

UNIT 2 WATCH THIS SPACE ...

The expression *watch this space* is often used to say that there will soon be an exciting change in a situation. Throughout the space age (the period of history from the 1950s to the present) scientists have been keenly observing space and sending messages in the hope of finding intelligent life on other planets. Their work has led to many technological innovations that have changed the way we live.

Unit plan



Unit opener	(p. 20)	20 min.
1 Reading: an online article	(p. 22)	30 min.
• Vocabulary: business and innovation		15 min.
2 Grammar: future passive	(p. 23)	40 min.
3 Listening: understanding native English speakers	(p. 24)	30 min.
• Vocabulary: negative prefixes: <i>un-, im-, in-</i>		15 min.
4 Grammar: conditional conjunctions	(p. 25)	40 min.
5 Pronunciation: contrastive stress	(p. 26)	15 min.
6 Speaking: talking about the possibility of life on other planets	(p. 26)	30 min.
7 Writing: outlining	(p. 27)	30 min.
LifeSkills: evaluating explanations (Study and Learning)	(p. 28)	50 min.
• Optional downloadable <i>LifeSkills</i> lesson (Self and Society)		50 min.
• Optional downloadable <i>LifeSkills</i> lesson (Work and Career)		50 min.
Language wrap-up	(p. 30)	20 min.
Speaking workshop: describing a picture	(p. 31)	30 min.
Video and downloadable video worksheet		45 min.

Unit opener (p. 20)

Lead-in

Ask the students to look at the unit title and the photos and to predict what the unit will be about. Elicit the meaning of the title using the ideas in the panel under the title on this page. Ask the students what they know about major events in the space age and the kind of exploration that humans have done. Direct the students' attention to the points in the unit objectives box and go through the information with them. To get your students to think about the skills being developed in this unit, ask them to look at the questions in the cogs.

Listening: understanding native English speakers

- Elicit answers to the questions. Ask volunteers to share experiences in which they had difficulty understanding an English speaker and explain why. Have the class agree on three countries or regions where English is more difficult to understand and three countries or regions where English is easier to understand.

Writing: outlining

- Ask for volunteers to answer the questions. Lead a brief class discussion on different ways to organise ideas for writing (*lists, graphic organisers, outlines, etc.*).

LifeSkills: evaluating explanations

- Refer the students to the *LifeSkills* panel. Ask how they make choices about who and what to believe and what qualities make a source of information credible.

Common European Framework: unit map



Unit 2	Competence developed	CEF Reference (C1 competences)
Reading	can understand an online article	Table 1; Table 2; Sections 4.4.2.2; 4.4.2.4; 4.4.3.4; 4.5.2.2
Grammar	can use and understand the future passive	Table 1; Table 2; Sections 5.2.1.2; 6.4.7.7; 6.4.7.8
Listening	can understand native English speakers	Table 1; Table 2; Sections 4.4.2.1; 4.4.3.1; 4.4.3.5; 4.5.2.2; 5.2.2.5
Grammar	can use and understand conditional conjunctions	Table 1; Table 2; Sections 5.2.1.2; 6.4.7.7; 6.4.7.8
Pronunciation	can use contrastive stress	Section 5.2.1.4
Speaking	can talk about the possibility of life on other planets	Table 1; Table 2; Sections 4.4.1.1; 4.4.3.1; 4.4.3.5; 4.5.2.1; 5.2.1.1; 5.2.1.2; 5.2.3.2
Writing	can write an outline	Table 1; Table 2; Sections 4.4.1.2; 4.4.1.3; 4.5.2.1; 5.2.1.6

A

- Write some high numbers in digits on the board, including hundreds, thousands, hundreds of thousands, millions, hundreds of millions and billions. Elicit how to say them correctly. Find examples from the internet or other sources to help the students picture how large these numbers are. (*A million miles is 40 trips around the Earth, etc.*)
- Direct the students' attention to the instructions. Read the eight statements about the universe to the class. Divide the board into columns with headings for various large place values – thousands to billions. Take two or three examples from the statements about the universe (except for items 5 and 8) and have the students estimate the place-value column in which the answer belongs.
- Ask the students to individually guess the numbers to complete the eight statements. When they finish, have them check their answers on p. 30. Then have the students compare answers in pairs to see whose guesses were closest.
- Write the correct answers from the answer key on the board, and check them with the whole class. Model saying the numbers and ask the students to listen and repeat. Then point to the numbers on the board in random order and ask a different student to say each number. Write similar numbers on the board and have the students practise saying them.
- Write the date 1969 on the board and have the students practise saying it. Next, write 1,969 and have them practise saying it. Then quickly point to the two numbers and have the students practise saying them. Repeat with 1949/1,948 and 2017/2,017.

