Feeling Good?

‘Science brings people together, working toward a common cause – fighting disease.’

Pardis Sabeti

In This Unit

Theme  This unit explores factors that affect our physical and emotional health.

Content Objectives
Students will
• identify factors that affect physical and emotional health.
• describe how different factors influence their own physical and emotional health.

Language Objectives
Students will
• talk about things that affect emotional and physical health.
• ask after friends and talk about how they feel.
• use adverbs to talk about how and how often they do something.
• use make + adjective to talk about what affects their mood and feelings.
• write a classification essay about the negative effects of stress.

Target Vocabulary

pages 26–27  antibiotics, bacteria, cell, digest, disease, immune system, infection, invade, protect, sore, symptom, treat, vaccination, virus
page 28  emotion, illness, positive, survive
page 31  brain, comfortable, researcher, rest, select, theory
page 32  adolescent, experience, process, structure

Vocabulary Strategies  Suffix -ness;
Use a dictionary: Sample sentences

Speaking Strategies  Asking after friends and saying how you feel

Grammar
Grammar 1  Use adverbs to say how and how often you do something
Grammar 2  Say what affects mood and feelings using make + adjective

Reading  The Teenage Brain
Reading Strategy  Summarise

Video  Scene 2.1: The Forgotten Organ;
Scene 2.2: Meet Pardis Sabeti

Writing  Classification essay

National Geographic Mission  Take Care of Yourself

Project
• Healthy-living brochure
• Sleep research
• Quiz show

Pronunciation  Pronunciation of -s endings

Pacing Guides  2.2.1, 2.2.2, 2.2.3

Introduce the Unit

• Activate prior knowledge  Display the two toothbrushes or pictures. Ask Can anyone tell me what these are? (toothbrush, electric toothbrush) What do we use them for? (cleaning our teeth) Why is it important to clean our teeth? (to keep them strong and healthy) Say Someone had the idea to invent a toothbrush. We use inventions like these every day to help us keep healthy and feel good.

• To start  Tell students to open their books at pages 24–25. Point out the unit title Feeling Good? Ask What’s in the photo? (two girls on bikes)

• Ask questions such as these to encourage further discussion:
Do you think the girls in the photo are having a good time? What makes you think so? (yes; they’re laughing)
Do you think the girls enjoy riding bikes? Does it make them feel good? (yes; they’re smiling and happy)

• Ask a student to read aloud Question 1. Ask Does the expression on a person’s face help you understand how a person feels?
1. Look at the girls in the photo. How do you think they feel? Why do you think they feel this way?

2. How has science helped to improve people’s health over the last 100 years? Give examples.

3. Work in small groups to think of three ways in which science affects your daily life. Share your ideas with the class.

• Next, ask a student to read aloud the quote by Pardis Sabeti on page 24. Explain that working towards a common cause means to join with others to reach a goal. Ask What is the goal that Pardis Sabeti refers to? (fighting disease) Say Disease makes people sick. Fighting disease is helping people get better or helping them stay healthy.

• Ask a student to read aloud Question 2. Ask What are inventions or discoveries in areas of science like medicine, technology and food? (X-rays, MRIs, CT scans, hearing aids, new medicines and more nutritious foods)

• For Question 3, put students into groups of three or four. Ask How do you decide what to eat each day? Does your family use technology to cook? What do you do when you feel ill? How is science related to the things you do? Invite groups to share their ideas with the class.

Extend
• Hand out Worksheet 2.2.1. Put students into pairs. Explain that they will write about and discuss the role science plays in people’s health.

Objectives
Students will
• discuss how the people shown in a photo feel.
• discuss ways science has improved people’s health.
• discuss how science affects their daily lives.

Resources
Worksheet 2.2.1 (Teacher’s Resource CD-ROM/Website); CPT: Unit Opener

Materials
an ordinary toothbrush and an electric toothbrush, or pictures of each
How are you feeling today? Have you got a sore throat? Are you coughing? Sneezing? These are all very common symptoms that signal your body is fighting a disease. Your immune system works to protect you from diseases, but when it is weakened, you feel ill. The illness that you feel could be caused by one of two things: bacteria or viruses.

Bacteria are organisms with just one cell. They can survive outside the body, but we also have trillions of bacteria living in our bodies. In fact, there are more bacteria than human cells in our bodies. But don't worry: 99 per cent of these bacteria are good for us. They allow us to feel positive emotions, protect us from disease and help us digest food. Your mouth alone contains more bacteria than there are people on Earth! Unfortunately, there are also bad bacteria that cause illnesses. We can treat these bacterial infections with antibiotics.

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Warm Up

• Activate prior knowledge  Display the bottle of hand sanitiser. Say This is hand sanitiser. You can use it to clean your hands if you don’t have soap and water. Ask Has anyone ever used something like this? Where have you used it? Students may describe using it in a public toilet or a doctor's office or hospital. Say Using hand sanitiser helps get rid of germs, just like washing your hands helps get rid of germs. Some kinds of germs can cause you to become ill.

Present

• Tell students to open their books at pages 26–27. Ask a student to read aloud the Activity 1 question at the top of page 26. Say We know that some kinds of germs can cause you to become ill. Now let’s talk about things that happen to your body when you feel ill.

• List the following parts of the body on the board: head, eyes, nose, throat, ears, stomach, whole body. Then write the following sentence frame on the board: When I feel ill, my ______ is/are _______

• Use the list on the board to ask students about different parts of their bodies when they feel ill. For example, ask When you feel ill, what happens to your (throat)? Tell students to use the sentence frame to answer. (When I feel ill, my throat is painful.)

• Play Track 015 and tell students to listen and read. Discuss the reading with students. Ask questions such as the following:
Viruses are smaller than bacteria. They cannot exist without a host – an animal or plant to live in. That person next to you who’s sneezing? She’s the host of a virus, so watch out! With each sneeze, she sends you over 100,000 virus cells, travelling at a speed of over 160 kph. (100 mph.) Once those cells invade your body, you become the host. The virus then changes in order to make more viruses in your body. If you get a virus, you can’t treat it with antibiotics. You simply need to wait until your body gets rid of it. Of course, you can protect yourself from viruses such as the flu by getting vaccinations, or even just by washing your hands. Over 80 per cent of viruses are spread by touching an infected person or thing, so make sure you take care of yourself and stay healthy!

