

5



The senses


Unit Objectives

- Talk about the senses
- Understand a text about the senses and technology
- Talk about my sleep habits
- Talk about food
- Write a for and against essay




On Track Video

- 1  Watch the video about the '5-4-3-2-1' technique. What does the technique help people do?
- 2  Watch again. Copy and complete each stage of the '5-4-3-2-1' technique with a word from the video.
 - a five things you can
 - b four things you can
 - c three things you can
 - d two things you can
 - e one thing you can

- 3 **YOUR TURN**  Try the '5-4-3-2-1' technique. Then tell a partner. How many of the things were the same as your partner's?

OK, for 'things you can smell', I had hand cream and chewing gum! What about you?

- 4 **MEDIATION**  Your group of friends don't understand English. Explain three important details of the video to them in your language.

Sense verbs and adjectives

i Vocabulary presentation

1 **5.01** Copy and complete the sentences with the adjectives in the box. Listen and check.

colourful disgusting fresh hard rough **salty**
shiny smooth soft sour spicy sweet

TASTE

| | |
|---|---|
| These pretzels taste salty . | This curry tastes ¹ ... |
|  |  |
| These sweets taste ² ... | Lemons and limes taste ³ ... |
|  |  |

FEEL

| | |
|---|---|
| This wood feels ⁴ ... | This blanket feels ⁵ ... |
|  |  |
| This sandpaper feels ⁶ ... | These stones feel ⁷ ... |
|  |  |

LOOK

| | |
|---|---|
| These balloons look ⁸ ... | These beetles look ⁹ ... |
|  |  |

SMELL

| | |
|---|---|
| These flowers smell ¹⁰ ... | This rubbish smells ¹¹ ... |
|  |  |

DID YOU KNOW?

For years, scientists thought our fingerprints (the small lines on our fingers and thumbs) existed to help us hold things. Recently, research has shown they actually help make our sense of touch better.



2 **5.02** Choose the correct words to complete the travel journal. Listen and check.

My Asia Travel Journal

Some fruits, like the durian, jackfruit, and rambutan, have a ¹ **hard** / **sweet** skin on the outside, and ² **soft** / **salty** fruit on the inside. In Vietnam, they call rambutans 'chom chom', meaning 'messy hair', because of their unusual skin! On the inside, there is ³ **shiny** / **rough**, white fruit.



These ⁴ **fresh** / **spicy** flowers at the market in Kunming, China, were very ⁵ **colourful** / **smooth**. They ⁶ **felt** / **smelled** amazing!



Mango sticky rice was my favourite Thai dessert. I like very ⁷ **disgusting** / **sweet** food and I thought it ⁸ **tasted** / **looked** delicious.



3 Write down three or four foods and objects. Then match them to the sense adjectives in exercise 1.

4 **YOUR TURN**  In pairs, play a guessing game. Use your ideas from exercise 3.

They're small and they taste salty. Pretzels!

No. What else tastes salty? Peanuts?

Yes!

i Vocabulary practice

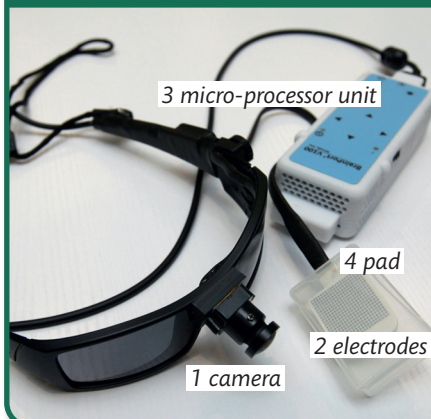
Complete all activities in your notebook.

A magazine article

- 1  5.03 What do the people in the article have in common? Read and listen to the article, and check.

THE BRAIN: our sixth sense

Humans have five senses: sight, hearing, smell, taste, and touch. Interestingly, we get 80% of our sensory information through our eyes. Living with impaired vision presents challenges, but happily, technology can help.