Culture note

Here are some important dates in the story of space exploration:

- 1957** The USSR launches the first satellite, called *Sputnik*, into space in October and soon after, the first satellite with a living creature – a dog – in it.
- 1963** Yuri Gagarin of the USSR becomes the first person in space, with a 108-minute flight that orbited the Earth.
- 1967** The US *Apollo 11* spacecraft lands on the moon and crew members walk on the moon.
- 1973** The USSR space probe *Mars 2* orbits around Mars and maps it.
- 1986** Construction begins on the USSR's *MIR* space station, which was the first consistently inhabited space station.
- 2000** The first permanent crew moves into the International Space Station, where crews from various nations continue to live and do research.
- 2013** The US space probe *Voyager 1* exits the solar system after thirty-six years of travelling, becoming the first human-made object to reach interstellar space.

B

- Ask the students to read the two statements. By a show of hands, divide the class into two sides: those who agree with the first statement and those who agree with the second statement. Lead a class debate, encouraging volunteers on each side to say why they agree with the statement they chose and why they disagree with the opposite statement. List all the ideas on the board.

- Briefly evaluate the key points of each side's explanation. Invite volunteers to summarise their personal explanation in one sentence.

Alternative

Have each side choose one or two leaders to speak for the entire team. Then conduct a formal debate, in which the leader of each side speaks for their side and against the other side's arguments.

Culture note

Sci-fi is short for science fiction, as is the abbreviation *SF*. In English, it is common to shorten or abbreviate popular names and titles, such as *PM* for Prime Minister and *prof* for university professor.

Reading: an online article (p. 22)

Lead-in

Write the words *science fiction* on the board. Ask the students what images come to their minds when they read these words. Ask them to name examples of famous science fiction books, films and TV shows from the past (*Star Trek*, *The Twilight Zone*, *Planet of the Apes*, *Star Wars*, *Inception*, *Jurassic Park*, *E.T.*, *Back to the Future*, *The Matrix*, *Planet of the Apes*, *The Day the Earth Stood Still*, etc). Elicit examples of things the students found interesting in these futuristic visions of life. Ask if they think they will someday come true.

A

- Ask the students to imagine life without mobile phones and computers. Elicit what students think the main advantages and disadvantages would be. Discuss the ideas as a class.
- Direct the students' attention to the article and the first photo. Ask if any of them have seen *Star Trek*. Explain that it was a popular television series that was later made into a series of films. If you can, play a short clip from it (search YouTube). Elicit conversation about other science fiction TV shows or films the students may know. Ask for examples of futuristic gadgets/tools from these programmes.
- Direct the students' attention to the title of the article. Ask the students to speculate how *Star Trek* might have inspired mobile phones. Write two or three of their answers on the board.
- Have the students read the question. Then give them time to read the article with the question in mind.
- When the students finish reading, put them in pairs to create a short answer (one or two sentences) to the question.
- Elicit answers from several pairs. Write some of their answers on the board. Ask the students which answers they think are the best, and why.

Answer

The connection between space, science fiction and mobile phones is that the inventor of the mobile phone was inspired by a device used in the science-fiction TV series *Star Trek*, which was set in space.

Extra: vocabulary

Make three columns on the board, with the headings *space*, *science fiction* and *mobile phones*. Ask the students to write the headings on a piece of paper, scan the article for key words that belong under each heading and write them in the table. Then have the students call out answers and write them on the board.

B

- Make sure the students understand the difference between a noun (person, place, or thing) and a verb (an action or *being* word).
- Direct the students' attention to the vocabulary exercise. Elicit/explain that *n* stands for *noun* and *v* stands for *verb*. Model how to change a verb to its base form (the infinitive without *to*). Write examples on the board (*inspired* → *inspire*, etc).
- Ask the students to complete the exercise individually. Have them scan the article for the underlined words and match them to their definitions.
- Put the students in pairs to compare answers and discuss differences.
- Check answers with the class. Make sure the students have used the base form of the verb when necessary.

Answers

1 inspire 2 public relations 3 lobby 4 prototype 5 giant
6 gain a lead 7 infrastructure 8 press conference 9 rival
10 launch

Culture note

Star Trek was a popular US television series about a future ship that explores space. It was shown originally in the 1960s, and was followed by a series of television sequels – *The Next Generation*, *Deep Space Nine*, *Voyager* and *Enterprise* – as well as 12 films and many books, comic books and games.