The flu virus

Vocabulary

About the Photo

E. coli, an abbreviation for Escherichia coli, is a group of many strains of bacteria. Most are harmless and are found naturally in the environment and in the intestinal tracts of humans and other animals. Some strains of E. coli, however, can cause diarrhoea and illnesses such as urinary tract infections, respiratory illness and pneumonia.

The flu virus causes seasonal influenza epidemics each year. Influenza is a respiratory illness that is contagious. Scientists believe that the flu virus can be spread to another person up to six feet away.

Teaching Tip

Monitor students on a regular basis to determine their level of proficiency with each set of vocabulary words and grammar structures. Students may learn certain topics quickly but need additional help with other topics. Students who have been successful in the past may require intervention in the future.

What two types of things could cause illness?
(bacteria and viruses)

How are most bacteria good for us?
(They help us feel positive emotions, protect us from disease and allow us to digest food.)

What are vaccinations used for?
(to protect people from viruses such as the flu)

2 LEARN NEW WORDS Listen and repeat. 

Say each word in a true or false statement. Your classmates will decide whether the statement is true or false. If the statement is false, the person who disagrees with it will restate it to make it true. If the statement is true, the person will agree with you and restate the true statement.

Model an example for students. Say Antibiotics can be used to treat viruses such as the flu. True or false? (false) Ask a student to restate the example to make it a true statement. (Antibiotics can be used to treat infections caused by bacteria.)
Pardis Sabeti is a doctor and a researcher. In her recent research on the antibiotic that causes Lassa Fever, she wanted to find out why some people get the illness and others don’t. Pardis didn’t just do research in her lab. She travelled to hospitals in Africa to learn more about diseases. There, she helped train medical workers to treat people. She hopes that one day her research will help scientists to make a symptom available that can protect people against Lassa Fever.

**LEARN NEW WORDS**

Listen to these words and match them to the definitions. Then listen and repeat.

<table>
<thead>
<tr>
<th>emotion</th>
<th>illness</th>
<th>positive</th>
<th>survive</th>
</tr>
</thead>
<tbody>
<tr>
<td>emotion</td>
<td>illness</td>
<td>positive</td>
<td>survive</td>
</tr>
</tbody>
</table>

1. state of being ill
2. confident and happy
3. continue to live
4. feeling

**YOU DECIDE**

Choose an activity. Work in pairs.

1. Make a list of three health problems in your country. Then write the causes of these problems.
2. Pardis is hardworking and creative. Do you have either of these traits? If so, what do you use them for?
3. If you could find the cure for one disease, which disease would it be and why? Discuss. Then share your responses with the class.

**Practise**

- Put students into pairs. Say *Think about what you’ve read about how you can protect yourself from disease. Now read the Activity 3 question on page 27*. Ask pairs to complete the activity. Say *Try to use some of your new words in the examples you give*. Students’ examples may include washing their hands, eating a healthy diet, getting exercise, getting enough sleep and getting vaccinations to help boost their immune systems.

- Tell students to turn to page 28. Say *Circle the correct word in the sentences in the paragraph*. Before students begin, explain that Lassa Fever causes people to become ill by harming important parts of the body, including the parts that carry blood throughout the body. Explain that most people with Lassa Fever get better, but some people die from it. Tell students that Lassa Fever is commonly found in the western part of Africa.

- Then ask students to complete Activity 4 independently. Invite a student to read aloud the paragraph with the correct words.
Formative Assessment

Can students
• use new vocabulary related to how bacteria and viruses affect people?

Ask How can bacterial infections be treated?
• use new vocabulary to discuss the causes of illness and ways to stay healthy?

Ask What are two ways you can protect yourself from viruses?

Workbook For additional practice, assign Workbook pages 12–13.

Online Workbook Vocabulary

VOCABULARY PRACTICE
Warm Up

**Activate prior knowledge** Say Suppose that you meet someone you know when you’re walking down the street. Ask What do you say to greet the person? (Elicit: Hi. How are you? or Hello. How are you?) Say We often ask the question ‘How are you?’ in English as a greeting. Ask How do people usually reply? (Elicit: I’m fine. How are you? or Fine, thanks. And you?) Say Today we’re going to learn about questions you can ask and responses you can use when you want to find out how a friend is feeling.

Present

**Say** We’re going to learn about ways to ask after friends and ways to say how they feel. Tell students to open their books at page 29. Say We’ll listen to speakers asking questions to ask after a friend. We’ll also hear speakers reply in several different ways to say how they feel.

**Play Track 019.** Ask How does each speaker ask and say how the other is feeling? List question-and-answer language on the board.

**Play Track 019 again** and tell students to read along in their books. Then put students into pairs to take turns asking after their partner and saying how they feel. Supply additional prompts such as the following:

Do you feel better?
Not really. I feel ________.
Is everything OK?
Actually, I’m feeling pretty ________

**Say** Now listen as two friends talk. Listen for the words and phrases that one friend uses to ask how the other friend is feeling. Listen to how the other friend says she feels. Make notes about the words and phrases you hear. Play Track 020. Invite students to share the words and phrases they wrote.
Practise

2. Once students seem comfortable using the speaking strategy to ask after a friend and to say how they feel, direct them to Activity 2. Ask students to complete Activity 2 independently.

Ask students to read their completed dialogues aloud, taking turns as Yuto and Aiko. After several pairs have read their dialogues, ask Did you hear different ways to ask after a friend and for someone to say how she feels? What phrases did you say or hear?

Apply

3. Put students into pairs. Ask partners to use the game board in Activity 3. Say The game is called Noughts and Crosses. You get three in a row to win. Use the speech bubbles to model with a student how to play the game. Point to the square with ‘wrong’. Say I’ll ask after a friend by asking ‘Is anything wrong?’ Then I’ll mark an X on ‘wrong’. Your partner will point to ‘tired’ and say Actually, I’m feeling pretty tired. I’ll mark an O on ‘tired’. Ask pairs to play the game. If no one gets three Xs or Os in a row, pairs play again.

