

1

WHY DO BABIES HAVE MORE BONES THAN ADULTS?

Look and see ...

Name the senses
in the pictures.



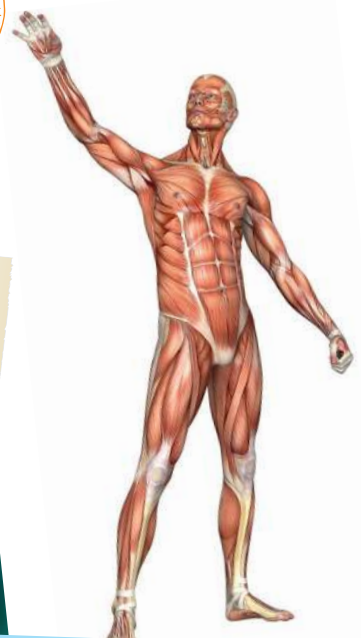
Can you name
any bones on
the skeleton?



Song 02
Five senses



What do joints do?



What do muscles do?

DOCUMENTARY
Helping the senses



In this unit, you will make a mural about a season and the five senses.
To do this, you will:

- choose a season and think about what it reminds you of.
- learn about the five senses.
- think about how your senses help you enjoy the seasons.

HOW DOES YOUR BRAIN WORK?

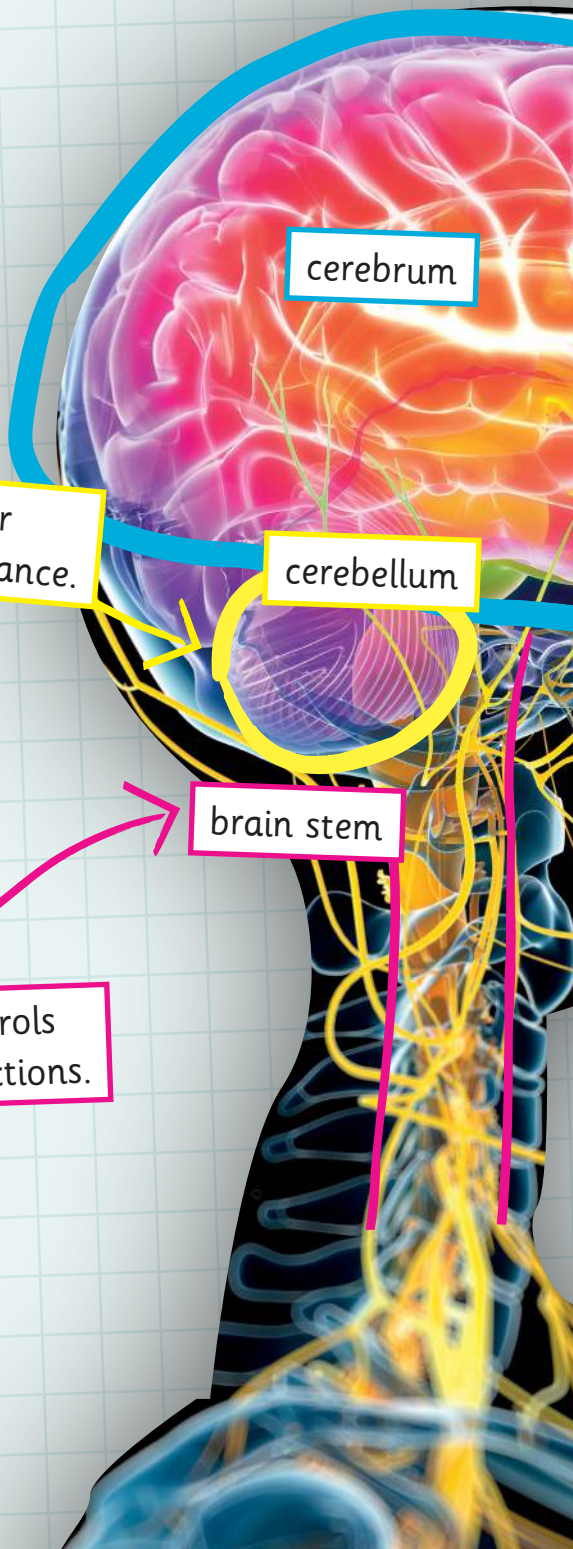


Body systems are made up of organs. The **brain** is the organ that controls everything we do. It is the control center of the **nervous system**.

By the end of this lesson, you will know which part of the brain stops you from falling over.



This part controls our coordination and balance.



cerebrum

cerebellum

brain stem



This part controls involuntary actions.



