

## THE HUMAN BRAIN

### WORDS

- **allow** = let
- **area** = place
- **balance** = to spread your weight so that you do not fall
- **breathe** = to take air into your lungs and send it out again
- **cell** = the smallest part of a living thing that can exist by itself
- **connect** = join together
- **consists of** = is made up of
- **crack** = a line that splits an object apart, but it doesn't break
- **digest** = to change food that you have eaten into things your body can use
- **functions** = job, task, work
- **in charge of** = to control
- **manage** = control
- **memory** = the ability to remember things that have happened
- **movement** = when you change your position or move from one place to another
- **oxygen** = the gas that is in the air and that we need to survive
- **pain** = the feeling you have when your body hurts
- **protect** = defend, guard
- **scientist** = a person who is trained in science
- **shape** = the form that something has
- **skull** = the bones of the head
- **solve** = to find a way to do something
- **speech** = the ability to speak
- **spinal cord** = the thick string of nerves that lies in your back. It transports messages to and from your brain
- **sponge** = soft material that can absorb water; it is used for washing and cleaning
- **store** = to keep things in a place
- **surface** = the top part of an object
- **weigh** = how heavy something is
- **wrinkles** = lines in your skin

The human brain is a very powerful organ. It controls all parts of the body and **allows** you to think, feel, move your arms and legs and it helps you stay healthy.

The brain looks like a pink **sponge** and **consists** of a mass of nerve **cells**. It is **protected** by the **skull**. An adult's brain **weighs** about 1.5 kilograms.

### MAIN PARTS OF THE BRAIN

#### Cerebrum

The biggest part of the brain is the cerebrum. It makes up about 85 % of the brain's **weight**. Its **surface** has a lot of **wrinkles** and **cracks**. The cerebrum is the thinking part of the brain. It controls your muscles and makes them move when you want them to.

When you think hard, try to **solve** a math problem or draw a picture you use your cerebrum. It is also the **area** which **stores** your **memory**.

The cerebrum has two halves. Some **scientists** think that the right half helps you think about things like music, colours or **shapes**. The left half helps you think logically and controls your **speech**. The right half of the cerebrum controls the left side of your body and the left half controls the right side.

#### Cerebellum

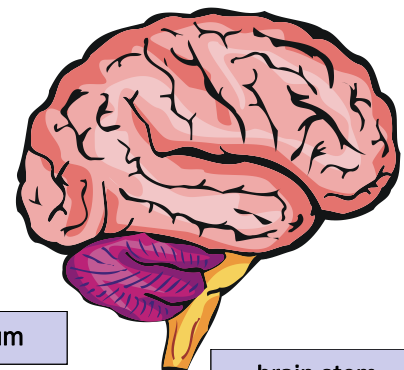
The cerebellum is a lot smaller than the cerebrum and sits at the back of the brain. It's very important because it controls **balance**, **movement** and the way your muscles work together.

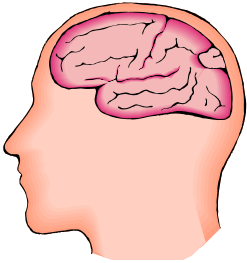
It **allows** you to stand on your feet without falling down or lets you **balance** your **weight** on a surf- or snowboard.

#### Brain Stem

The brain stem is below the cerebrum and in front of the cerebellum. It **connects** the brain to your **spinal cord**. This part of the brain controls the **functions** your body needs in order to stay alive and it is **in charge of** things that happen automatically. **Breathing**, body temperature, **pain**, hunger and heartbeats are all **managed** by the brain stem.

It tells your heart to pump more blood when you go jogging and need more **oxygen**, or it tells your stomach to **digest** the food that you eat. It sends messages back and forth between your brain and other organs of your body.





## THE HUMAN BRAIN

### WORDS

- **ability** = the power to do something
- **activity** = something that happens
- **affect** = to have an effect on ; influence
- **artery** = a tube that carries blood from your heart to the rest of your body
- **blood pressure** = the force with which blood travels through your body
- **cause** = reason for
- **cell** = the smallest part of a living thing that can exist by itself
- **certain** = special
- **common** = very popular
- **connect** = to join together
- **create** = make
- **damage** = destroy, hurt
- **destroy** = damage
- **develop** = grow
- **disease** = illness
- **disorder** = an illness which does not let parts of your body work in the correct way
- **drug** = here : medicine
- **error** = mistake
- **genetic** = what you get from your parents
- **growth** = to get bigger
- **inherit** = get
- **injury** = when you are hurt in an accident
- **jerky** = rough, sudden movements, with many starts and stops
- **loss** = if you lose something
- **membrane** = a thin piece of skin that covers or connects parts of your body
- **memory** = the ability to remember things that have happened
- **mental** = everything that has to do with your brain
- **movement** = when you change your position or move from one place to another
- **occur** = to happen
- **oxygen** = the gas that is in the air and that we need to survive
- **partly** = not fully
- **pathway** = many nerves that give information to each other
- **pressure** = force, weight
- **rapid** = fast
- **record** = to write down on a machine
- **recover** = to become healthy again
- **remove** = to take away
- **replace** = put back, return
- **serious** = very bad, dangerous
- **spinal cord** = the thick string of nerves that lies in your back . It transports messages to and from your brain
- **stroke** = when an artery with blood suddenly breaks open or is blocked ; when this happens a person may not be able to use some muscles; it can even lead to death
- **suffer** = to feel pain
- **victim** = here: people who have this illness
- **X-ray** = light that goes through a person's body . It can show you pictures of inside organs