Connect. Say Think of times you talked to a friend about your emotions. Ask Does talking to someone make you feel better? Can it change the way you feel? When you ask how a friend is feeling, does it show that you care? Can it change how your friend feels?

4. Put students into groups of three or four. Ask them to read Activity 4. Say Answer the questions. Explain that people can feel things physically in their bodies and emotionally in their minds.

After groups have completed the activity, invite them to share their answers with the class. (Sample responses: Sharing feelings lets people know they are not alone or shows them a situation from a different point of view; ‘I’m sorry. I don’t want to talk about it.’)

Extend

Put students into pairs. List the following situations on the board: You are getting the flu. You had the flu and are getting better. You are upset that you didn’t do well on a quiz. You are excited that a favourite relative is coming to visit. Say For each situation, take turns asking how your partner feels and responding to say how you feel.

If time allows, hand out Worksheet 2.2.3. Explain that students will use the worksheet to ask after a friend and say how they feel.

Consolidate

Write the following words on cards: depressed, excited, hungry, nervous, relaxed. Ask pairs to act out scenarios to ask after a friend and say how they feel. Partners use a question from the speaking strategy box and the word on their card. Say Use your word in a role play. For example, your partner asks ‘Is anything wrong?’ You reply ‘Actually, I feel pretty nervous’.

Formative Assessment

Can students
• ask after friends?
  Ask What question can you ask if you want to know how your friend is feeling?
• say how they feel?
  Ask If you are not feeling well, how do you reply to a friend who asks how you are feeling?

Online Workbook
Speaking Strategy

SPEAKING STRATEGY
Many teenagers often like to sleep. They're always tired. Many people rarely get enough sleep. They can get ill more easily.

If you sleep regularly, you're usually able to pay more attention at school.

If you're like a lot of teens, you like sleeping. And that's a good thing! But many people sleep badly, and this has harmful effects on the body and mind. While you sleep, your body well produces cells that work to fight infections. If you don't sleep enough, fewer cells are produced and your immune system doesn't work as effectively. As a result, you can become ill more rarely.

Lack of sleep also affects your mind. You're more likely to feel angry or depressed, so you react negatively to almost everything. A lack of sleep makes it difficult to pay attention rarely. Making good decisions, solving problems and remembering things poorly seems much harder when you don't get a good night's sleep. Lack of sleep also makes you react to things more slowly. In fact, tired drivers may be responsible for around 20 per cent of all traffic accidents. Sleeping at least seven hours a night is important for your health, your marks and even your safety!

Work in pairs. You learnt that sleep is important. Talk about the benefits of sleeping well. Use words from the box in your discussion.

A good night's sleep helps me think clearly.

Always calmly clearly effectively often regularly usually

Warm Up
• Build background Say Sometimes we talk about how often we do something. Suppose you have football practice on Mondays. You say that you have practice one day a week or once a week. Suppose that you have practice on Mondays and Thursdays. What do you say to say how often you have football practice? (Elicit: two days a week, twice a week) Say Suppose you help at the community centre on the first weekend of the month. Ask What do you say to say how often you help there? (Elicit: one weekend a month, once a month)

• Invite students to name an activity they do and say how often they do it. For example, say (Reiko), name an activity that you do. Tell us how often you do the activity. (Sample response: I take piano lessons on Tuesday. I take piano lessons once a week.)

Present
• Tell students to open their books at pages 30–31. Point out the grammar box at the top of page 30. Say The box shows sentences with adverbs. Adverbs are words you use to say how you do something or how often you do something.
Learn new words Read and listen to information about the connection between sleep and intelligence. Then listen and repeat.

Read in pairs. Talk about your own sleep habits. Do you sleep well? What affects your sleep? Why? Use the words in the box to help you.

- bad, badly
- comfortable
- select
- stress
- well

Read in groups. Design a bedroom that would result in really good sleep. Draw your design. Explain why the room is good for getting enough sleep. Use adverbs to talk about how the room helps people sleep. Present your information to the class.

Researchers that study sleep and the brain have a theory: getting enough rest is strongly connected with intelligence. Just as humans prefer to sleep in comfortable beds, highly intelligent animals like these chimpanzees select the strongest trees for a good night’s sleep.

Grammar in Depth
Adverbs of manner describe how, or the manner in which, something happens. They usually appear in a sentence after the verb:

I wake up very quickly.

Adverbs of frequency appear before the verb:

I sometimes/always/never/usually/often go there.

Some can also appear after the verb:

I go there sometimes/often.

The adverbs of frequency always and never only appear before the verb. (The sentence ‘I go there always/never’ is grammatically incorrect.)

In perfect and continuous verb tenses, an adverb appears between the auxiliary and the main verb:

He’s always complaining. I have never seen him study.

For an adverb of frequency with a negative meaning, such as never, do not use the word not to negate the verb. (The sentence ‘I don’t never arrive late’ is grammatically incorrect.) Double negation is the rule in some other languages, but it is not used in English.

Our World in Context
- Teenagers need ten hours of sleep compared to eight hours for adults. This is probably because their growing brains are mapping neural connections during sleep.
- Workers on the night shift are known to experience more depression and cardiovascular problems than day workers. The brain has difficulty adapting to sleeping during the day and staying awake at night.
- Blind people who can’t see any light at all may suffer from insomnia because of the lack of light cues to tell their brains when to feel sleepy.
- Before the invention of electricity and the widespread use of electric lights, people tended to sleep for longer periods of time.

Related Words
- blanket, pillow
• Read aloud the last sentence in the grammar box. Say The words regularly and usually tell us how many times something happens. Regularly means ‘happening over and over again in the same way’. The word usually means ‘most of the time’.

**Practise 1 2**

• Direct students’ attention to Activity 1. Say Read the text. Decide which adverb makes the most sense in the sentences. Circle the correct adverb.

• After students have completed the activity, ask a student to read aloud the paragraphs with his or her circled choices. Discuss any incorrect responses students may have and why they are incorrect. You may want to point out that most adverbs in English have the ending -ly.

• Put students into pairs. Ask a student to read aloud the words in the box. Say All the words in the box are adverbs. If students are unclear about the meaning of any of the words, provide definitions.