Do you remember
what the *sense*
organs are?

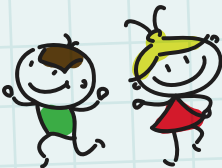


Our sense organs send
information to our brain.
This information travels to
our brain through the **nerves**.

The brain then sends information
back, through the nerves, to
different parts of the body.



This part controls
voluntary actions.



Which part of the
brain helps us to dance?



Investigate STAGE 1

- Choose one of the four seasons.
- Quickly write down five things it reminds you of.
- Compare your list with a partner.

I've chosen ... It
reminds me of ...

WHY DO YOU HAVE A SKELETON?



By the end of this lesson, you will know what the parts of the musculoskeletal system are.

The **musculoskeletal system** allows us to move. It has three main parts.

Joints are where our bones connect to each other.

Muscles are soft and elastic. They help us move.

Can you find the skull, ribs, and spinal column in the skeleton?

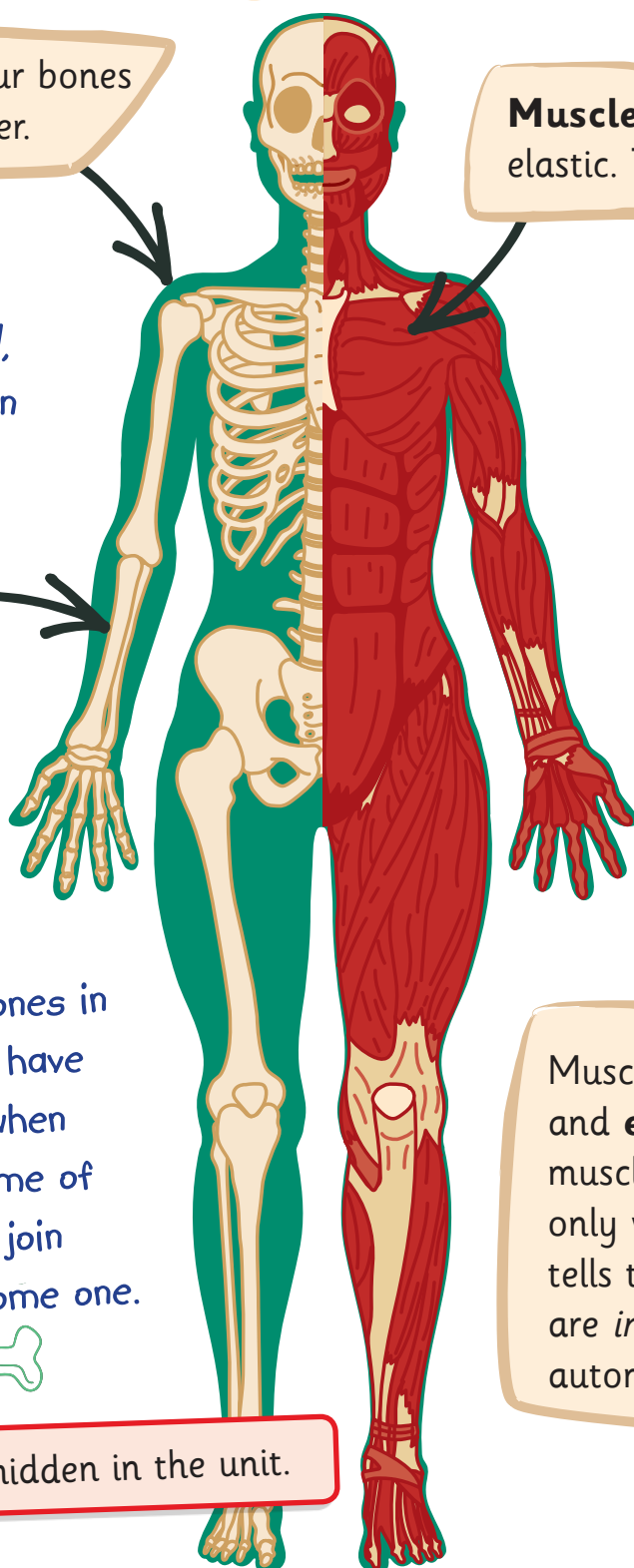
Bones are hard and rigid. They form our **skeleton**, which gives our body shape.



Adults have 206 bones in their body. Babies have about 300 bones when they are born. Some of these bones later join together and become one.



Find the skeleton hidden in the unit.



Muscles work by **contracting** and **expanding**. Some muscles are *voluntary* – they only work when our brain tells them to. Other muscles are *involuntary* and they work automatically – like the heart.