Erik Weihenmayer has been blind since he was 14, but that hasn't stopped him becoming a climber. In 2001, he became the first (and only) blind person to climb Mount Everest! Now, Erik climbs with a BrainPort device that helps him to 'see'. The BrainPort sends images from a video camera, via a micro-processor, to a pad on his tongue. Electrodes on this pad form shapes. The tongue feels the shapes, and then, incredibly, the brain transforms the information into simple pictures. With the help of his BrainPort, Erik can walk, play ball games with his children, and climb without assistance.


Craig Lundberg lost his sight when he was in his early twenties and, like Weihenmayer, Lundberg has continued to live an active life. Since losing his sight, amazingly, he has run a marathon, completed a 550 km bike ride and climbed Mount Kilimanjaro! Lundberg was one of the first people to try the BrainPort, and he was excited about how the device might improve life for blind people. He was able to identify objects, read words and walk without help when using the BrainPort.



Reading strategy

Identifying a writer's attitude

Identify how a writer feels about what they write by looking for comment adverbs such as *obviously*, *unbelievably* and *amazingly*.

- 2  Study the Reading strategy. Then find four comment adverbs in the text.
- 3 Read the article again. Then answer the questions. Use the comment adverbs to help you.
- 1 What does the writer think about the importance of sight for humans?
 - 2 How does the writer feel about how technology can help?
 - 3 What does the writer think about the way the brain and the BrainPort work together?
 - 4 How does the writer feel about Craig Lundberg's active life?

- 4 Are the statements true or false? Correct the false ones.

- 1 We get about half our sensory information through our sense of sight.
- 2 Erik Weihenmayer was born blind.
- 3 Erik was the first blind person to climb Mount Everest.
- 4 Erik can climb without help thanks to his BrainPort.
- 5 Craig Lundberg lost his sight when he was 10.
- 6 Craig thought the BrainPort might help blind people.
- 7 Craig uses the BrainPort to write.

5 YOUR TURN In pairs, discuss the questions.

- 1 Order the senses from most important to least important. Explain your reasons.

I think ... is the most important sense because ...

- 2 In what other ways do you think technology will help us in the future?

Perhaps technology will help us cure diseases.

Present perfect: *for* and *since*

i Grammar animation

1 **5.04** Read and listen to Grammar in context. Whose are the hearing aids?

Grammar in context

Dr. Felix How long have you had your hearing aids?

Carla I haven't had them for long.

Dad I think she's had them for about three years. Is that right, Carla?

Carla Yes, I've used them since I was 17.



| |
|--|
| Affirmative |
| I've used the hearing aids since I was 17. She's had them for about three years. |
| Negative |
| I haven't had them for long. Dr. Felix hasn't seen Carla since she was 16. |
| Questions |
| How long has Carla had her hearing aids? How long have you had your hearing aids? |



STOP

Since = when an action started
For = duration of an action or state
I've been here **for** 20 minutes.
I've been here **since** 10:30.

2 Study the table. Then look at the time expressions in the box. Which time expressions are periods of time and which are points in time?

48 hours a week last week three years ago
three years a month 13th October yesterday

Period of time – 48 hours a week

Point in time – yesterday

3 Match the sentence halves.

- | | |
|-----------------------------------|-------------------------|
| 1 Has Alice lived in London for | a ten years? |
| 2 We haven't lost a match since | b six o'clock? |
| 3 Have you been here since | c two years. |
| 4 Rudy has been at university for | d you studied English? |
| 5 How long have | e Lara played football? |
| 6 How long has | f I joined the team. |

4 Copy and complete the sentences with *for* or *since*.

They've lived in Amsterdam *for* ten years.

- We've walked 12,000 steps every day ... last weekend.
- I've had a headache ... a few hours.
- We've been at this school ... we were 12.
- Has she been here ... 3:30?
- You haven't spoken to Simon ... ages.
- I've felt sick ... I had breakfast.

5 Write questions with *How long* and the present perfect. Write the answers with *for* or *since*.

- you / live here?
I / live / here / I was three
How long have you lived here?
I've lived here since I was three.

- you / study / English?
I / study / it / eight years
- we / be / in this class?
we / be / in this class / 9:30
- your best friend / know / you?
my best friend / know / me / ten years
- you / have / this English book?
I / have / it / the start of this year
- you / be / a teenager?
I / be / a teenager / 18 months

6 YOUR TURN In pairs, ask and answer the questions in exercise 5. Give answers that are true for you.

How long have you lived here?

