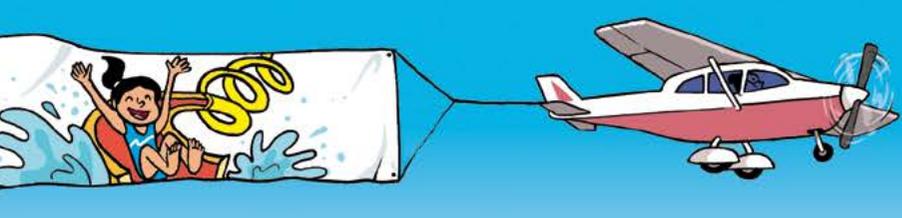


1

# INTERACTION

*Have Fun at the Seaside!*





## LET'S BEGIN



**1** Which organs do you use to interact with the world around you?

**2** Look at the picture. Point to something you can:

- taste
- touch
- see
- hear
- smell

**3** Say which characteristics each object has.



- rough    smooth    hard    soft    rigid

**4** Find Alex and Carla. What are they doing?

**5** How are the adults and children in the picture using their senses? Point and say.

**6** Listen to the *How I use my senses* song. In your notebook, write the words in the order you hear them.



see

touch

smell

taste

hear

**7** Sing the song. Point to the correct sense organ.

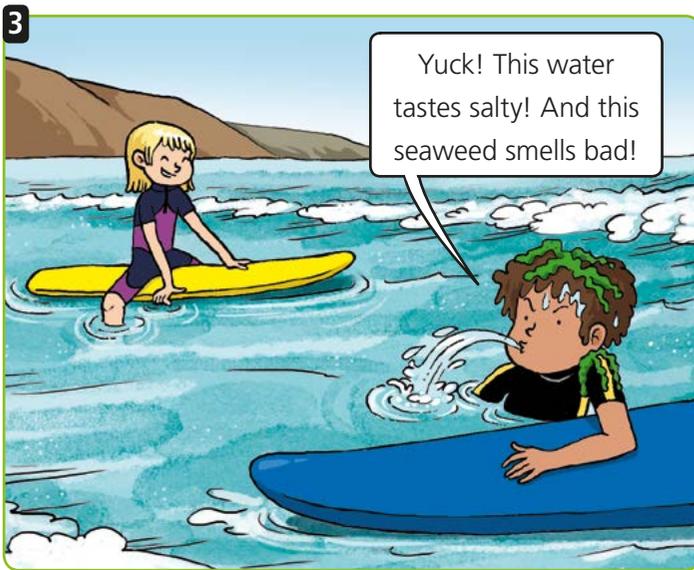
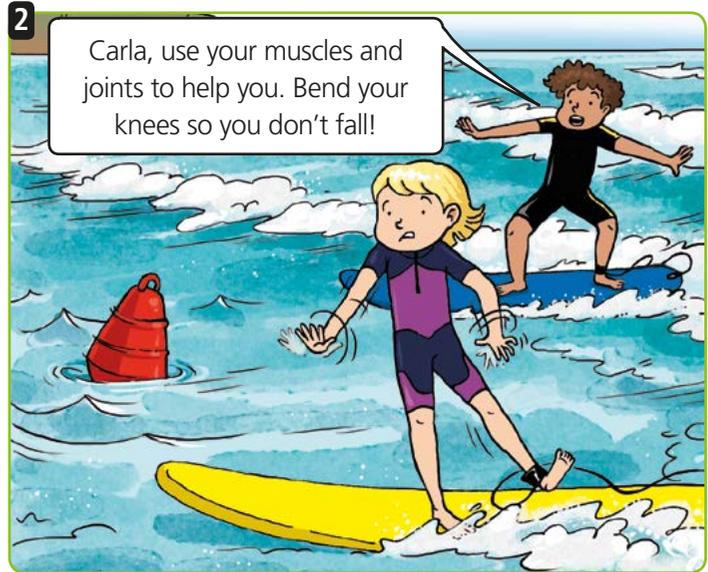
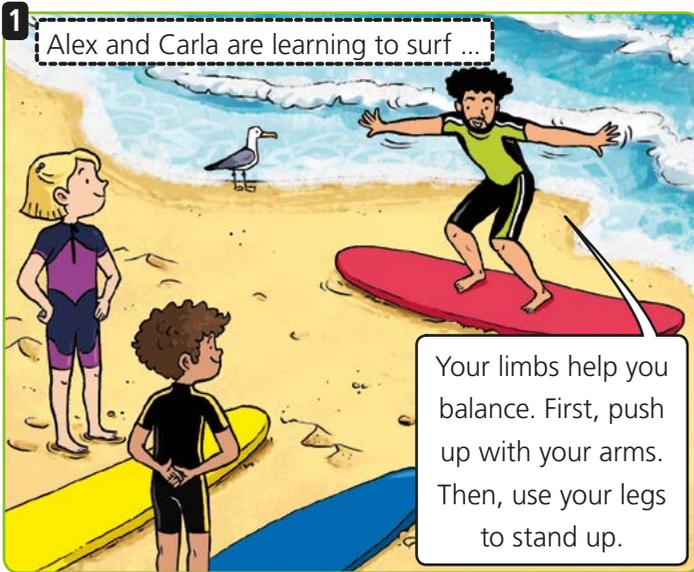
What do you know? Let's find out!

### Useful language

He / she ... is tasting / seeing ...