Alternative

Have the students cover the article in Ex. A and work in pairs. Ask them to read the definitions in Ex. B and predict the words. When they finish, have them check the underlined words in the article and compare the actual answers with their predictions.

Extra: vocabulary

Read the following definitions to the students one at a time, with the paragraph number. Ask the students to read the article silently and raise their hands when they find a word or phrase with the same meaning. Invite one of the students to say the word.

- 1 to move ahead of someone or something – paragraph 1 (leapfrog)
- 2 easy to carry – paragraph 1 (portable)
- 3 reporters – paragraph 2 (journalists)
- 4 demonstrate to be true – paragraph 2 (prove)
- 5 stared in amazement – paragraph 3 (gaped)
- 6 produced in order to be sold on the market – paragraph 4 (commercial)
- 7 gave a sign of something to come in the future – paragraph 5 (foreshadowed)

C

- Ask the students to read the questions. Allow them time to make notes for their discussion.
- Put the students in small groups to discuss the questions. Circulate and help as needed.
- Have the groups share their answers with the class.

Extra: speaking

Have each group choose one future prototype from their answer to item 3. Instruct them to imagine they are going to launch this product and design an advertisement for it. Then have the groups take turns presenting their product. Have the class vote on the best presentation.

▶ Workbook p. 10, Section 1

Grammar: future passive (p. 23)

Lead-in

Ask the students to look at the picture and tell you what it is (*a robot soldier from the science fiction film Avatar*). Elicit what the purpose of this robot might be (*to fight wars to protect society*). Ask the students if they think this might someday come true on Earth.

A

- Direct the students' attention to the text and ask them what they think it will be about.
- Ask the students to read the three possibilities for the main idea. Then have them read the text and decide which sentence best describes the main idea. Take a class vote on the best choice (c).
- Ask the students to find examples in the text that support answer (c) as the main idea (*force fields for British tanks, combat robots for the USA*).
- Ask the students to explain why answers (a) and (b) are not the main idea (*(a) is contradicted by examples in the text, (b) could be true, but it is opposite to what the text describes*).

NOTICE!

- Direct the students' attention to the **Notice!** box.
- Have them underline all the examples of the passive in the text, and underline all the modal verbs twice. Ask them which of the passive phrases refer to future possibilities.
- Check answers with the class.

Answers

1 and 2

have been created

Could ... be invented

will be activated

will be spent

may be developed

3

Could some of those things actually be invented and may be developed refer to future possibilities.

Will be activated and will be spent are more definite predictions.

B

Form

- Direct the students' attention to the rule and have them choose the correct option (a), using the text in Ex. A for help. Ask them to name the past participle in the future passive examples in the text (*invented, activated, spent, developed*).
- Ask the students to find an example of the passive with *by* in the text. Make sure they understand that *by* is used when we want to identify the person/thing doing the action.
- Direct the students' attention to the **What's right?** box and ask them to tick the correct sentence (2). Ask a volunteer to say what is wrong in the incorrect sentence (*there is no be, and the verb use is in the base form, not the past participle form*).

C

- Have the students work individually to rewrite the sentences using the future passive. Circulate and give help as needed.
- Put the students in pairs. Have them discuss each pair of sentences and decide which form works best – the active, the passive, or both forms equally well – and why.
- When the pairs finish, discuss the answers with the class.

Possible answers

- 1 Personal spaceships will be invented in the next century. (Passive is better because *they* is vague and doesn't add anything to the meaning.)
- 2 A lot could be learnt from future science-fiction films. (Active and passive are equally appropriate, as the speaker might want to include the word *we* as a way to suggest that everyone could learn from the films.)
- 3 Astronauts won't/will not be sent to Mars in my lifetime. (Passive is better here, as *they* isn't a specific subject and so isn't necessary.)
- 4 Astronauts might be trained (by NASA) at a lunar base. (Active might be better here, as the information about who will train the astronauts is important/interesting.)
- 5 Do you think other planets will ever be colonised? (Passive is better here because it isn't necessary to say that people would colonise other planets; that is understood.)

D

- Put the students in groups and have them brainstorm a list of things they think will happen in space within the next 50 years. Encourage the students to use *will* for definite predictions and *might, could* or *may* for possibilities that are less likely to happen. Direct their attention to the example sentence and its use of future passive.
- Circulate and help as needed.
- To conclude, have the groups share their ideas with the class.