• Say Talk to your partner about the ways that sleep is important. Use what you learnt about sleep in Activity 1. Use what you know from your own experience, too. Talk about the reasons why it’s important to sleep well. Make sure you use the words in the box as you talk to your partner.

• Ask a student to read aloud the sentence in the speech bubble to model using an adverb in an observation about the importance of sleep. You may want to point out to students a few general rules about using adverbs in sentences: always and never come before the verb; sometimes, usually and often can come before or after the verb; most other adverbs come after the verb.

• After students have completed the activity, invite pairs to share some statements with the class.

**Apply 3 4 5**

• Direct students’ attention to Activity 3. Say You’ve read about some of the reasons that sleep is important. Now you’re going to learn new words to talk about how sleep is connected to learning. Play Track 022. Tell students to look at their books as they listen.

• Point out the six bold words in Activity 3. Say You heard some new words. Let’s listen to these words in sentences. Play Track 023. Ask students to repeat each word alone and in a sentence.

• Put students into pairs. Say Talk to your partner about how you sleep. Use the words from the box in your discussion. Say how you sleep most nights. Say whether anything stops you from falling asleep. Say whether anything wakes you up during the night. Review the meanings of the words in the box. Then ask partners to talk about their sleep habits. Invite pairs to share some of their discussions with the class.

• Put students into groups of three or four. Tell them to read Activity 5. Say Think about things that affect the way you sleep. Think about what you and your partner talked about in Activity 4. Ask What helps people sleep well? What stops people from sleeping well? Do things that people are thinking about affect how they sleep? Do lights and sounds affect how they sleep?

• Say Work with your group to draw a bedroom design. The design should include things that help people sleep well. You’ll present your designs to the class. In your presentation, use adverbs to say how your bedroom design helps people sleep. You may want to provide a separate list of adverbs or tell students to use the adverbs from Activities 1 and 2. Consider asking groups to assign one student to make a list of ideas, another student to draw the design and a third student to outline the presentation. After students have completed their designs, invite them to make their presentations to the class.
Formative Assessment

Can students
• identify adverbs of manner and frequency?

Ask students to identify the adverbs in these sentences:

- The immune system works more effectively when you get lots of sleep.
- A person who is tired often finds it hard to pay attention.

• use adverbs to talk about sleeping habits?

Ask students to use often, sometimes, rarely, never or always to say one thing about their sleeping habits.

• use words associated with scientific findings about sleep?

Ask students to use researcher, theory or brain to say what scientists learnt about chimpanzees’ sleeping habits.

Workbook For additional practice, assign Workbook pages 14–15.

Online Workbook Grammar 1
Before You Read Discuss in pairs. Based on the title and the image, what do you think this reading is about?

Learn New Words Find these words in the reading. What do you think they mean? Use a dictionary to check. Pay attention to how each word is used in a sentence in the dictionary. Then listen and repeat.

- adolescent  
- experience  
- process  
- structure

3  
While You Read Summarise each paragraph.

Warm Up  
- Activate prior knowledge  Display the road map. Ask Have you ever seen a map like this? (yes) What do the lines on the map stand for? (roads) What do you use a map for? (to work out how to get from one place to another)
- Point to the location of a city on the map. Say To get to this city, you can take different roads. Point to several different roads on the map that lead to the city’s location. Say All these roads connect to the city. There is more than one way to get to the city. Ask What are some reasons you choose one road instead of another? (to get there faster, to stop at another place along the way, to avoid paying tolls, to look at the scenery along the way)
- Say You’re going to read about the brain. It’s useful to know about maps to understand how parts of the brain work.

Before You Read  
- Tell students to open their books at pages 32–33. Put students into pairs. Say Look at Activity 1. With your partner, look at
Shaping your future

1. Being a teenager can be challenging, but it can also be exciting. You’re becoming more independent and making decisions for yourself. You are also learning to take risks and solve problems better than you could before. And changes are happening throughout your body, even in your brain.

2. You can’t see the changes in your brain, but they’re affecting how you develop into an adult. At this time in your life, there is a process going on inside your brain that makes it work faster and more efficiently. Imagine that the structure of your brain is like a big road map. There are lots of roads leading to different destinations. When you were a child, as you learnt new things, your brain created more and more roads leading to different destinations. By the time you become an adolescent, the most important places on the map have many different roads leading to them. Now your brain’s job is to make that map more efficient. It removes the roads that you don’t need and works to make the other roads faster.

3. As a result, your experiences as a teenager actually affect the way that your brain develops. If you spend hours playing video games, what skills do you use? You learn to see something with your eyes and respond to it with your hands. As you develop those skills, your brain is making sure that the roads leading to them are especially fast and efficient. So, your video-game playing could be preparing you for a career such as a fighter pilot, or even a surgeon.

4. This is a great time for you to practise new skills and discover what you’re good at and what you love doing. Go out and try different activities, and stick with them if you think they’re useful. Remember that with everything you do, you’re shaping your brain for the future.

Reading Strategy

Summarise When you summarise a text, you talk about the most important ideas in it. A summary does not include all the information and details in a text. It only includes the important information. In a non-fiction text, each paragraph has a main idea. Identify the main idea in each paragraph to summarise the paragraph. You can then use the summaries of each paragraph to create a summary of the entire text. Summarising each paragraph as you read helps you better understand what you’re reading. Summarising also helps you connect the main idea in each paragraph to the main idea of the entire text.

Vocabulary Strategy

Use a dictionary A dictionary is an important tool for students who are learning a new language. With a good dictionary, students can do the following:

• find the meaning of an English word they read or hear.
• find the English translation of a word in their language.
• check the spelling of a word.
• find out how to pronounce a word.
• find sentences with examples of the word in context.

The sample sentences in a dictionary show how a word connects with other words to form meaningful sentences. Sample sentences also show the different meanings of a word as it’s used in context. Additionally, they provide information about the other words often used together with a word (collocation) and the other implied meanings of a word (connotation).

About the Photo

The photo shows colourised fibres that connect different regions of the brain. The image was produced using a technology called diffusion MRI. Scientists concluded from analysing the MRI data that the pathways connecting brain regions are arranged in a curved, three-dimensional grid.