# A day out at the beach

  Listen, read and act out.



**1** Read the descriptions and match them to the words below in your notebook.

- a** This is an upper limb.
- b** This is a lower limb.
- c** This is a joint. It helps you bend your arm.
- d** This is a joint. It helps you bend your legs.
- e** This is the organ you use to taste.
- f** This is the organ you use to smell.

nose   knee   arm   elbow   tongue   leg



## Sensitive skin



### Think first

Different parts of your body have more or less sensitivity. In groups, choose three of four areas of the body to test. For example, the palms of your hands, fingertips, arms and face. Think about the following questions individually. Then discuss them as a group. Take notes about your group's answers.

- Which is the most sensitive part?
- Which is the least sensitive part?
- Can you identify the objects with your eyes covered?

**Materials:** blindfold, a variety of objects (feather, pine cone, sponge, tennis ball).

### Steps

- 1 Work in pairs. Cover your partner's eyes.
- 2 Use the objects to touch the different parts of your partner's body.
- 3 Now swap places with your partner. Write your conclusions.
- 4 Compare your conclusions with another pair.



### Reflect

Check your answers to the **Think first** questions. Has the experiment changed your ideas about skin sensitivity? Can you identify the different objects with your eyes covered?

Evaluate your cooperative learning.



# The nervous system

What does the brain need to work correctly?

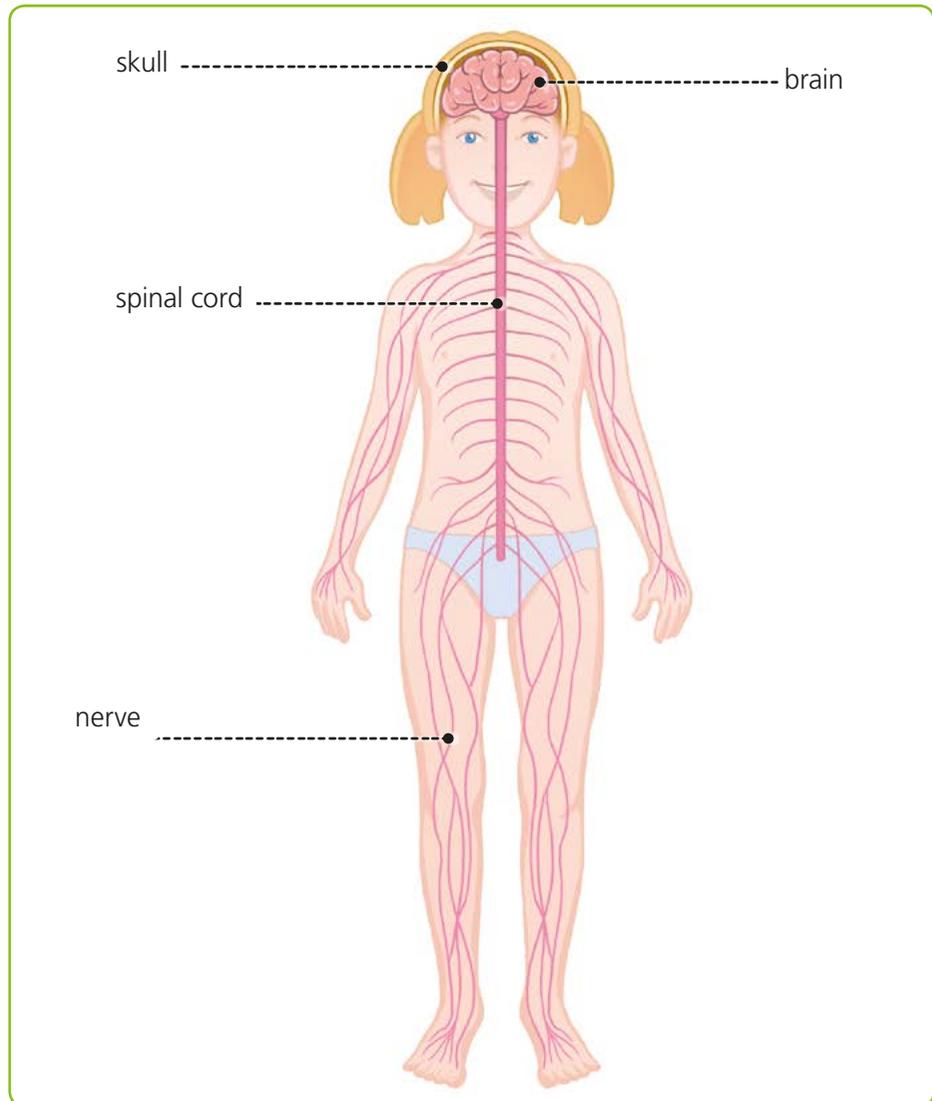
The nervous system controls everything you do: thinking, walking, talking, breathing, remembering, etc. It also allows you to interact with your environment and can keep you safe from danger. The nervous system includes the **brain**, the **spinal cord** and the **nerves**.

## Brain and nerves

The most important part of the nervous system is the **brain**. This organ is inside your head and is protected by the **skull**.

The brain receives information from the sense organs through the **nerves**. In most cases, this information goes to the brain from the **spinal cord**.

The brain reads the signals sent by the eyes, ears, nose, tongue and skin. Then it sends messages back to different parts of the body.