▶ Workbook pp. 10–11, Section 2



Listening: understanding native English speakers (p. 24)

Lead-in

Ask the students to read the information in the skills panel. Ask them to name the different kinds of English accents they are familiar with (*American, Canadian, British, Indian, Australian, etc.*). Explain that the difference in English accents often revolves around pronunciation of specific sounds and syllable stress. Write the word *car* on the board. Pronounce it the American way (/kɑːr/) and the British way /kɑː(r)/. Next, write the word *magazine* on the board and pronounce it first in the American way with the stress on the first syllable (/ˈmæɡə,zɪn/) and then in the British way with the stress on the last syllable (/ˌmæɡəˈziːn/). Ask the students for other examples of pronunciation differences they have encountered. Point out that Spanish is pronounced differently in Spain, Mexico, Colombia and Argentina, etc.

A 1.06

- See p. 122 for the **audioscript**.
- Have the students read the instructions. Discuss what a book launch is (*an event to celebrate the publication of a new book, at which the author gives information about it to the public*).
- Explain that the students are going to listen to statements from six people at the book launch and that they will hear three different accents. Ask the students to listen and see if they can match the two people to the same accent.

- Play the audio once and ask the students just to listen. Play the audio again and have the students mark the answers.
- Check answers with the class. Ask the students which match was the easiest and which was the most difficult. Ask them to explain why.

Answers

Speaker 1 – Speaker 5
Speaker 2 – Speaker 4
Speaker 3 – Speaker 6

B

- Direct the students' attention to the three maps. Ask the students to explain the connection to Ex. A (*All the speakers come from these three countries.*).
- Explain that you are going to play the audio again. This time, the students should try to match each speaker to one of the countries – the US, Australia or India.
- Play the audio. Check answers with the class.
- Ask the students to identify any specific words, phrases or pronunciation that helped them identify a speaker's country.
- Ask students which of the six speakers was easiest to understand and why, and which was most difficult to understand and why.

Answers

1 India – Speakers 3 and 6
2 USA – Speakers 1 and 5
3 Australia – Speakers 2 and 4

C 1.07

- See p. 122 for the **audioscript**.
- Explain that the students are now going to listen to a Question and Answer, or Q & A, session after the book launch. This time the students should listen for each speaker's opinion about space exploration and the main reason for their opinion. Remind the students to list only one reason per speaker.
- Play the audio. Encourage the students to take notes as they listen.
- Play the audio again and have the students review their answers.
- Check answers with the whole class.
- Ask the students to identify specific words that gave clues to the speaker's opinion.
- Ask the students which speaker was easiest to understand and why, and which was most difficult to understand and why.

Answers

Speaker 1: Against: We should spend money on solving problems on Earth.
Speaker 2: For: We need natural resources from other planets.
Speaker 3: For: The space programme creates jobs.
Speaker 4: Against: We should concentrate on caring for our own planet.
Speaker 5: For: The space programme gives us useful inventions.
Speaker 6: Against: We should spend money on improving life for people on Earth.

D

- Explain that the speakers in Ex. C used several words starting with *un-*, *im-* and *in-*. These are prefixes, and they change the meaning of the root word. Elicit from the students that these three prefixes make words negative (*impossible* = *not possible*). Instruct them to choose the correct prefix to attach to each of the words in the box, and to write the new word in the appropriate column. Suggest that students use dictionaries for help if they need to.
- Check answers with the class.
- **Highlight** that *in-* changes to *im-* before words beginning with *p*. Point out that *im-* is also used before adjectives beginning with *m* (*immoral*, *immature*, etc). *In-* can also change to *ir-* in words such as *irresponsible* and *irregular*, and to *il-* in *illegal* and *illogical*. Tell the students that the prefix *un-*, in contrast, never changes in form.
- Put the students in pairs. Have them work together to add other examples of words beginning with *un-*, *im-* and *in-* to the table.
- Ask the pairs to share one new word from each column with the class. Make sure they have used the proper prefix for each adjective.

Answers

im: immeasurable, impatient, imperfect, impractical, improbable
in: inaccurate, incapable, insignificant
un: unacceptable, unavailable, unaware, unbelievable, uncertain

E

- Explain to the students they will work in groups to discuss whether space exploration should continue. Give the students time to organise their arguments and make notes. Encourage them to use as many *un-*, *in-* and *im-* words as they can.
- Put the students in small groups. Circulate and help as needed.
- To conclude, ask the groups share their decisions with the class and justify them.