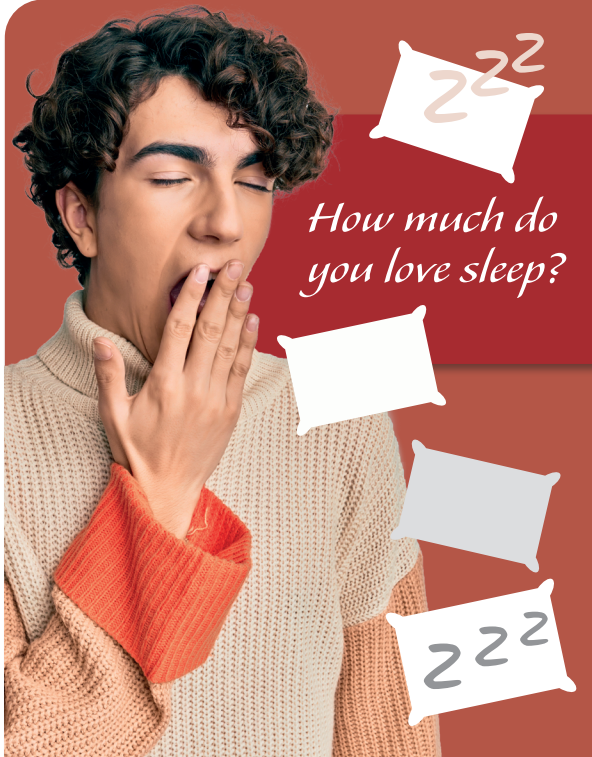
I've lived here for seven years. How about you?

i Grammar practice

Sleep

Vocabulary presentation

1 **5.05** Read and listen to the quiz and check the meaning of the words in bold. What do they mean in your language?



- 1 I **yawn** as soon as someone else yawns.
T = 2 points F = 1 point
- 2 I always **feel sleepy** after school.
T = 2 points F = 1 point
- 3 I hate getting up. I **lie in bed** for hours at the weekend.
T = 2 points F = 1 point
- 4 I **fall asleep** as soon as my head touches the pillow.
T = 2 points F = 1 point
- 5 I sometimes **lie awake** at night.
T = 1 point F = 2 points
- 6 I **wake up** early on Saturdays.
T = 1 point F = 2 points
- 7 I **have dreams** about flying!
T = 2 points F = 1 point
- 8 After I **have a nightmare**, I'm worried for a few minutes, but then I just go back to sleep.
T = 2 points F = 1 point



KEY 8-10: You're happier awake than asleep. That's OK, but remember you need sleep to stay healthy.
11-13: You like a good night's sleep, but you can get out of bed when you need to.
14-16: You love sleep! Nothing will get you out of bed.

2 Do the quiz. Are the sentences true or false for you?

3 **👥** Add up your points. Look at the key, and compare your results in pairs. Do you agree?

4 **5.06** Listen to the podcast. What is the main idea?

- a Secondary school hours don't work well with teenagers' body clocks.
- b Teenagers' poor sleep habits cause bad grades at school.
- c Teenagers should go to bed earlier.

5 **5.06** Listen again. Are the statements true or false?

- 1 A ten-year-old should naturally feel sleepy at about 9 p.m.
- 2 Our body clocks stay the same as we get older.
- 3 Teachers say teenagers need to sleep between 9 and 9.5 hours each night.

6 **5.07** **🎧** Copy and complete the summary of the podcast with the times in the box. Listen and check.

7 7 8:30 9:30 9 9½ 10 11 13

Until the age of **13**, most people feel sleepy at around ¹ ... p.m. After this age, people usually feel sleepy at around ² ... p.m. or midnight. Teenagers need lots of sleep – up to ³ ... hours every night. If secondary school starts at ⁴ ... a.m., you need to get up at about ⁵ ... a.m. If you go to bed at midnight, that's only ⁶ ... hours' sleep in total. That's why some secondary schools have changed classes to start at ⁷ ... or ⁸ ... a.m.