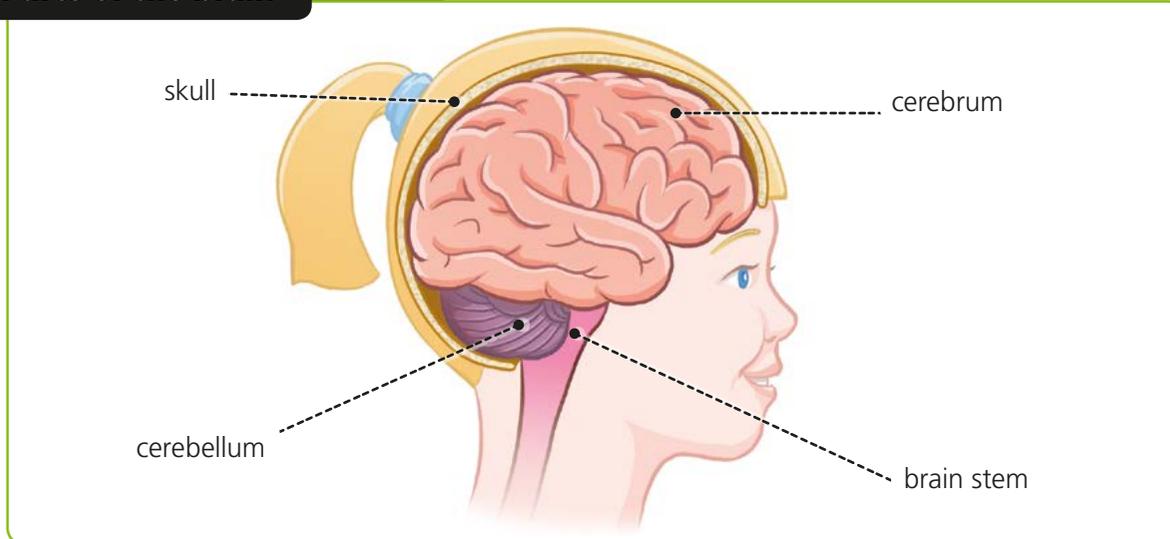
1 What are the three main parts of the nervous system?

2 Listen and write the correct parts of the body.

brain    spinal cord    sense organs

3 Why is the skull important?

## Parts of the brain



The **cerebrum** controls voluntary actions. These are things you want to do, for example, talking, writing or reading.



The **cerebellum** controls balance, movement and coordination.



The **brain stem** controls involuntary actions. These are things you do not think about, for example, breathing and digesting food.

- 4 Which part of the brain helps you when you are riding your bike or skateboarding?
- 5   How can the nervous system keep you safe from danger?
- 6  With your partner, make a list of eight voluntary and involuntary actions. Which parts of the brain control them?

### Useful language

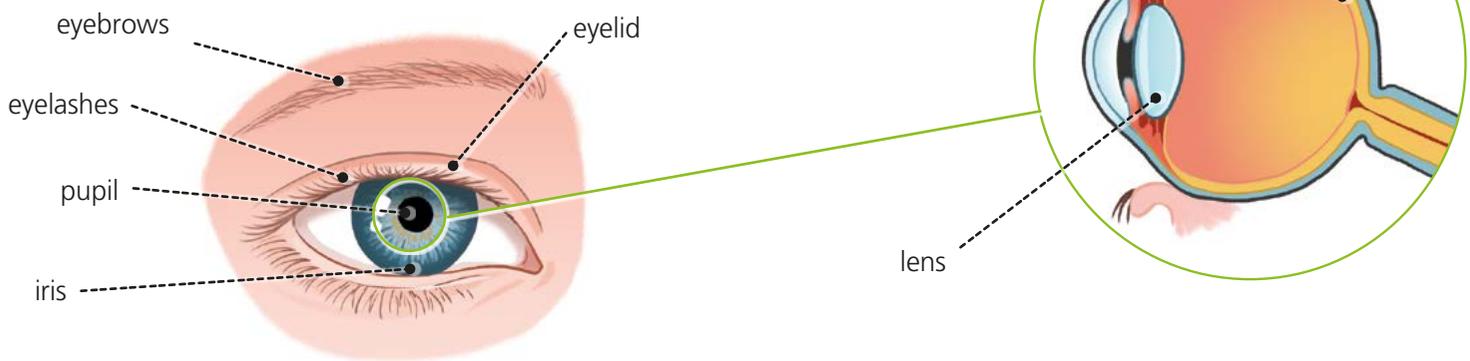
The nervous system warns you about ...

The nervous system sends messages and tells the brain to ...

What colour are your eyes? What part of the eye is coloured?