▶ Workbook p. 11, Section 3

▶ Workbook p. 12, Section 4

Grammar: conditional conjunctions (p. 25)

Lead-in

Write the following on the board: *rain*, *umbrella*. Ask the students how they might form a sentence using these two words to describe a situation in which they are not sure that it is going to rain. Elicit/provide responses such as *If it rains, I will carry an umbrella*, or *In case it rains, I will carry an umbrella*. Explain that words such as *if* and *in case* are conditional conjunctions. Ask students to define a conditional conjunction (*a conjunction that describes a condition – something that may or may not happen*).

A

- Direct the students' attention to the blog entry and the question. Ask the students to read the blog with the question in mind.
- Elicit answers to the question. Ask the students to note where in the blog entry the answer is found (*in the first sentence*). Explain that in English writing, the main idea of a paragraph is often expressed in the opening sentence.

Answer

The writer believes that there might be intelligent life on other planets, but we have to be careful because it might be dangerous to us.

NOTICE!

- Direct the students' attention to the **Notice!** box. Have the students read the three sentences and choose the one with a different meaning.
- Elicit the answer to the question (b). Ask the students how sentence (b) differs from sentences (a) and (c). Point out that *unless* and *if ... not* are two different ways to express the same meaning. The meaning is that if the action in the *unless* or *if ... not* clause is not done (we protect ourselves), the situation – often an unfavourable one – described in the other clause may occur (we might be putting the human race in danger).

B

Function

- Ask the students to read the blog entry again and complete the exercise on their own.
- Check answers with the class.

Answers

a 4 b 2, 5 c 3 d 1, 6

Form

- Elicit the correct option (a) to complete the rule. Ask the students to provide examples from the blog entry.
- Ask the students if they can think of other examples. Write their suggestions on the board.
- Direct the students' attention to the **What's right?** box and ask them to tick the correct sentences (2 and 3). Ask the students why the first sentence is incorrect. Elicit/explain that it doesn't make sense because *if we don't* does not mean the same as *unless we don't*, and we don't use the negative form of the verb with *unless*.

C

- Have the students complete the exercise individually. Remind them that they can only use words or phrases from the answers in Ex. B.
- Check answers with the class.

Answers

1 unless 2 (just) in case 3 provided that, as long as
4 (just) in case 5 since 6 provided that / as long as

D

- Direct the students' attention to the instructions and the prompts. Make sure they understand that they can use these expressions to help them formulate their ideas about space programmes in the future. Elicit some examples.
- Put the students in small groups to discuss their ideas, using the prompts to help them.
- Circulate and help as needed. Emphasise that there are no right or wrong answers.
- To conclude, ask the groups to share ideas with the class.

Extra: grammar practice

Write the following sentences on the board. Tell the students to rewrite the sentences using the correct conditional conjunction. Check answers with the class.

- 1 I won't believe in the existence of aliens (*unless, in case*) I see them with my own eyes.
- 2 We should continue to send signals into space (*just in case, provided that*) there are creatures that can receive and understand them.
- 3 (*Since, Unless*) I don't believe in life on other planets, I think space exploration is a waste of money.
- 4 (*In case, As long as*) there is life on other planets, I think it is important to explore space.
- 5 (*Provided that, In case*) governments continue to pay for space programmes, we will continue to learn more and more about the universe.
- 6 The International Space Station will continue (*as long as, just in case*) nations cooperate and provide money for the programme.

Answers

1 unless 2 just in case 3 Since 4 In case 5 Provided that 6 as long as

▶ Workbook pp. 12–13, Section 5



Pronunciation: contrastive stress (p. 26)

Lead-in

Write the following sentence on the board: *I am going to the shop*. Read the sentence three times. Each time you read it, stress a different word: *I*, *am*, *shop*. After each reading, ask the class how stressing the chosen word changes the meaning of the sentence. Elicit that stressing *I* emphasises who is going, stressing *am* confirms your intent and stressing *shop* emphasises where you are going. Explain that in English, it is important to pay attention not only to the words that are said, but also the way they are said.

A 1.08

- See the Student's Book page for the **audiocscript**.
- Direct the students' attention to the sentences and ask them to underline one word in each sentence so that the meaning is the same as the phrases in italics.

- Play the audio once or twice and check the answers. Answer any questions students may have about the differences in meaning between the different readings of the sentence.

Answers

- 1 I think there may be life on other planets in our galaxy.
- 2 I think there may be life on other planets in our galaxy.
- 3 I think there may be life on other planets in our galaxy.
- 4 I think there may be life on other planets in our galaxy.
- 5 I think there may be life on other planets in our galaxy.