Related Word

fibres
While You Read

- **Say** Now you’re going to learn about the teenage brain. Listen and read. **Play Track 025.**
- **Say** Now listen and read again. This time, think about summarising each paragraph. You may want to hand out Spider Map graphic organisers and tell students to summarise the main idea of each paragraph as they listen and read. **Play Track 025 again** and tell students to follow along. You may want to pause the recording after each paragraph to give students time to write on their graphic organisers.

After You Read

- **4** Put students into pairs and ask them to answer the questions. If pairs come up with different answers, tell them to re-read the text to find support for their answers.
- **5** Explain that students will re-read the text and match each summary to a paragraph of text. Say **As you read, think about summarising each paragraph. A summary gives the most important information.** Point out the small paragraph number to the left of each paragraph. Say **Write the number of each paragraph next to the correct summary in Activity 5.** (If you asked them to use the Spider Map graphic organiser, let students refer to their notes.) After students have completed the activity, discuss the summaries as a class.
- **6** Tell students to form groups of three or four to answer the questions in Activity 6. Ask one student in each group to act as secretary and note information from the discussion.
- When discussions have finished, say **Now let’s list what you’ve discussed.** Draw the following table on the board. Include a row for each group.

<table>
<thead>
<tr>
<th>Group</th>
<th>Skills important for the future</th>
<th>What you do shapes your brain</th>
<th>Interesting careers</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Activity</td>
<td>Skills</td>
<td>Activity</td>
</tr>
<tr>
<td>A</td>
<td>football</td>
<td>teamwork</td>
<td>watch TV</td>
</tr>
<tr>
<td></td>
<td>cycling</td>
<td>balance</td>
<td></td>
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<td>B</td>
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<td></td>
</tr>
<tr>
<td>C</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Formative Assessment

Can students

• summarise how the adolescent brain undergoes structural changes?
  Say Summarise the process that happens to the structures in the brain of a teenager.

• summarise how experiences affect the adolescent brain?
  Say Summarise the way that the experiences a teenager has changes his or her brain.

• use new words to discuss what they’ve read about the teenage brain?
  Ask students to use adolescent, experience, process or structure in a sentence that tells us how a teenage brain develops.

• identify the main idea of a paragraph in a summary?
  Ask students to summarise the main idea of the first paragraph of the reading.

Workbook For additional practice, assign Workbook pages 16–17.

Online Workbook Reading
VIDEO

Objectives
Students will
• discuss how microbes in the human body can be beneficial as well as harmful.
• apply the message of the video to their personal lives.

Academic Language beneficial, diary, public-service announcement, record

Content Vocabulary communication, diet, gut, harmful, microbe, mouse, situation, surroundings

Resources
Video scene 2.1 (DVD/Website/CPT); Online Workbook; CPT: Video

Answer Key
Comprehension
1. bacteria, viruses and other tiny organisms
2. your brain
3. as many as 100 trillion
4. There are cells in your intestines that extend all the way into your brain, and microbes send signals directly to the brain using those cells as a highway.
5. It was less social.
6. It started to communicate more.

Before You Watch
• Ask students to review what they know about the effect bacteria, viruses and sleep have on people’s physical and emotional health. Say List two or three things that you’ve learnt about how viruses and bacteria affect people’s health and about how sleep and lack of sleep affect the way people feel.

• 1 Put students into pairs. Tell them to open their books at pages 34–35. Ask a student to read aloud Activity 1. Say With your partner, talk about how each of the things listed in the box affects the way you feel. Explain that diet means the kinds of food you eat and that surroundings are the places and things that are around you. When partners have finished the activity, if time allows, invite students to share some of their ideas with the class.

• 2 Ask students to work with their same partners. Invite a student to read aloud Activity 2. Say Look at the photo and caption on pages 34 and 35. Think about how they’re related to what you’ve learnt about being healthy. You’re going to watch a video called The Forgotten Organ. Ask Based on the photo on these pages and on the title of the video, what do you think the ‘forgotten organ’ is? (the bacteria in our bodies) Invite several pairs to share their ideas with the class.

While You Watch
• 3 Say Now you’re going to watch the video. Think about what you and your partner decided the ‘forgotten organ’ is. While you watch, think about whether your answer was right or not. Make notes as you watch, too.

• Play Video scene 2.1. If students have difficulty following the video or understanding the text, pause it and allow them to ask questions or re-read the text. Try replaying the video with and without sound,
Formative Assessment
Can students
• discuss how microbes in the human body can be beneficial as well as harmful as a result of watching the video?

Ask How do the microbes in a person’s gut affect that person’s brain and behaviour?

Online Workbook Video

and ask students to describe and comment on what they see. Tell them to finish making notes in their notebooks.

• Ask Were your ideas about what the ‘forgotten organ’ is correct? Ask students to tell you whether their ideas were correct or not and explain why.

After You Watch

• 4 Tell pairs to review their notes. Say Answer the questions in Activity 4 with your partner. Then tell them to complete Activity 4. Review the answers as a class.

• 5 Put students into groups of three or four. Read aloud Activity 5. Say Think about what you know about ways that bacteria and viruses can cause illness and disease. In your groups, talk about how you got better after a time you were ill. Invite groups to share their ideas with the class.

• 6 You decide Ask students to choose an activity.
If students choose to keep a diary, explain that a diary is a notebook in which they write their daily thoughts and what they did each day. Say For two days, write the food you eat at each meal and any snacks you eat between meals. Write how you feel after eating. Explain that after two days, students should look at what they wrote and decide whether they think the food they ate had an impact on their feelings and emotions.

• If partners choose to create a poster, suggest that they include labelled diagrams or drawings. If possible, ask them to do additional research about beneficial microbes.

• If students choose to create a public-service announcement, ask them to consider options such as a radio announcement, a TV announcement or a print advert that could be displayed in a public area, for example, a bus stop or the underground.

Teaching Tip
Video in the classroom You can control the level of instruction in a video by playing the video without the sound and supplying your own narration. To check students’ comprehension after they watch a video, you can replay the video without the sound and have students retell and explain what is happening in the video.
Objective
Students will
• say what affects mood and feelings using make + adjective.