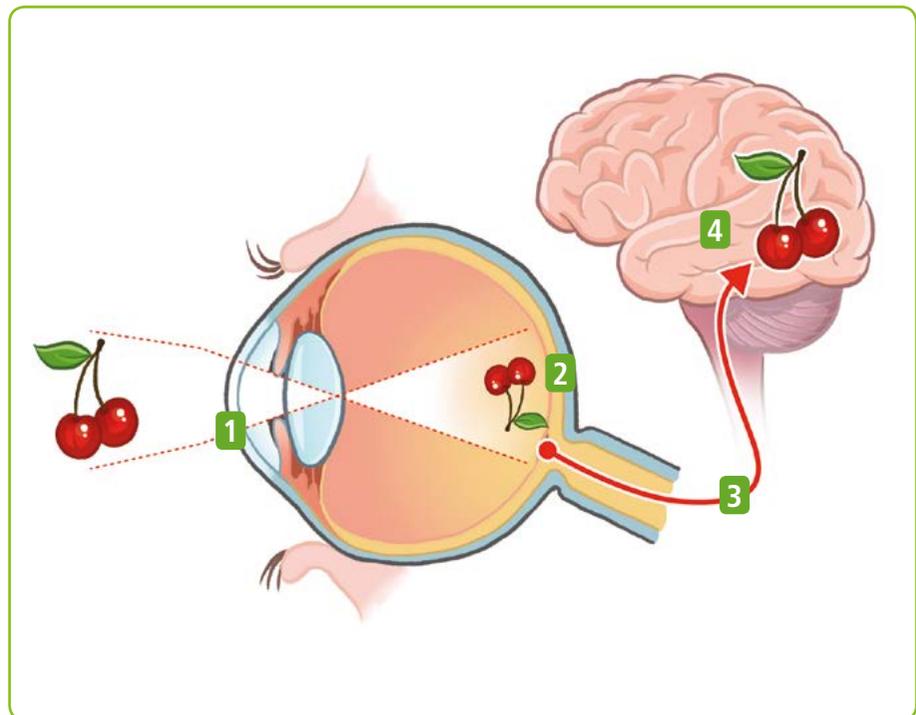
## Eyes

Your **eyes** are the organs of sight. The eyes are very delicate and are protected by the eyebrows, eyelashes and eyelids. These stop sweat and dust from getting into your eyes.



## How do you see things?

- 1 Light reflects off an object and enters the eye through the **pupil**.
- 2 The light goes through the **lens** and makes an image on the **retina** at the back of the eye. The image is upside down.
- 3 The **retina** sends the information to the brain.
- 4 The **brain** reads the signals and turns the image right side up.



1 Name the parts of the eye used for protection. What do they do?

2  Listen and say *external part* or *internal part*.

3  In pairs, look at each other's eyes and identify the different external parts of the eye.

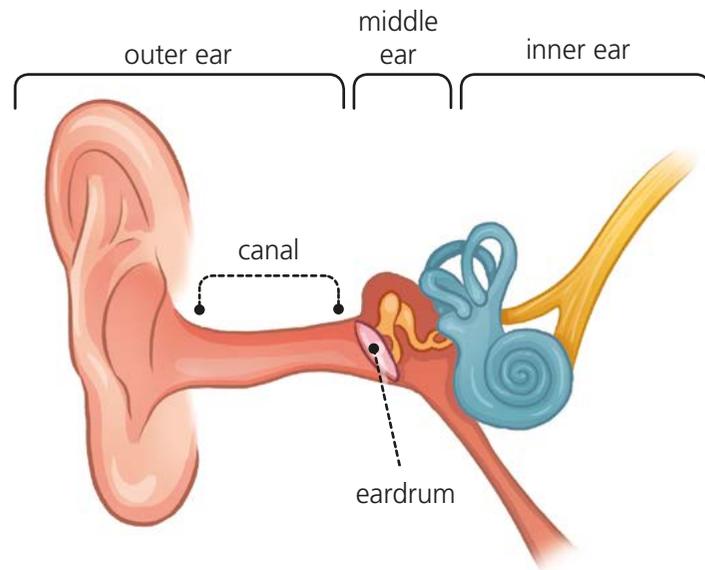
# Hearing



Which organs do we use to hear?

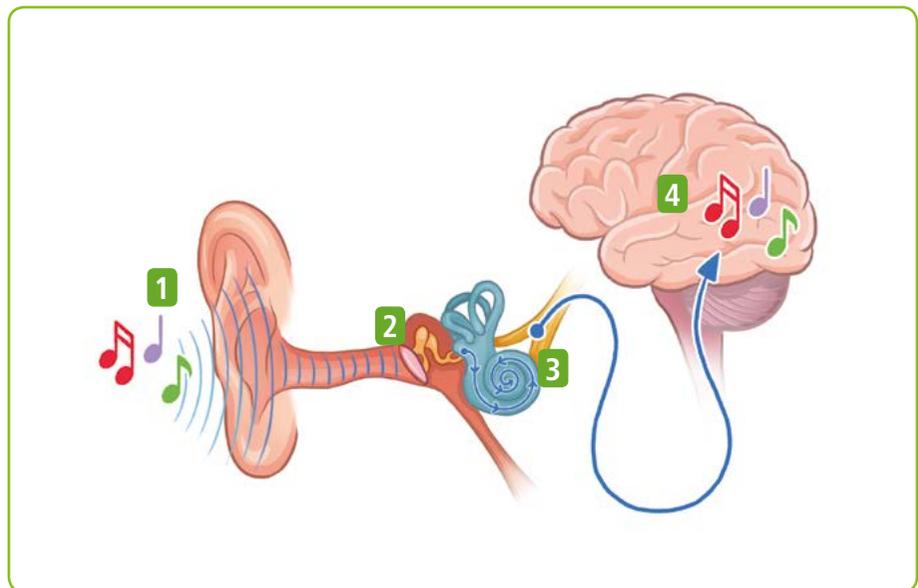
## Ears

Your **ears** are the organs of hearing. The ear has three parts: the outer ear, the middle ear and the inner ear. The ears are very delicate. Earwax is a sticky substance inside your ear canal. It protects your ears from dirt and infection.