B

- Put the students in pairs and have them take turns reading the sentences according to the directions. Ask them to pay attention to the stressed words. Circulate and help as needed.
- Model that placing stress when talking can be subtle; a word or phrase does not have to be shouted.

Speaking: talking about the possibility of life on other planets (p. 26)

Lead-in

Direct the students' attention to the blog entry and its title. Write the letters *UFO* on the board and ask the students if they know what the letters stand for. Elicit the answer *Unidentified Flying Object*. By a show of hands, ask how many students believe that UFOs exist. Lead a brief class discussion or debate about the existence of UFOs. Invite the students to share any stories they know about UFOs.

A

- Ask the students to read the blog entry silently and make notes according to the instructions. Circulate and help as needed.
- Ask volunteers to offer the three reasons and to cite the sentences in the text that support their response.
- Work with the class to form a sentence that summarises the author's belief. (*The writer thinks there is no life on other planets because our technology has not detected it, there is no solid proof that UFOs exist, and we know of no other planet like Earth that is capable of supporting life, etc.*)

Answers

- 1 If there were other intelligent life, our technology would have detected it.
- 2 There is no real proof that aliens or UFOs exist.
- 3 We haven't found other planets capable of supporting life.

B 1.09

- See p. 122 for the **audioscript**.
- Explain that the students are going to listen to a speaker with an opposing opinion to the one in the blog entry. Ask them to take notes according to the instructions.

- Check answers with the class and form a sentence summarising the speaker's belief, as in Ex. A.

Answers

- 1 With the large number of planets and other bodies in the universe, it is probable that at least one other would have life on it.
- 2 There is evidence that some other planets have some of the same conditions as Earth.
- 3 There are so many reports of UFOs that at least some must be true.

C

- Direct the students' attention to the instructions. Give them time to organise their thoughts and make notes if they wish.
- Ask for volunteers to share their opinions in one or two sentences. (*I agree with Dr Fisher because his arguments are more convincing than the blog writer's. I think that this argument is a strong one: there are so many planets and so it seems probable that some could have conditions that support life, etc.*)

D

- Put the students in pairs. Ask them to read and follow the instructions.
- Remind them that when taking notes they should write key words and not complete sentences. They should also use abbreviations, such as UFO, rather than full names.
- When the pairs finish, give each student one minute to report to the class what their partner believes. Encourage the students to summarise their partner's opinion in one sentence.

Writing: outlining (p. 27)

Lead-in

Ask the students to read the information in the skills panel. Explain that an outline is like a road map for a journey. Before we begin a trip, we outline our route on the map. Following the route keeps us from getting lost or wandering off course. Explain that the trip might look easy on the map, but when we're on the road things happen that might throw us off course: road works, missing a motorway exit, etc. When this happens, we need to look at the map again to keep us on track.

A

- Explain that the students are going to read an essay question and then two different outlines for an essay that answers the question. As they read, they should decide which outline is better.
- Direct the students' attention to the box and remind them to keep these questions in mind as they read.
- When they finish reading, discuss with the whole class which outline is better and why.

Answer

Outline 1 is better. It is clearly organised so that each point relates to the topic of the section.

Problems with outline 2:

Introduction: The history of the space programme isn't related to the general topic about whether countries should have space programmes. It's better to have a general statement that there are pros and cons, as in outline 1, if the essay is going to contain both pros and cons.

Paragraph 2: The first point is simply a statement of how much money is spent on the US space programme every year. It is not an argument against the space programme.

Paragraph 3: The first point is an argument against, not for, space programmes. The third point is just an opinion, not an argument for the programmes.

Conclusion: This seems to be just a statement of the writer's opinion rather than a strong conclusion that shows *why* the writer is in favour of space programmes.

Culture note

The United States, Russia, the European Union, China, Canada and India currently have programmes to send humans into space. In addition, the United States, Russia, Canada, Japan and the European Union all participate in the International Space Station. The United States spends about \$17 billion a year on NASA (National Aeronautics and Space Administration), which manages its space programme. This is about one-half of one percent of the US national budget.

B

- Put the students in pairs. Explain that they are going to work together to create an outline for the essay question in Ex. B.
- Encourage the students to make a list before they compose their outline. Suggest that they divide a paper into two columns with the headings *probable* and *improbable*, and then list supporting arguments under each heading. Remind them that clear thinking = clear writing.
- Circulate and help as needed.

C

- Put each pair of students together with another pair. Direct their attention to the instructions.
- Have the pairs revise their outlines, incorporating suggestions from the other student pair.
- Post the outlines in the classroom, or pass them around so that all students can read them. Have the students vote on which outline they think is best. Elicit volunteers to explain why.
- To conclude, have a class discussion in which students explain why they think intelligent life on other planets is probable or improbable. List their reasons on the board.