Grammar Make + adjective: Saying what affects mood and feelings

Content Vocabulary fast food, stomach ache, track

Resources Online Workbook/Workbook pages 18–19; Worksheet 2.2.5 (Teacher’s Resource CD-ROM/Website); Track 026 (Audio CD/Website/CPT); CPT: Grammar 2

Warm Up

• Recycle Say You’ve learnt ways to talk about how you feel. Write the following words on the board: happy, tired, sick, depressed, nervous, relaxed and excited. Say These words describe your mood or feelings. Think of something you did or will do. Use a word on the board to say how you feel. Model by saying I am going to give a presentation. I feel nervous. Ask students to say how they feel before or after doing an activity. (Sample responses: I am going to visit my favourite cousin. I feel happy. / I watched a sad film. I feel depressed.)

Present

• Tell students to open their books at page 36. Say We can also use the word make with an adjective to say how something affects the way we feel. Ask a student to read aloud the grammar point in the grammar box.

• Play Track 026. Tell students to read along silently.

Then ask a student to read aloud the grammar examples. Play Track 026 again. Point out that the verb make is followed first by a pronoun (you, us) and then an adjective (tired, ill, good, better).

• Write the following additional sentences on the board:

Bad bacteria make us ill.
Ice cream make me happy.
A vaccination can make you nervous.
Vaccinations can make you nervous.

• Say Use makes with a singular noun like ice cream. Use make with a plural noun like bacteria. Use can make with singular or plural nouns.

• Write on the board: ________ makes me _________. Tell students to use the frame to say an original sentence.
Formative Assessment
Can students
• say what affects mood and feelings using make + adjective?
Ask What makes you feel happy?

Workbook
For additional practice, assign Workbook pages 18–19.

Online Workbook
Grammar 2

Practise

1. Say Look at Activity 1. Read the sentences and look at the small pictures of a face. Decide what emotion the face shows. Then complete the sentence to say what emotion each person feels.

Model completing the first example. Read the two sentences, substituting the word blank for the second blank line. Say The first face looks tired. The phrase makes me tired is shown on that blank line. Now look at the face at the end of the sentence. Ask How does the person feel? (happy) Say What phrase do we write on the blank line? (makes me happy)

Tell students to complete the activity on their own. Invite students to read their completed sentences.

2. Go over the completed sentence in item 1. Then ask students to complete the sentences in items 2–4. Invite a few students to read their completed sentences. Discuss different ways that students used the verb make.

Apply

1. Say Look at Activity 1. Read the sentences and look at the small pictures of a face. Decide what emotion the face shows. Then complete the sentence to say what emotion each person feels.

Model completing the first example. Read the two sentences, substituting the word blank for the second blank line. Say The first face looks tired. The phrase makes me tired is shown on that blank line. Now look at the face at the end of the sentence. Ask How does the person feel? (happy) Say What phrase do we write on the blank line? (makes me happy)

Tell students to complete the activity on their own. Invite students to read their completed sentences.

Go over the completed sentence in item 1. Then ask students to complete the sentences in items 2–4. Invite a few students to read their completed sentences. Discuss different ways that students used the verb make.

Apply

3. Put students into pairs. Ask them to cut out and make the cube on page 157. Say Roll the cube and look at the word on top. Use the word to talk about something that makes you feel that emotion. Your partner responds by agreeing or disagreeing and then talking about something that makes him or her feel that emotion.

Invite two students to read aloud the dialogue in the speech bubbles to model how the game is played. Monitor pairs as they play the game to listen for correct usage of make in their dialogues.

Extend

Put students into small groups. List the following situations on the board: first day at a new school, going on a holiday, acting in a school play, playing in a sports event. Prepare cards with words such as happy, sad, nervous, angry, relaxed, excited and tired. Give a set of cards to each group. Tell students to sit in a circle.

Say Choose a situation on the board. Tell a group story about it. Each person says a sentence to continue the story. Choose a card. Try to use the word on the card in your story. Talk about something that makes a person feel the emotion on the card. The story is finished when students use all the words on the cards.

To conclude, hand out Worksheet 2.2.5.

Consolidate

Say I’ll ask a question about an emotion. You respond by naming something that makes people feel that emotion. Model an example. Say I ask, ‘What makes people feel sad?’ (Jorge) responds, ‘Seeing someone cry makes people sad’. Call out questions that ask about different emotions and ask students to respond.

Grammar in Depth
The pattern verb + object + adjective is commonly used with the verbs make, get, keep and turn. These verbs are called causative verbs because they cause something to occur. Examples of how causative verbs are used include:

The cold weather makes me sad.
The football match got me very excited.
Doing sports keeps you healthy.

In this pattern, the adjective follows the noun or pronoun. This is the opposite of typical word structure in English, in which an adjective usually precedes a noun.

A related pattern is It + makes + pronoun + adjective + clause. Compare these two examples:

My brother’s attitude makes me mad.
It makes me mad when my brother rolls his eyes.
When we write a classification essay, we divide the topic into different categories. Then we present each category and support it with examples. The following phrases are useful when classifying:

- additionally
- another type/way
- to begin with
- the final type/way

2. Read the model. Work in pairs to identify the different categories in the essay. Underline words that signal the categories.

When people hear the word stress, they usually think of something negative. However, stress can have several benefits for the body and mind. To begin with, there is the type of stress people feel when there is something important to do. For example, some students are stressed before a big test. The stress might make them feel nervous, but it also makes them feel focused. This type of stress can help people work efficiently to meet their goals.

Another way stress benefits us is by keeping us healthy. Scientists who study stress learnt that a little stress strengthens the immune system. When your body learns to respond to some stress, it’s able to protect you from infection better.

The final way that stress benefits us is by helping us react to danger. If you see a car coming around the corner too fast, you might experience stress. This stress sends a message to warn your brain of danger, allowing your body to respond quickly. Without the stress, you may not be able to jump out of the car’s way soon enough.

Of course, too much stress is harmful to our bodies and minds. But the right amount of stress makes us more efficient, healthier and safer.