## How do you hear things?

- 1 Sound waves enter through the **outer ear**.
- 2 The waves hit the **eardrum** in the **middle ear** and make it vibrate.
- 3 This vibration makes the liquid in the **inner ear** move and send signals to the brain.
- 4 The **brain** reads the signals and tells you what you are hearing.



1 Look around. Which objects make sounds?

2 Which organ reads signals from your eyes and ears?

3 How do sound waves travel? Order the words.

brain      sound wave      middle ear  
outer ear      inner ear

4 Listen and answer in your notebook.

a. What language do deaf people use to communicate?

b. What part of the body do they use to talk?

5 How can you protect your sense of hearing?

6 What are some diseases that affect the sense of hearing?

# Smell and taste

What happens to the sense of smell and taste when you have a cold?

## Smell

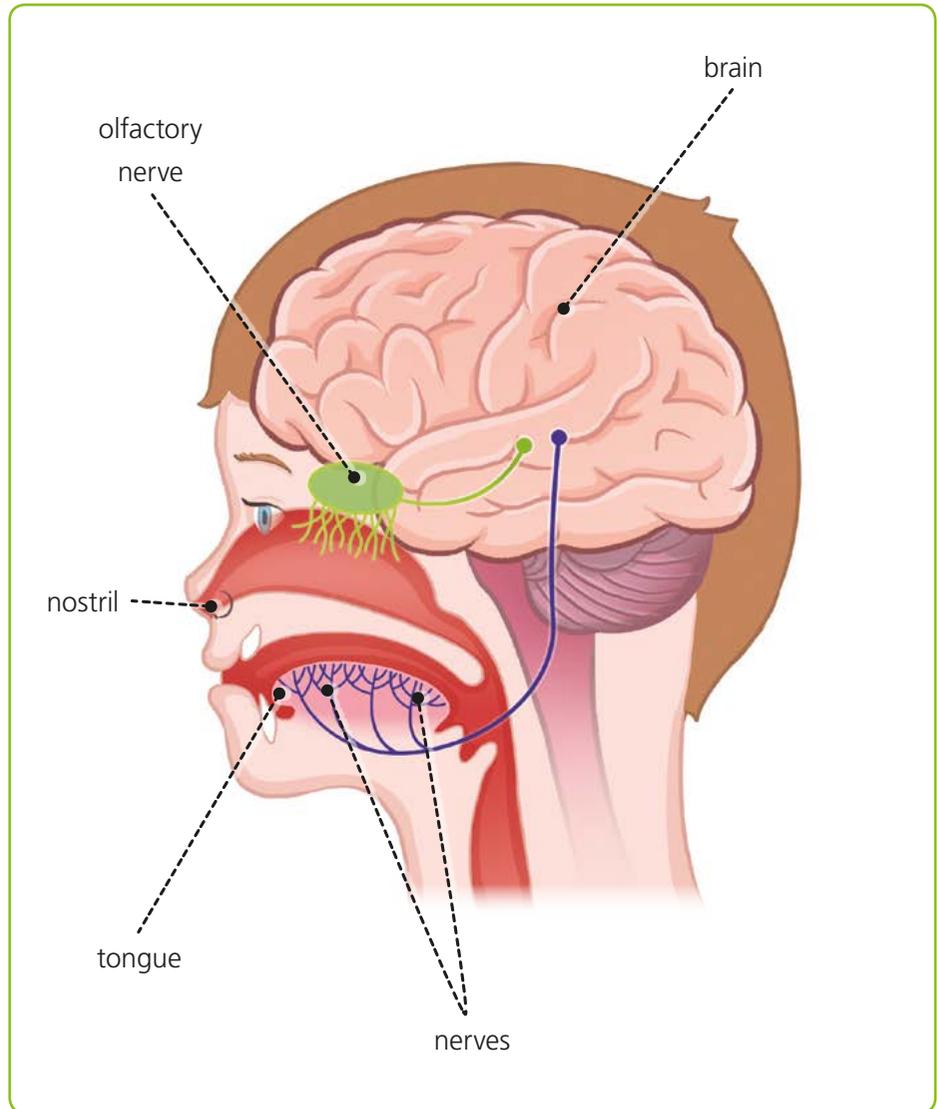
Your **nose** is the organ of smell.

Air enters the nose through the **nostrils**. The **olfactory nerve** sends information to your brain which tells you what you are smelling. You can smell about 10,000 different odours.

## Taste

Your **tongue** is the organ of taste.

The tongue is covered in **taste buds**. These identify different tastes. Nerves send information about the different tastes to your brain.



## Project tips

Spices are ingredients which add flavour to food.

- 1 What does the olfactory nerve do?
- 2 What is the function of the taste buds?
- 3   Think of six different foods. How do they taste?
- 4  Listen and answer in your notebook.
  - a. Which smells does the boy like?
  - b. Which smell does he hate?
- 5  Why do you sneeze?

## Useful language

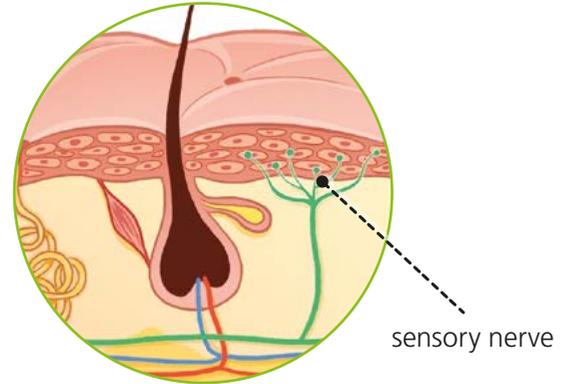
A / An ... tastes sour / bitter, etc.