Extra: homework

Ask the students to write an answer to either (a) the essay question in Ex. A using the first outline, or (b) the essay question in Ex. B using the outline they prepared. In the next lesson, have the students share their ideas with their partner from Ex. B and see how their ideas compare.

▶ Workbook p. 13, Section 6

LifeSkills: evaluating explanations (p. 28)

Step 1: Understand the difference between correlation and causation. (Ex. A, Ex. B)

Step 2: Read facts presented by the media and advertisers carefully to see if they are implying that one thing causes another. (Ex. C, Ex. D)

Step 3: Evaluate explanations of the facts to decide whether claims of causation are accurate or inaccurate. (Ex. D, Ex. E)

Lead-in

Read the target skill aloud and invite the students to tell you what they think *evaluating explanations* means. Explain that in this lesson they will learn how to evaluate explanations in the media and advertising. Then **highlight** the three-step strategy to develop the skill of evaluating explanations. Ask the students why it is important to evaluate the information they receive. Encourage the students to share examples of misleading or untrue explanations (especially in advertisements) they have encountered.

A

- Direct the students' attention to the magazine article and give them time to read it silently. Ask them to pay attention to the words *correlation* and *causation*.
- Ask the students to close their books. Choose volunteers to explain the difference between *correlation* and *causation* in their own words.
- Ask the students for other examples of correlation and causation they can think of. Make two columns on the board, marked *correlation* and *causation*. Write their examples under the appropriate heading.

Possible answer

Correlation is when things happen together. Causation is when things happen together because one thing causes another.

Extra: group practice

Ask the students to write one example of causation and one example of correlation on separate strips of paper. Put the students into groups of four. Have the members of each group mix their papers together. Ask a student to pick a paper, read the example, and tell whether it shows causation or correlation. Encourage group members to discuss whether this answer is correct. When all agree, have the groups repeat this with another student and example.

B

- Explain that the students are going to consider three claims and some possible explanations for those claims. Ask them to decide whether or not they find each explanation convincing.
- Direct the students' attention to the **How to say it** box, and encourage them to use these expressions as they discuss the explanations.
- Ask the students to read the instructions, and then the first claim and its explanation. Ask if they find this explanation convincing and why or why not. Ask them to consider whether there is causation or just correlation.
- Encourage the students to voice their opinions. Ask for other possible explanations for this claim.
- Repeat this procedure for the second and third claims and explanations. Take a class vote on the most convincing explanation.

Answers

Claim 1: People who play basketball are often taller than average because taller people have an advantage in playing the game. They can jump higher, and so it is easier for them to make more baskets and score more points.

Claim 2: Children with bigger hands write better because they are usually older, and so their language (and fine motor) skills are more developed.

Claim 3: Watching violent films does not necessarily mean the films make watchers violent. Millions of people have seen violent films, but very few people commit violent crimes.

C

- Explain that the students are going to read an online article and decide whether they agree or disagree with the writer, and why.
- Give the students time to read the article silently.
- Ask volunteers to explain in one sentence why they agree or disagree with the writer. (*I disagree with the writer because I find his argument unconvincing; I agree with the writer because his arguments make perfect sense, etc.*)

D

- Put the students in pairs and direct their attention to the instructions.
- Encourage them again to use expressions from the **How to say it** box on the previous page. Tell them to come up with at least one other possible explanation for each key fact, even if they find the writer's explanations convincing.
- Circulate and help as needed.

Possible answers

Key fact 1: We haven't heard anything.

Explanations: There's nothing to hear because there's no one out there.

Alternative explanations: We might have been looking and listening in the wrong places; there might be intelligent civilisations which are not sending signals into space; we might not be looking for the right kind of signal.

Key fact 2: We haven't yet found a planet capable of sustaining life.

Explanations: They don't exist; the Earth is unique.

Alternative explanations: We don't have strong enough equipment to detect similar planets; we might not be looking for them in the right places; intelligent life might be able to develop on planets very different from Earth.

E

- Explain to the students that they are going to share their ideas with the class.
- Allow each pair of students to explain how convincing they found the explanations in the article and to present their alternative explanations.
- As a class, decide which pair has the most convincing explanation(s), and why.

F

- Direct the students' attention to the questions. Lead a class discussion about the skill of evaluating explanations learnt in this lesson and how it can be useful to them in the domain of **Study and Learning**.
- Make a list of reasons for item 2 on the board, with the headings *believe* and *disbelieve*.
- Point out that if you believe there is causation, it is important to consider as many explanations as possible, and not just accept the first (or only) reason given.