7 **YOUR TURN** **👥** Would you prefer school to start later? Why / Why not?

Yes, I'd prefer to have more time in bed in the morning!

Past simple or present perfect?

i Grammar animation

1 **5.08** Read and listen to Grammar in context. Who is the person in the picture?

Grammar in context

Liv Have you ever fallen asleep anywhere unusual?

Lou No, I've never done that, but my brother has fallen asleep in some strange places! Last week, we went to the cinema, and he fell asleep during the film.



| Tense | Use | Example |
|-----------------|--|--|
| Past simple | to say when something happened (exact time) | My brother fell asleep at the cinema last week . |
| Present perfect | to talk generally about past experiences when we don't know/say the exact time | Have you ever fallen asleep anywhere unusual? I've never done that. My brother has fallen asleep in some strange places. |

2 Study the table. Choose the correct past simple or present perfect forms.

- We 've **visited** / **visited** Portugal lots of times. Our last visit **has been** / **was** two years ago.
- I **saw** / 've **seen** that film before. I **saw** / 've **seen** it last month.
- I 've **had** / **had** a nightmare last night. **Did you ever have** / **Have you ever had** one?
- Kevin: **Did you ever go** / **Have you ever been** to a zoo?
Elliot: No, I haven't. There **was** / **has been** a school trip to one last year, but I **haven't gone** / **didn't go**.

3 Copy and complete the conversations with the pairs of verbs in the box. Use the present perfect and the past simple.

drive / ride earn / pay give / speak
~~have / stay~~ visit / go

'Have you ever **had** a sleepover at Amy's?'
'Yes. I **stayed** at her house last Friday.'

- '... ever ... any money?'
'Yes. My parents ... me €10 for cleaning the car last weekend.'
- '... ever ... a car?'
'No, but I ... a motorbike last summer.'
- '... ever ... a presentation to more than 100 people?'
'Yes. I ... about the environment to the whole school last year.'
- '... ever ... the USA?'
'No, I haven't, but we ... to Mexico on holiday a few years ago.'

4 **D** Write questions using the prompts below. Use the present perfect with *ever*.

swim / in the ocean

Have you ever swum in the ocean?

- sleep / in a tent
- forget / something important for school
- sell / something to a friend
- have / an argument with a friend
- have / a dream about living in another country

5 **YOUR TURN** **🗣️** Ask and answer the questions you wrote in exercise 4. Use short answers in the present perfect: *Yes, I have* / *No, I haven't*. If there is more information, add a sentence in the past simple.

Have you ever swum in the ocean?

Yes, I have. I swam in the ocean in France last July.

i Grammar practice

Listening: A conversation

- 1 5.09 Look at the list of foods. Which do you think might make you feel sleepy? Which can keep you awake? Listen and check.

bananas burgers cherries
crisps nuts pizza pretzels

Listening strategy

Identifying unknown words

Identify the meaning of unknown words by thinking about the context and meaning of the rest of the sentence.

- 2 Read the Listening strategy. Then read the extracts from the conversation, and look at the bold words. Choose the correct definitions. Why did you choose these answers?

- 'I have a snack, brush and **floss** my teeth, then I get into bed.'
 - another way of saying brush your teeth
 - another thing you do to your teeth to clean them
 - a device you wear on your teeth
- 'She **did some research** and discovered that ...'
 - studied the facts about something
 - changed her behaviour in certain ways
 - asked herself some important questions
- 'Burgers are **tough** for your body to digest, so your system has to work hard ...'
 - difficult
 - easy
 - impossible

- 3 5.09 Listen again. Are the sentences true or false?

- Mayumi is having trouble sleeping at the moment.
- Mayumi sleeps with her light on.
- Ife says brushing your teeth makes you sleep badly.
- Eating burgers in the evening helps you fall asleep.
- Your body produces melatonin when it's time to go to sleep.

4 YOUR TURN Discuss the questions in pairs.

- What do you usually do, eat and drink before you go to bed?
- Do you think these things make it easier or more difficult to sleep? Why?