A / An ... tastes delicious / horrible, etc.

Which is the largest organ in the human body?

## Skin

Your **skin** is the organ you use to touch. The body is covered in skin. Your skin can tell you if something feels hot or cold, rough or smooth, hard or soft. Sensory nerves send this information to your brain.



hot



rough



hard



cold



smooth



soft

1 🗨️ With a partner, think of two objects for each characteristic.

smooth    cold    rough    hot

2 🗨️ 👍 Explain why touch is such an important sense.

3 🗣️ Listen and write the correct word in your notebook.

- a. A person with tactile agnosia cannot identify an object by **smell** / **touch**.
- b. The part of the body that does not function correctly is the **nose** / **brain**.

### Useful language

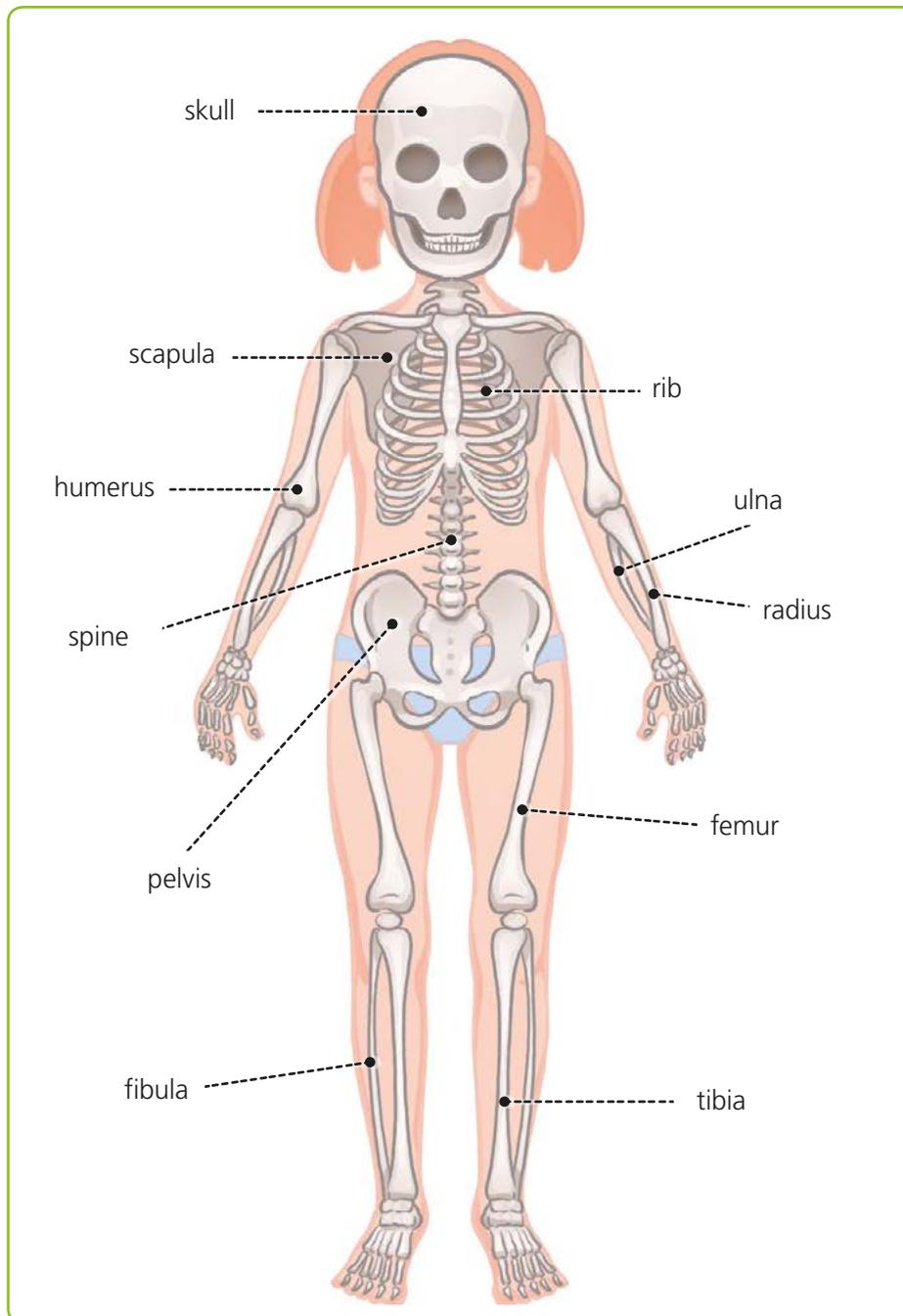
Touch is an important sense because ...

# The locomotor system

The **locomotor system** lets you control the different parts of your body and allows you to move around. The locomotor system includes bones, joints and muscles.

## The skeleton

All the **bones** make up the skeleton. Your bones are connected by **joints**. The joints in your knees, elbows and shoulders allow your bones to move.



What should you do before you exercise?

**1** Look at the picture and name:

- a. the bone that protects the brain.
- b. the bones that make up the lower limbs.
- c. the bones that make up the upper limbs.