REFLECT

- Ask the students to read the **Reflect** question.
- Give them time to think about different situations in the domains of **Work and Career** and **Self and Society** where the skill of *evaluating explanations* would be useful.
- Elicit the following responses: choosing the best proposal or determining the cause of a problem at work; reading an opinion article; deciding which candidate or issue to vote for, etc.

RESEARCH

- Explain the task and make sure the students understand what they have to do.
- Discuss possible ideas to replace the X in the examples with the class. Then have the class think of other possible *cause* statements for each category and say them. List them on the board.
- Ask the students to choose a topic that interests them and write it in the form of a statement similar to the ones in the bullet points (e.g. *lack of exercise causes heart disease*). Ask them to find articles on the topic to check if there is really causation.

- Give the students a deadline to do research on the topic and come to a conclusion on the issue of causation vs correlation. Have the students present their findings/ conclusions to the class.
- Ask the class to give their reactions to the presentations and express their ideas about whether one thing is caused by the other.

Language wrap-up (p. 30)

For notes on how to approach the exercises in the Language wrap-up section, please refer to page 9.

1 Vocabulary

- Ask the students to read through the text before they fill in the gaps with the words from the box. You could suggest that they do the ones they are sure about first.

Extra: vocabulary practice

Divide the class into two to four teams. Call out a word that can be made negative by adding *in-*, *im-* or *un-*. You can use words from this unit, and/or search online or in dictionaries for more. The first team to respond with the correct prefix earns a point. After a few words, change the game: call out a prefix, and the first team to respond with an appropriate word that could take that prefix wins a point.

2 Grammar

- Ask the students to circle the correct option in the pair of choices in each sentence.
- Encourage them to read each sentence aloud to themselves, once with each option. If they are unsure, tell them to choose the option that sounds the best to them.

Speaking workshop: describing a picture (p. 31)

Lead-in

Explain to the students that, in this workshop, they are going to practise describing a picture using an outline.

A 1.10

- See p. 123 for the **audioscript**.
- Tell the students that they will listen to a speaker describing a picture of a space colony. Ask the students to explain what a space colony is (*a place where people would live somewhere in space in the future*). Ask the students to describe space colonies that they have seen depicted in films or on science programmes.
- Explain that they will listen to the audio several times. The first time, they should number the main points in the order they hear them, from 1–5.
- Read the list of main points to the class, and make sure they understand all the vocabulary (i.e. *round, oval*). Elicit other shape adjectives (*circular, square, rectangular, triangular, etc*) and draw the shapes on the board.
- Play the audio once, but do not check answers with the class.

Answers

- 4 Details about the types of buildings
- 2 The shape of the colony (round, oval, etc)
- 5 The speaker's opinions of life in a space colony
- 1 Information printed on the picture
- 3 Details about transport

B

- Direct the students' attention to the sentences and the phrases in the box.
- Explain that they will listen to the audio again and fill in the gap in each sentence with a phrase from the box.
- Play the audio again.
- Put the students in pairs to compare their answers to both Ex. A and Ex. B, discussing any differences.
- Play the audio one more time, and then check answers with the class.

Answers

- 1 says that
- 2 shape of
- 3 look like
- 4 similar to
- 5 type of
- 6 appears to be
- 7 as long as

C

- Direct the students' attention to the illustration of a space colony. Tell them this is what an artist thinks such a colony might look like in the future.
- Explain that they will prepare a short talk describing the colony in the illustration. The first step is to make an outline. Point out that we make outlines for talks as well as for written texts. Ask the students to explain why making an outline is important for any kind of writing or presentation. Refer them to the skills panel on page 27.
- Direct the students' attention to the outline in the box. Instruct the students to follow the format listed in the box for their talk.
- Remind them that an outline should contain notes, not complete sentences.
- Give them time to work on their outlines individually. Circulate and help as needed.

D

- Put the students in pairs for their speaking task.
- Ask them to use their outlines to talk to their partner about the illustration.
- Explain that they will have only one-and-a-half minutes for their talk, and their goal is to include all the points in their outline in that time. Have their partners time the speech.
- When the students finish, allow time for their partners to give them feedback. Ask if they included all the points in their outline. If not, have them analyse why.
- If there is enough time, have each partner practise speaking again.

How are you doing?

- Ask the students to read the statements and tick the ones they believe are true.
- Ask them to discuss their talk with their partner and identify things they could improve next time.