Listening extension

Speaking: Talk about food



- Watch part 1 of Alex's video. Who is Alex with and what are they doing today?
- Watch part 2 of the video. In your notebook, match the people to their dishes and the countries their dishes are from.

Alex
Ben
Clara
Danni

crumble
curry
pavlova
ratatouille

England
France
India
New Zealand

- Watch part 3 of the video. Who wins the competition?
- Watch part 3 again and choose the correct option.
 - The **curry** / **ratatouille** is served with rice.
 - The **curry** / **ratatouille** is vegetarian.
 - The ratatouille was cooked in **the oven** / **a pan**.
 - The **crumble** / **pavlova** is made with eggs and sugar.
 - The **crumble** / **pavlova** is served with ice cream.
 - Alex **bought** / **made** his dish.

Speaking strategy

Talking about food

Use these phrases to describe ingredients:

It's got ... in it

It's made with ...

Use these phrases to describe ways of cooking:

You bake / cook it in the oven

You boil / fry it in a (frying) pan

You grill / cook it under the grill

Use these phrases to describe what comes with the main dish:

It's served with ...

It comes with ...

5 **5.10** Copy and complete the dialogue with words from the Speaking strategy. Listen and check.

Padma Dinner time! I've made dhal.
Ross Dhal? What's it ¹ ... in it?
Padma It's a lentil dish, ² ... with onions, garlic, and spices.
Ross How do you cook it?
Padma First you ³ ... the lentils in a pan of water. Then you ⁴ ... the onions, garlic and spices in a frying pan. Then you add it all together.
Ross What does it ⁵ ... with?
Padma It's ⁶ ... with rice and salad.
Ross Well, it smells delicious, Padma. Let's eat!



GLOBAL SKILLS

Trying new types of food

If you get the chance to try food from another country, take it! Food is a great way to learn about other cultures, especially if you also learn how to cook it.

6 Read Global skills then discuss the questions in pairs.

- Which are your favourite foods from other countries?
- Which foods from other countries would you like to try?

7 Work in pairs. Explain to your partner how to make a simple dish. Use a dish you know, a dish from the video, or one of the ideas in the box.

eggs on toast a hot chocolate drink
pasta and a simple sauce

- What is it made with?
- How is it cooked?
- What is it served with?

LET'S SPEAK!

8 In pairs, ask and answer questions about each other's dishes. Say what you think about the dish. Follow this model.

My dish is called ...

What's it got in it? /
What's it made with?

It's got ... in it /
It's made with ...

How do you make it? /
How is it cooked?

You bake / boil /
cook / fry / grill ...
in a (frying) pan /
in the oven /
under the grill.

What does it come with?
/ What is it served with?

It comes with ... /
It's served with ...

... is(n't) / are(n't) my
favourite / I absolutely
love ... / I can't stand ... /
I'm not keen on ...

What do you
think of my dish?

It sounds ... / I think it
probably (smells, looks,
tastes) ...

A for and against essay

1 Read the essay quickly. Does Alicia agree or disagree with the statement in the essay?

Essay task: Write a for and against essay on the following statement: 'Secondary school classes should start after 10 a.m.'

Teenagers' body clocks mean they need to sleep between about 12 a.m. and 9 a.m. However, most schools start before 9 a.m. As a result, teenagers aren't getting enough time in bed. Should secondary school classes start after 10 a.m.?

On the one hand, if teenagers can sleep longer, they won't be tired and will find it easier to concentrate. This could mean better grades and better health for young people.

On the other hand, if school begins later, school staff will need to start and finish work later. Parents might also need to change their daily routines, especially if they have children of different ages.

In conclusion, if teachers and parents are able to make the necessary changes, I think secondary school classes should start later. Although it will be difficult for some adults, it will benefit teenagers' health and education.

Alicia Harvey



2 Read Alicia's essay again. Copy and complete the table.

| | |
|--------------------------|--|
| The problem | Teenagers are too tired. |
| The cause of the problem | |
| The idea | |
| For the idea | |
| Against the idea | |
| Conclusion | Schools should start later. This will benefit teenagers' health and education. |

Writing strategy



Expressions of contrast

Use these expressions of contrast to explain differences: *although, however, on the one hand, on the other hand*

3 Read the Writing strategy. Then find expressions of contrast in Alicia's essay.

4 Read and complete the essay with expressions of contrast from the Writing strategy.

Most teenagers know that it is important to eat healthily. ¹... , not all of them choose to do so at school. Should school cafeterias only serve healthy food to students?