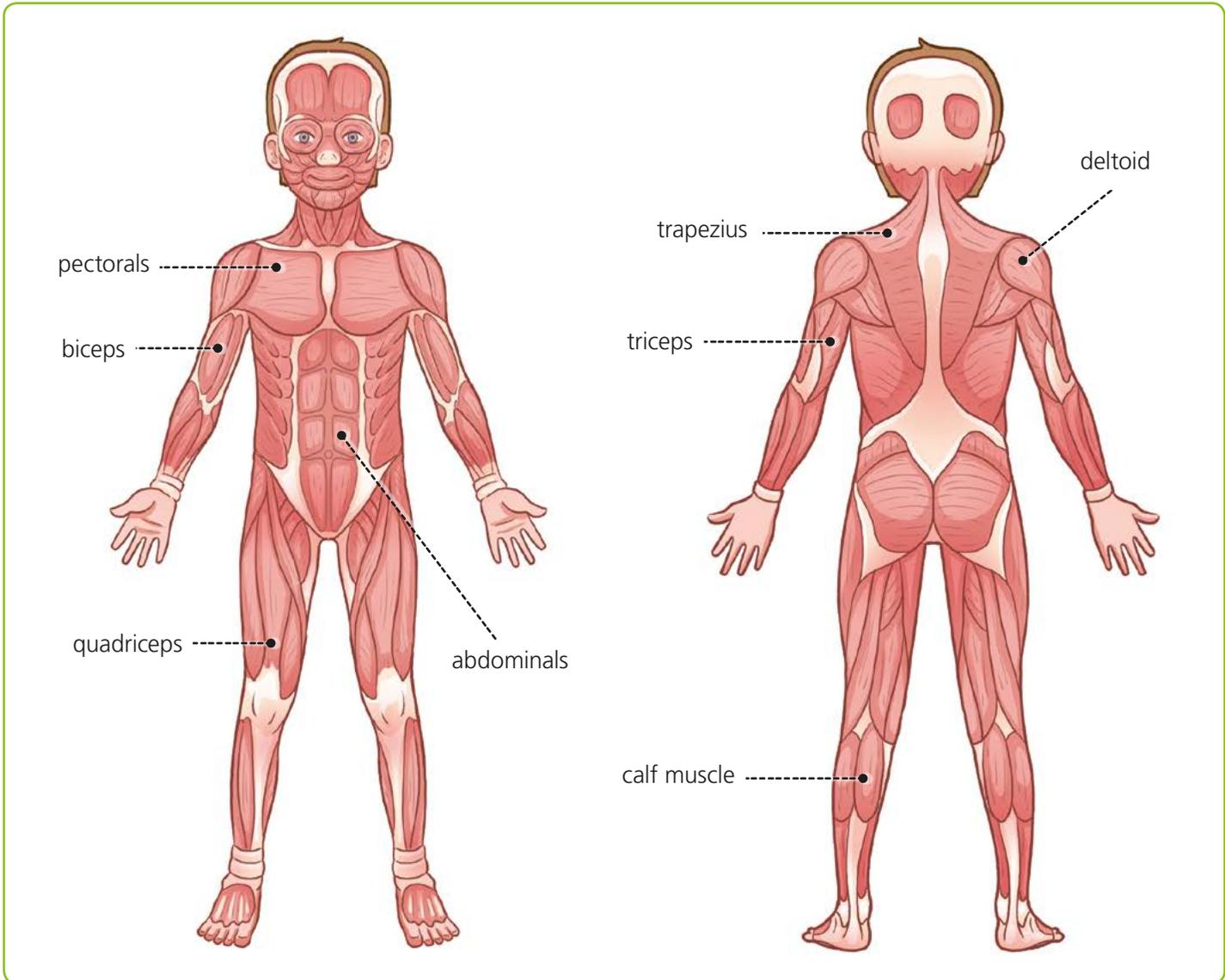
**2**  Listen and answer.

- a. How many bones do you have in your body?
- b. Which is the longest bone in the body?
- c. Where is the stapes, the smallest bone in the body?

**3**  Take turns with a partner. Ask: *Where is your femur? Where is your skull?* Your partner points to the correct bone.

## Muscles

You have **muscles** around many of your bones. They help you walk, stand, sit, hold objects and make other movements.



- 4** Look at the pictures above and answer the questions.
- Which muscles help you walk and jump?
  - Which muscles help you move your arms?
  - Which muscles do you use to pick up heavy objects?

- 5**  The heart is a muscle too. What function does it have? Which bones protect it?

- 6**  Which muscles can you control? Listen and say the correct words.

heart   quadriceps   calf muscles   eyelids

# Sensing our world

What can you do to protect your senses? Look at the photos. Which objects can these people use to protect their senses? Match the people to the objects they need.



- 1 Look at photos a–d. Which of these objects do you use to protect your senses?
- 2 How can you protect your skin from the sun?
- 3 What else can you do to look after your senses?
- 4 Read the text below. How can you protect your hearing?

Listening to loud noises can damage your sense of hearing. To protect your sense of hearing, don't turn the volume up high when you are watching TV and remember to turn the volume down when you are using headphones. You can help other people to protect their hearing by using a quiet voice in class.

- 5 With a partner, prepare a list of five ways that you will try to follow every day to protect your senses.

## Useful language

I can ...  
 It's safe to ...  
 It's not safe to ...