WHY DO YOU HAVE EARWAX?



Our senses allow us to **interact** with the world around us. Our **sense of hearing** allows us to distinguish between different sounds.

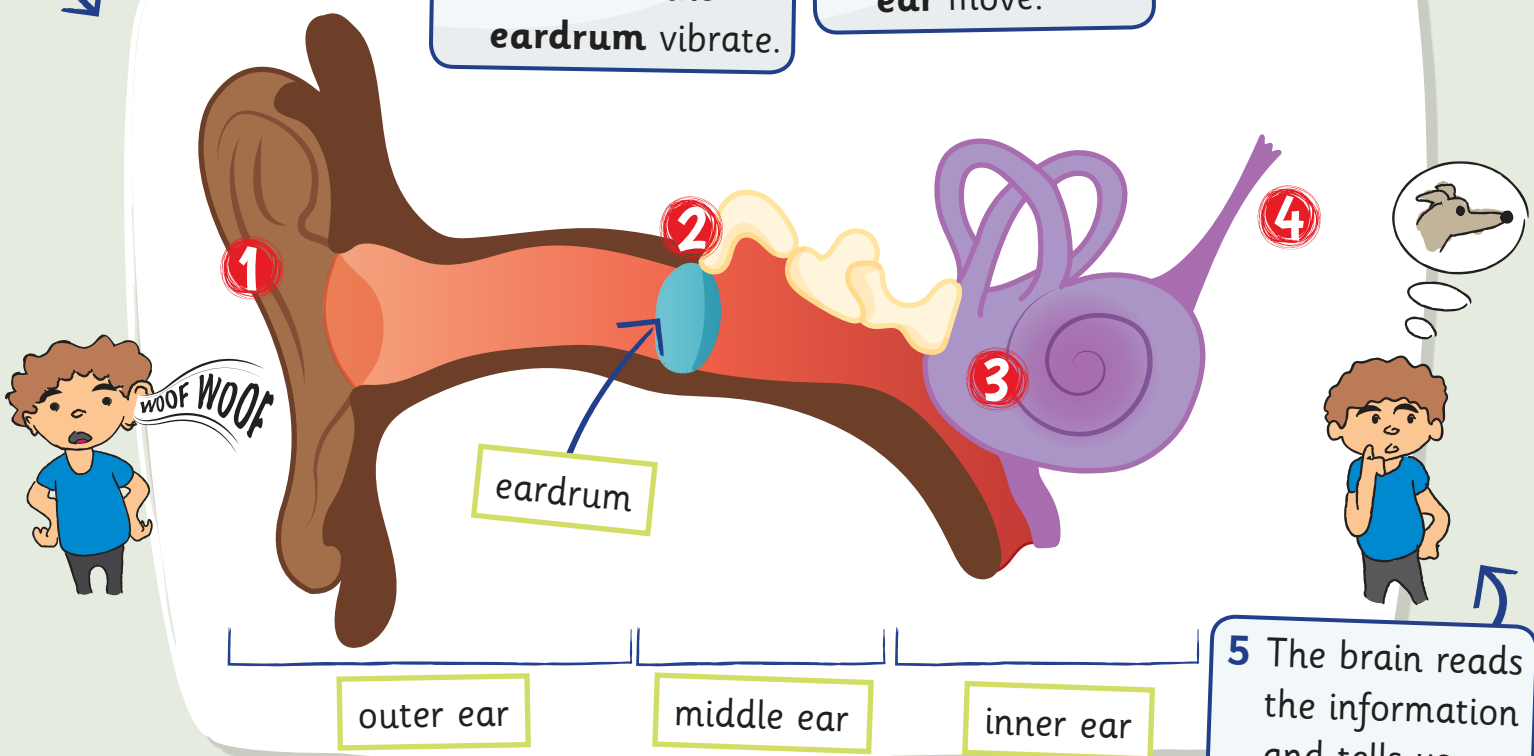
By the end of this lesson, you will know how we can take care of our hearing.

1 Sound waves enter the **outer ear**.

2 They continue to the **middle ear** and make the **eardrum** vibrate.

3 These vibrations make the liquid in the **inner ear** move.

4 This movement sends information to the **brain**.



Listen. What sounds can you hear?

5 The brain reads the information and tells us what we are listening to.

Investigate STAGE 2

- What sounds can you hear during your season?
- Did you mention any of these sounds in Stage 1?
- Print out pictures of the things you can hear and write sentences about them.

Take care of your ears.



Our ears produce a sticky substance called earwax. Earwax protects our ears from dirt and infection.