3. Work in pairs. What are the three benefits of stress mentioned in the essay?

• Write the following words and phrases on the board:

- additionally
- another type/way
- to begin with
- the final type/way

• Say We can use these words and phrases to help us organise a classification essay into different categories. We can write a paragraph for each category. We begin each paragraph with one of these words or phrases. In every paragraph, we also support our category with examples.

**Read the Model** 1 2

• 1 Put students into pairs. Say Now we’re going to look at an example of a classification essay.

• Say Look at the picture of the girl. Ask What kind of emotion is shown on her face? How do you think she feels? (nervous, scared) Ask From looking at the picture, what do you think the essay is going to be about? (something that makes a person nervous or scared)

• Read the instruction line aloud. Say Work with your partner. Look for the different categories in the essay. Underline the words and phrases that signal each different category. Look at the words in the writing box if you need a reminder. Tell the pairs to read the essay and underline the words that signal different categories.

• 2 Ask students to work with the same partners. Tell them to read the essay again and identify the three benefits of stress that are mentioned in the essay. Say A benefit is something that is good for you. A benefit is a positive thing. Look for things in the essay that describe how stress has a positive effect. Invite partners to share their answers with the class.

• **Worksheet** If your students need a reminder of the elements of the Classification Writing genre, you may want to hand out Genre Writing Worksheet (Classification) and review it together.
Plan

3. Read Activity 3 aloud. Explain that a negative effect is an effect that is not good, or a harmful effect. Say Now you’re going to plan your writing. You already know your topic – the negative effects of stress. Your next step is pre-writing. You’ll need to identify negative effects of stress. These will be your categories. Then you’ll need to give an example of each negative effect.

3. If you have time in class, allow students to work on this step. If not, assign it as homework. If students have Workbooks, remind them to use Workbook page 20 for writing support.

Writing Assessment

Use these guidelines to assess students’ writing. You can add other aspects of their writing you’d like to assess at the bottom of the table.

4 = Excellent
3 = Good
2 = Needs improvement
1 = Re-do

Writing
Student describes categories in the topic of the classification essay and uses examples to support each category. Student introduces categories using words and phrases such as additionally, another type/way, the final type/way and to begin with.

Grammar
Student uses adverbs and make + adjective to describe how things affect people’s emotions.

Vocabulary
Student uses a variety of word choices, including words learnt in this unit.

<table>
<thead>
<tr>
<th>Writing</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grammar</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vocabulary</td>
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<td></td>
</tr>
</tbody>
</table>
1. Watch scene 2.2.

2. Pardis says that you first have to take care of yourself before you can help others. Do you agree with her? Why or why not? Do you take care of yourself? What could you do to improve?

3. How do you balance work and fun in your life? What are your daily responsibilities? What do you do for fun? Do you have enough time for both? Explain.

Mission

- Read aloud the mission Take Care of Yourself. Ask What are some ways that you can take care of yourself? (eat good food, get exercise, get enough sleep) Ask a student to read aloud the quote by Pardis Sabeti. Ask What does Pardis Sabeti think you need to do before you can take care of other people? (take care of yourself)

- Activity 1 Say Now let’s watch a video about Pardis Sabeti. Play Video scene 2.2. Tell students to focus on Pardis Sabeti’s firmness of purpose in finding ways to help humans survive disease.

- Activity 2 Put students into pairs. Tell them to answer the questions. Ask Do you agree with what Pardis says? Explain your reasons to your partner. Then ask pairs to discuss specific things they do that have an impact on their physical and emotional health.

Students should then consider what changes they could make to improve their health. Tell students to use adverbs in their responses to say how they do something and how often they do it.

- Activity 3 Ask individual students to consider how they split their time each day between things that they have to do and things that they like to do. Explain that to balance two things means to do an even amount of each thing. Tell students to use make + adjective to say how the activities that they do make them feel. Model an example. Say I go for a walk in the neighbourhood every day after work. Walking makes me feel relaxed. It’s also good exercise for my body.

- Worksheet Hand out Worksheet 2.2.6. Explain that students will use the worksheet to further discuss Pardis Sabeti’s work and how people can take care of themselves in order to stay healthy.
Objective
Students will
• choose and complete a project related to ways to stay healthy.

Academic Language  brochure, conduct, summarise, survey

Content Vocabulary  microbial, quiz show

Resources  Assessment: Unit 2 Quiz; Workbook pages 21 and 91; Worksheet 2.2.7 (Teacher’s Resource CD-ROM/Website; CPT: Make an Impact and Review Games

Materials  health brochures (optional)

Teaching Tip
Create a positive environment for presentations. Arrange desks and tables to face toward the student presenter. Encourage students to be supportive of their classmates by listening and looking at the students presenting. Explain that this shows that they’re interested and paying attention.

Assessment  Go to page 255.

Prepare
• **YOU DECIDE** Ask students to choose a project.

• **Activity 1** If you have brochures on hand, display them. Point out that a brochure can include photos, drawings, charts, tables and text. Remind students that a brochure should clearly organise and present information.

• Tell students to find out two or three facts about each of the four subtopics. Encourage them to include interesting or surprising information.

• **Activity 2** Tell students to use different kinds of questions: open-ended (*How long do you usually sleep each night?*), multiple-choice (*Which number best describes the number of hours of sleep you get each night: 10, 9, 8, 7?*) and ranking (*On a scale of 1 to 5, say how well you usually sleep. 1 = not well at all, 5 = great*). They can also ask about weeknight versus weekend sleeping habits. Encourage students to include adverbs in their questions.

• Model summarising sample survey results in a pie or bar chart. Encourage students to visually summarise their results.

• **Activity 3** Explain that *microbial* means ‘having to do with microbes’. Say *Bacteria and viruses are kinds of microbes*. Ask students to do research to find simple facts about viruses and bacteria. Some students may want to play the role of a TV quiz show moderator. Teams score one point for each correct answer. The team with the most points wins.

Share
• Allow time for groups to present their final projects to the class. For the quiz show, arrange the classroom to fit the moderator and two teams.

• **Modify** For Activity 1, create a *Healthy Living* display with students’ brochures so others can learn about good health habits.
Track 015 1 Listen and read. See Student’s Book pages 26–27.