## Protect your sense of sight

Looking at screens, including mobile phones, can cause eye damage. Screens can make your eyes tired and become dry and red. Make sure you take a break when working with screens and try to spend as much time as possible playing outside. Remember to wear sunglasses on a sunny day as bright sunlight can damage your eyes.

### Useful language

I think that ...

I don't think that ...

People can ...



screen



sunglasses



tired eyes



### 6 Which of these things are bad for your sight?

watching TV all day      wearing a cap on a sunny day  
reading in a dark room      looking at a screen

### 7 How can you protect your sense of sight? Think of ways with your partner.

### 8 Make a list of people who need to protect their sight at work.

### 9 Imagine you need to design a sign to remind people to protect their sight. Here are some ideas to help you.

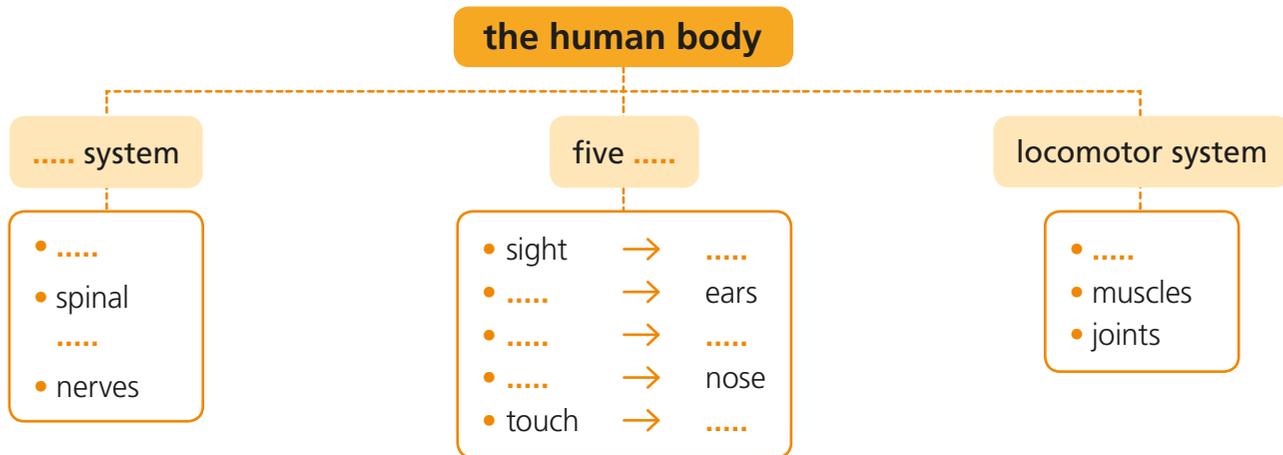
- Decide who the information will help:

people at home      people at the beach      workers

- Choose one piece of advice for these people.
- Design a symbol to show people what they can do to protect their sight.
- Draw and colour your symbol.
- Write a sentence under the symbol to explain what people can do to protect their sight.

# REVIEW

1 Copy and complete in your notebook.



2  Which sense organ are they using? Listen and choose the correct picture.



3 Choose the correct words and write the sentences in your notebook.

- a The **eye** / **brain** is the control centre of the body.
- b A **knee** / **leg** is a type of joint.
- c The **skin** / **brain** is the largest organ in the body.
- d The arms are the **upper** / **lower** limbs.
- e The **skull** / **spinal cord** protects the brain.
- f The **brain stem** / **cerebellum** controls coordination.

4 In your notebook, write which of the five senses these objects protect.



5 How do you see and hear things? Order the words in your notebook.

a retina pupil brain lens light

b middle ear sound brain inner ear outer ear

6  In pairs, put the words in order to make questions. Test your partner.

**Pupil A**

- a. organ / the / What / sight / is / of ?
- b. brain / does / do / What / the ?
- c. ear / parts / How / does / the / have / many ?

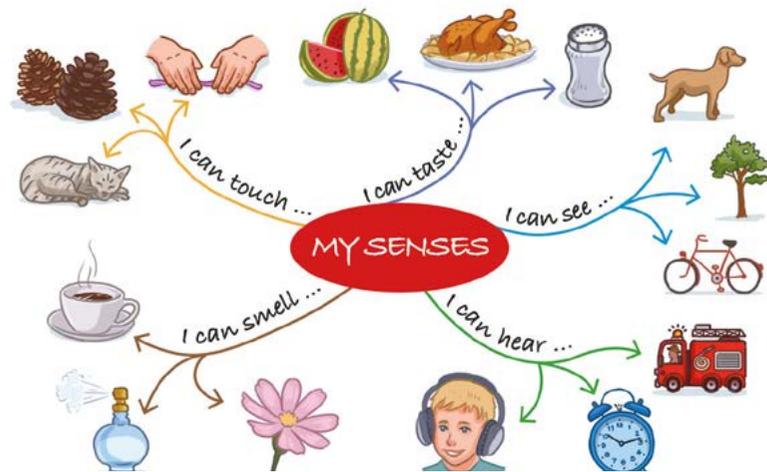
**Pupil B**

- a. does / What / locomotor / the / include / system ?
- b. organ / is / smell / What / the / of ?
- c. external / the / What / are / eye / of / the / parts ?

**Study skills**

Use a visual diagram to show how you use your senses.

- Write the main subject in the middle.
- Add sections. Use different colours.
- Add information to each section.
- Add pictures.



 What do you know now? Check your progress!