WHICH PART OF YOUR EYE IS SIMILAR TO A CAT'S WHISKERS?

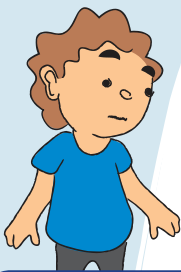


By the end of this lesson, you will know which part of the eye is called the pupil.

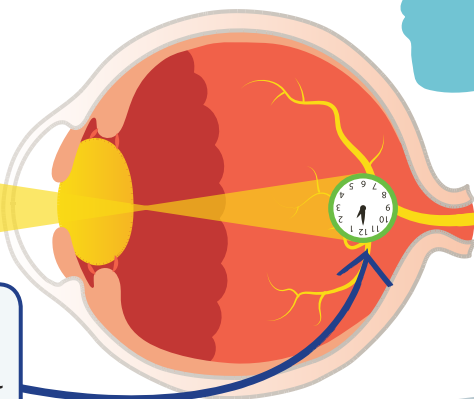
Our **sense of sight** allows us to perceive shapes, size, movement, distance, and color.

4 The brain reads the signal and tells us what we are seeing.

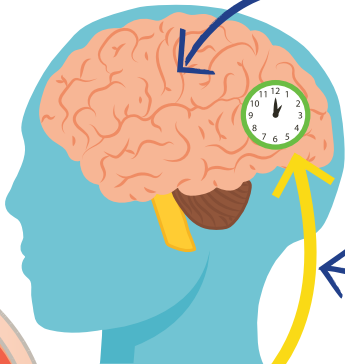
1 Light reflects off an object and enters the eye.



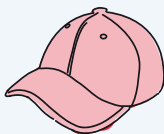
2 The light forms an upside-down image on the **retina**.



3 The information is sent to the **brain**.



LUNCH TIME!



Eyelashes protect the eye from dust and sweat. Also, if something is too close to your eye, your eyelashes sense it and warn you ... in the same way that a cat's whiskers do.

eyelashes

eyebrow

eyelid

pupil

iris

There are beautiful / amazing / interesting ...

Find out how to take care of your eyes.



STAGE 3

- Think about what you can see during your season.
- Draw and color pictures of the things you can see.
- Compare your pictures with a partner using different adjectives.

UPSIDE-DOWN IMAGES

Hands on!

Before you start

The image that forms on the back of the eye (the retina) is upside-down.

Materials

long cardboard tube, wax paper, tape, black construction paper, rubber bands, aluminum foil, pushpin

Method

- 1 Cover one end of the cardboard tube with wax paper and secure it with tape.
- 2 Cut out a piece of black construction paper, the same length as the tube. Cover half of the tube with the construction paper and secure it with a rubber band.
- 3 Cover the end of the black construction paper with aluminum foil.
- 4 Make a small hole in the aluminum foil with the pushpin.
- 5 Point the camera at an object. You can zoom in or out by moving the black construction paper.

Conclusions

What happened to the object when you looked at it through the camera?

Which part of the pinhole camera functions as the pupil?

Which part of the pinhole camera functions as the retina?



The ... functions as the ...

The camera formed an ... image.

Why should you not touch the pupil of your eye?

HOW DO YOU KNOW IF POPCORN IS SWEET OR SALTY?



Our senses of **smell** and **taste** are connected. These senses help us decide which foods we like and which we do not like.