Track 016 2 LEARN NEW WORDS  antibiotic / People take antibiotics to fight some infections. bacteria / Some bacteria can make people very ill. cell / A cell is the smallest living thing that can exist independently. digest / It takes the body over 30 hours to digest food. disease / The child caught the disease from her mother. immune system / Our immune system protects us so that we don’t get ill. infection / Harmful bacteria can cause an infection. invade / A virus invades its host and begins to make more viruses. protect / The human body can protect itself against many illnesses. sore / I can’t speak much today; I’ve got a sore throat. symptom / A high temperature can be a symptom of the flu. treat / The doctor treated my injury in hospital. vaccination / Babies are given vaccinations to protect them as they grow. virus / The common cold is a type of virus.

Track 017 5 Pardis Sabeti works hard as a scientist and a mathematician. She studies serious illnesses, such as Ebola. She uses complex maths to understand how the Ebola virus has been able to change and survive for thousands of years. Working on such serious illnesses can sometimes make Pardis feel sad or depressed. But she deals with these emotions by finding other things to make her feel positive. Music is one of these things, and she sings and plays bass in the band Thousand Days. Physical activity is also important to Pardis. She often commutes to work on her rollerblades, which helps her relax and prepare for the day.

Track 018 5 LEARN NEW WORDS  emotion / Happiness and sadness are examples of human emotions. illness / Scientists try to find new ways to treat different illnesses. positive / I feel very positive about the results of this new research. survive / Some viruses can survive for thousands of years.

Track 019 SPEAKING STRATEGY See Student’s Book page 29.

Track 020 1 S1: Hi, Yuki. Hey, is anything wrong? You look a little tired. S2: No, everything’s OK. S1: Are you sure? S2: Yes, I’m fine, really. S1: Well, you just look like you don’t feel well. S2: Actually, Myriam, I’m feeling a bit hungry. S1: Is that all? Here, why don’t you eat these crackers? S2: Thank you! S1: Are you feeling better? S2: Yes, thanks! That was just what I needed.

Track 021 GRAMMAR See Student’s Book page 30.

Track 022 3 When chimpanzees want to get some rest, they usually climb up a tree. But they don’t choose just any tree. In fact, researcher David Samson recently discovered that chimpanzees select special trees for their beds. Over seventy per cent of chimpanzees studied sleep in the Ugandan Ironwood tree. Chimpanzees know that this type of tree has the strongest wood and the best material for comfortable beds. Scientists like Sampson have a theory that sleeping comfortably is connected with intelligence. They believe that millions of years ago, some of the great apes moved from sleeping in the branches of trees to making their own beds. This meant that they slept better, and over time, became more intelligent. So what does this mean for you? You know sleep makes your brain work better. If you want to pass that difficult test, make sure that you have the most comfortable bed in the house!
Express Yourself

Objectives
Students will
- identify elements and content of a song.
- connect ideas about colours and how they affect our physical and mental health.

Genre  Song Lyrics

Academic Language  express, graphic art

Content Vocabulary  alive, breathe, forsaken, gather, lifetime, pray, proof, radiate, scream, starry, strive

Resources  Workbook pages 22–23/Online Workbook (Units 1–2 Review); Worksheet 2.2.8 (Teacher’s Resource CD-ROM/Website); Track 027 (Audio CD/Website/CPT); CPT: Express Yourself Units 1–2

Present

1. Preview  Tell students to turn to pages 40–41. Say Look at the photo. Ask What does the photo show? (a musician and some instruments) What colours do you see? (grey, brown, black)

2. Read together  Say You’re going to listen to a song by Pardis Sabeti’s band Thousand Days. You’ll read the lyrics to the song as you listen. Lyrics are the words in a song. Point out the song’s title and its different verses in the text on page 41. Explain that song lyrics are similar to the words in a poem. Say Just like some poems tell us about the thoughts and feelings of the writer, some songs tell us about the thoughts and feelings of the songwriter.

Practise

1. Ask students to form small groups. Tell students to re-read the song lyrics. Ask groups to work together to work out the meanings of words such as to radiate, starry, proof and lifetime. As needed, tell students that to radiate means ‘to shine’ and that forsaken means ‘given up on or left behind’.

2. Discuss  Say Talk about the song with your group. Ask questions such as Who’s speaking? What feelings does the speaker have? Which words tell us about the songwriter’s feelings and mood? What message do you think the songwriter has for listeners? How does the song make you feel? Happy? Sad? Angry? Say Answer Question 1 with your group. When everyone has finished, ask What feelings do the scientists have toward their work? Invite a student from each group to describe the results of their discussions.
Formative Assessment

Can students
• identify elements and content of a song?

Ask students to identify song lyrics that describe the songwriter’s emotions. (We laugh; We cry; We pray; We are love; We dream; We scream; We strive)

• connect ideas about colours and how they affect our physical and mental health?

Ask How does wearing a certain colour of clothing affect the way you feel? (Answers will vary but should describe how a particular colour creates an emotional response.)

You decide choose an activity.

1. Choose a topic:
   • how colours make you feel
   • body and mind

2. Choose a way to express yourself:
   • a song
   • a poem
   • a piece of graphic art

3. Present your work.

Discuss in groups.

1. Pardis recorded this song with other scientists while fighting the Ebola virus. They saw many people, including friends, die of the virus. This made them very sad. To help, they recorded this song. What is the ‘one truth’ that they are singing about?

2. Do you like the song? Why or why not?

Connect ideas. In Unit 1, you learnt about colours. In Unit 2, you learnt about health. What is the connection between these two units? How can colours affect your body and your mind?

Prep

4 YOU DECIDE Review the instructions for Activity 4. You may want to assign this activity in advance so that students have more time to work on it in class or at home.

• Ask students to choose an activity. Provide reasonable assistance to students who choose to write a song or poem. You may want to help students choose examples of favourite songs or poems to use as models, or help students who want to create a song using a computer app or programme to produce music.

Share

• Set aside time for students to share their work with the class. Remind students to listen actively by focusing on the presenter. Point out that it’s all right to sometimes ask questions for clarification.

Express Yourself