²... , there are advantages to limiting school cafeteria menus in this way. Students will have to eat a balanced meal at lunchtime and this will help them to concentrate in afternoon lessons.

³... , perhaps it is unfair to force young people to eat healthily. If there are only healthy options available, some students might go without lunch, or eat only unhealthy snacks they buy or bring themselves.

In conclusion, ⁴... it is good for schools to offer healthy food, I think it is also important to give young people the choice of what they eat.

i Language practice

LET'S WRITE!

5 Think and plan.

Read the essay task. Then plan your essay. Draw a table like the one in exercise 2. Then complete it with your ideas.

Essay task: Write a for and against essay on the following statement: 'Teenagers should study less and have more free time.'

6 Write your essay.

- Use your plan from exercise 5.
- Use Alicia's essay and the essay in exercise 4 as models.
- Use the expressions of contrast in the Writing strategy.

On the one hand, it's important for teenagers to get good grades ...

On the other hand, too much stress is bad for our health ...


Although studying is important, it's not the only thing that matters ...

7 Check your writing.

- expressions of contrast
- present perfect with *for* and *since*; present perfect and past simple
- sense verbs and adjectives; sleep words

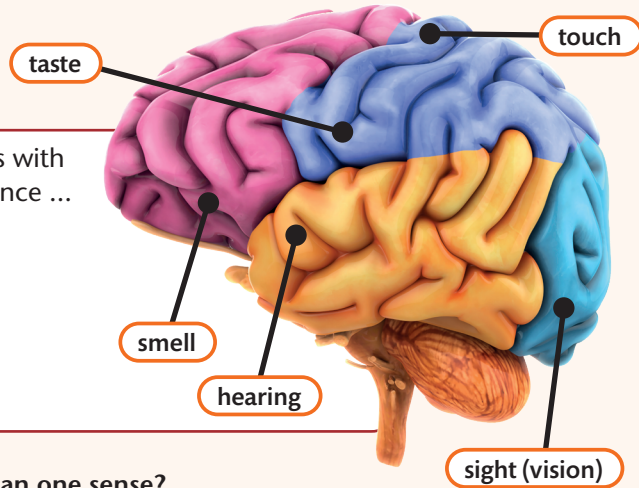
Synaesthesia

Before you watch

1  Look at the picture and answer the questions.

The sensory cortex is in the outer part of the brain. It deals with the five senses. Which sense do you use when you experience ...

- the aroma of a delicious meal? *smell*
- 1 the beautiful orange light of a sunset?
- 2 a bite of a sweet strawberry?
- 3 the rough texture of a stone?
- 4 the sound of someone's voice?




2 Can you think of things that you experience with more than one sense?

When I watch TV, I hear it and I see it.


When it rains, I can feel it, see it, and smell it.

While you watch


3  Watch the video and choose the correct answer.

Professor Spence wants to:

- a advertise his synaesthesia business.
- b convince us that synaesthesia exists.
- c share his knowledge about synaesthesia.


4  Watch the video again and put the items in the order they appear.


- a Examples of synaesthesia
- b Using all of the senses in the perception of food
- c Meeting Professor Charles Spence 1
- d Using the research to help the food business
- e How the sensory cortex processes senses


5  Choose the correct answers. Watch the video and check.

- 1 Professor Charles Spence is a **businessman** / **psychologist**.
- 2 Scientists have known about synaesthesia for more than **2,000** / **200** years.
- 3 About **14%** / **4%** of people have got synaesthesia.
- 4 With synaesthesia, there's a **connection** / **no connection** between areas of the sensory cortex.
- 5 Professor Spence is helping **food companies** / **researchers** to understand how people experience products with their senses.

After you watch

6 **MEDIATION**  Go online and find out more about synaesthesia. Write three sentences about information that you found interesting.

7  In groups, share your sentences. What was the most surprising fact?

 Video extension