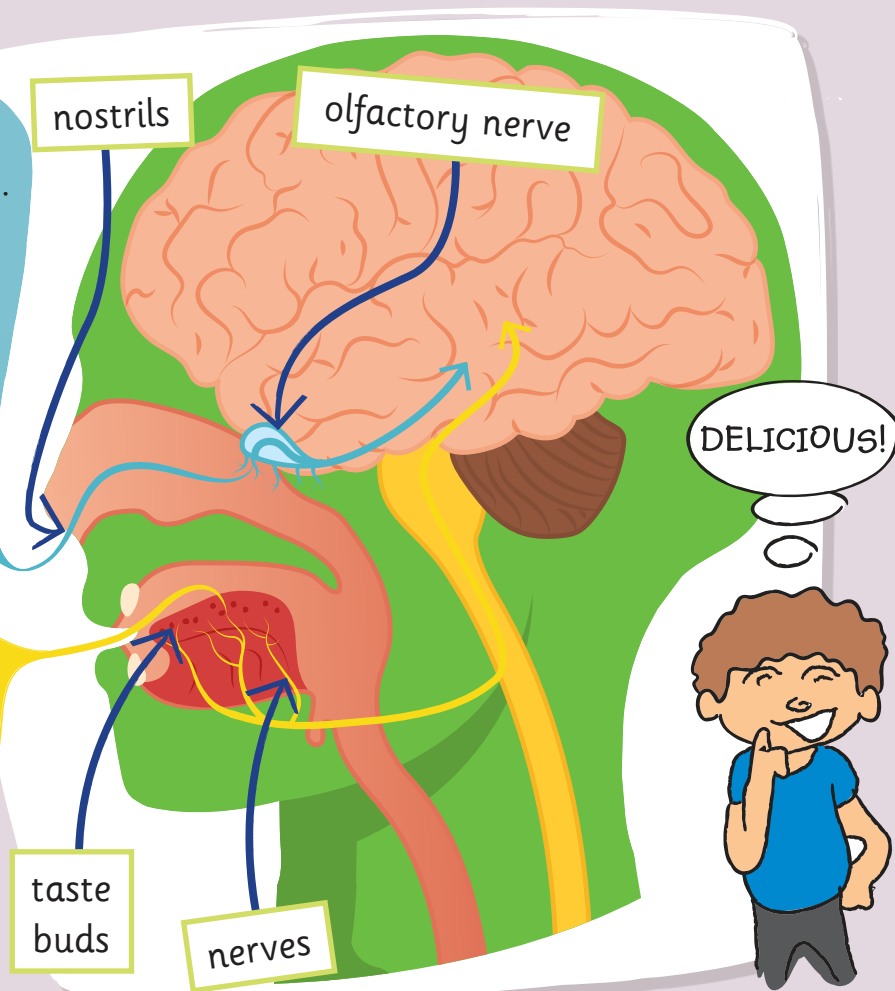
By the end of this lesson, you will know how information about different smells and tastes reach the brain.

Smell

- 1 Air enters the nose through two holes called the **nostrils**.
- 2 The **olfactory nerve** detects the smells and sends the information to the brain.

Taste

- 1 Tiny **taste buds** on the tongue identify different tastes. Different tastes can be identified anywhere on the tongue.
- 2 This information is sent to the brain via the **nerves**.



There are four main tastes: sweet, salty, bitter, and sour.

Find out how to take care of your nose and mouth.

Look back

How do the foods on pages 6 and 7 taste?

Investigate STAGE 4

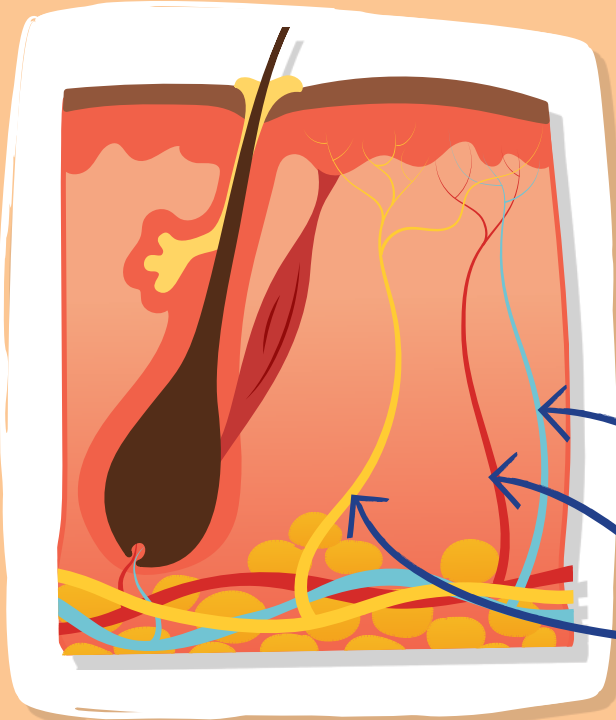
- What can you smell and taste during your season?
- Do you eat any typical foods at this time of the year?
- Make a menu for your season with pictures.

HOW DOES YOUR SKIN STOP YOU GETTING BURNED?



By the end of this lesson, you will know which nerves send information about how things feel to the brain.

How do we know that a tree feels rough, but a sweater feels soft? Our body is covered in **skin** and our skin is the organ of **touch**.



Our skin tells us if something is rough, smooth, hard, or soft. **Sensory nerves** below the skin send information to the brain when we touch something. If something is too hot, our skin will tell us!

sensory nerves



How do these things feel?

Investigate STAGE 5

- What things can you touch during your season?
- Search for pictures of them on the internet.
- Label the pictures with adjectives to describe how they feel.

Find out how to take care of your skin.

