
The race was canceled _____.
- Jack had a bad cold. He didn't go to school. (of)
Jack didn't go to school _____ cold.
- The police got some information and arrested the man. (result)
The man was arrested _____ information given to the police.
- Too many people were on vacation, so the meeting was postponed. (due)
The meeting was postponed _____ so many people being on vacation.

Workbook page 101

VOCABULARY

Adjectives commonly used to describe movies

1 Match the words in italics from the blog with the definitions below.

- | | |
|--|-------|
| 1 really pleasant | _____ |
| 2 really beautiful | _____ |
| 3 really exciting | _____ |
| 4 over-emotional | _____ |
| 5 difficult to believe | _____ |
| 6 really exciting and really beautiful | _____ |
| 7 something you won't forget | _____ |
| 8 full of action | _____ |

2 Choose the correct word to complete each sentence.

- The ending of the movie was really *thrilling / sentimental*. I was on the edge of my seat.
- I was surprised that the ending was so *stunning / sentimental*. It was a horror movie, after all.
- It's a *delightful / far-fetched* film. I loved every minute of it.
- It's full of explosions and fights and car chases. It's a really *action-packed / delightful* movie.
- I know it was a fantasy film, but for me the story was so *far-fetched / memorable* that it just seemed ridiculous.
- The characters were kind of dull, but the costumes were *thrilling / stunning*.
- It's a really *sentimental / memorable* movie. I'm sure I'll be thinking about it for days.
- The opening scenes are *action-packed / breathtaking*. They're absolutely beautiful.

3 Work in pairs. Think of a movie as an example for each of the sentences in Exercise 2.

Workbook page 102

SPEAKING

Work in pairs. Choose one of the categories and think of four movies for it. As you discuss your choices, use the adjectives in Exercise 2 to help you describe the movies and agree on your final list.

The four greatest comedies

The four greatest romantic movies

The four greatest action movies

The four greatest horror movies

Culture

1 Scan the article to find the answers to these questions.

- 1 What countries are engaged in space exploration these days?
- 2 What are some of the everyday problems in space stations?

2 2.30 Read and listen to check.



Real Humans

Life ... in space

For decades space travel was a race between the United States and the former Soviet Union. But these days other nations such as China, Japan, and India have joined in the ^aquest to learn more about the universe beyond Earth. And then, of course, there are private businesses selling space trips for huge ^bprofits to the few people who can afford them and the very few who are eager to ^cembark on such an extreme adventure.

In the media astronauts are ^dportrayed as heroes. That's why in today's *Real Humans* column, we go behind the scenes and beyond the glory to find out what life in a space station is really like.

The sushi disaster

Food in space can be rather boring. That's why astronauts are allowed a ^ebonus container with a few of their favorite dishes. In 2007 astronaut Sunita Williams took along some sushi and a tube of wasabi paste, the famous spicy green paste that is commonly eaten with sushi. Because there's no gravity, when she ^fsqueezed the tube, the paste came out and went everywhere. She managed to clean most of it off the walls, but the smell remained for quite a while. Consequently, wasabi was put on a list of forbidden space foods because it is considered "too dangerous."

The shower that isn't

Hygiene can be a challenge in space. There are no showers, of course, because water won't run down your body like it does in your bathroom. Without gravity, the solution lies in water guns similar to the ones children sometimes play with. With the help of this "toy" and a washcloth, astronauts can shoot water at themselves and get clean.

^gDrifting off

Even astronauts have to sleep. Although sleeping in a gravity-free environment can be quite comfortable, it also poses problems. As Canadian astronaut Julie Payette once told reporters, "We sleep very well in space. Can you imagine? We have a sleeping bag each, and when you get into it, you float in the sleeping bag. The sleeping bag floats in the module. So all you have to do is just attach it somewhere, which is a good idea, by the way, because during the night while you're sleeping, you might start drifting and end up somewhere you didn't intend to be."

Roller coaster space rides

Free-floating in the space station can be quite enjoyable, but the trips to and from the station can be a little rough. The Russian Soyuz spacecraft has a particular ^hreputation for offering rather bumpy rides. NASA astronaut Tracy Caldwell Dyson said, "I've heard it described as a train wreck followed by a car crash followed by falling off your bike." After she flew home from the station on one herself, she reported, "It certainly didn't disappoint!"

3 Answer the questions.

- 1 Who do private businesses sell trips into space to?
- 2 What was the problem with the wasabi that an astronaut tried to eat?
- 3 Why can't astronauts have normal showers?
- 4 What advantages are there to sleeping in a space station?
- 5 How do astronauts sleep in the space station?
- 6 What did astronaut Tracy Caldwell Dyson mean when she said, "It certainly didn't disappoint!"?

4 VOCABULARY Match the **highlighted** words in the article to the definitions.

- 1 to set off on a journey
- 2 the money a business earns minus costs
- 3 the way that people or things are generally perceived
- 4 pressed something hard
- 5 floating or falling asleep
- 6 mission / expedition to find something
- 7 something extra you get at no cost
- 8 the way someone or something is shown to be

SPEAKING

Work in pairs. Discuss the questions.

- 1 Which of the four examples of life in a space station would be the biggest challenge for you? Why?
- 2 Would you like to spend time in a space station if it was possible? Why or why not?
- 3 Can you think of any other aspects of daily life that would be difficult in space?

WRITING

A report

1 Read the report. What problem does it present and what solution does it suggest?

[1] The aim of this report is to discuss a problem recently encountered during the Admiral 9 mission to the International Space Station and make suggestions about what can be done to prevent this from happening in the future.

[2] In September of this year, commander Captain Janice Logan reported a serious incident of computer malfunction in the dining quarters of the International Space Station. On further inspection it appeared that the computer had stopped working due to it being covered in a thick orange liquid. Logan questioned members of her team only to discover that the problem had occurred when engineer Ian Coyne's carrot soup had leaked from its container and found its way to the computing area.

[3] Although the crew was able to run the back-up computer, the incident has raised serious concerns about dining habits. Consequently, while a more detailed report is being prepared, we suggest an immediate ban on all liquid food aboard the space station until safer procedures can be introduced.

2 Match the paragraphs with their main function. There are two extra functions.

- Say who is responsible
- A brief description of what the report is about
- Suggestions for changes
- Talk about the cost of making changes
- An outline of the problem

3 Use the words in parentheses to rewrite the sentences in your notebook. Make sure they have the same meaning.

The computer had stopped working due to it being covered in a thick orange liquid.

- 1 (as a result of)
- 2 (because of)

Although the crew was able to run the back-up computer, the incident has raised serious concerns about dining habits.

- 3 (however)
- 4 (despite)

4 Read through the situation and make notes.

Last Friday there was a school trip to the space museum. The bus was supposed to leave at 9 a.m. but didn't leave until 10 a.m. because five students were late. As a consequence, the group had an hour less to spend at the museum.

Problem: _____

Solution: _____

5 Write a report (140–190 words) about the problem with the school trip. Don't forget to:

- say what the report is about
- outline the problem
- suggest a solution