### THE NERVOUS SYSTEM

The brain is made up of millions and millions of nerve **cells** called neurons. Almost all of them are there when you are born but they are not **connected** with each other. When you learn things as a child the brain starts to **create pathways** between the neurons. As time goes on things become easier for you to do and you don't have to think about them because you do them automatically.

### BRAIN DISORDERS

**Injuries**, illnesses and other **diseases** that you may **inherit** from your parents or grandparents can **damage** your brain. **Disorders** that **destroy** brain cells are very **serious** because the body cannot **replace** lost cells.

A **stroke occurs** when the brain cells do not get enough **oxygen**, which is transported throughout your body by blood . If this happens the brain can no longer work in the **damaged** area . Many **stroke victims** are not able to use a **certain** side of their body and, very often, they lose the **ability** to speak clearly. Strokes are often **caused** by high **blood pressure** or when **arteries** become harder. Some **stroke victims** die, others **re-cover partly**.

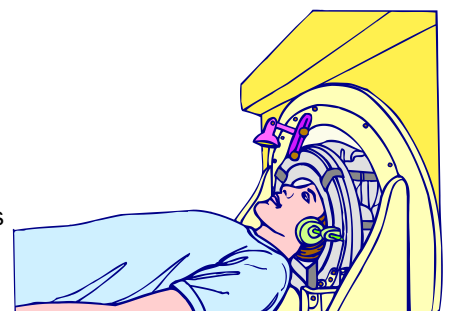
Brain tumours are **caused** by the **rapid growth** of cells. Such fast-growing cells **destroy** healthy ones . As they grow they **create pressure** and may **damage** other areas of the brain. Sometimes tumours can be **removed** by operations or with **drugs**.

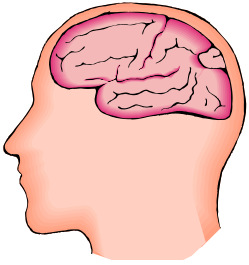
Many diseases that are **caused** by bacteria or viruses can also do **damage** to the human brain. One of the most **common** illnesses is meningitis , a **disease** that **affects** the **membranes** that cover the brain and the **spinal cord**.

Sometimes the brain of an unborn baby does not **develop** the way it should. In Down's syndrome there is an extra chromosome that **causes mental disorder**. In other cases **genetic errors cause** brain **damage** in later life. Huntington's disease, for example, **occurs** mostly during middle age. It leads to **jerky movements** of the body.

Alzheimer's disease often **occurs** after the age of 60. Many **victims suffer** from a **loss** of **memory** and they often cannot care for themselves.

Today, modern medicine has ways and methods of looking into the human brain. The EEG ( electroencephalogram ) **records** the **activity** in the brain. Computed tomography makes pictures by sending many **X-rays** through the brain. Magnetic resonance imaging (MRI) uses powerful magnets to show how atoms in your brain change.





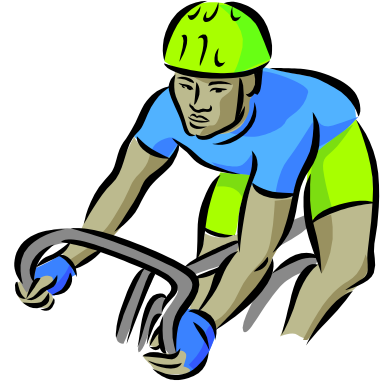
## THE HUMAN BRAIN

### WORDS

- **conscious** = to be awake ; if you are able to see and understand the things around you
- **feature** =characteristic, special quality
- **force** =to make someone or something do something
- **injury** = when you are hurt in an accident
- **oxygen** = the gas that is in the air and that we need to survive
- **pain** = the feeling you have when your body hurts
- **reach** = get to
- **solve** = to find a way to do something
- **weight** =how heavy something is

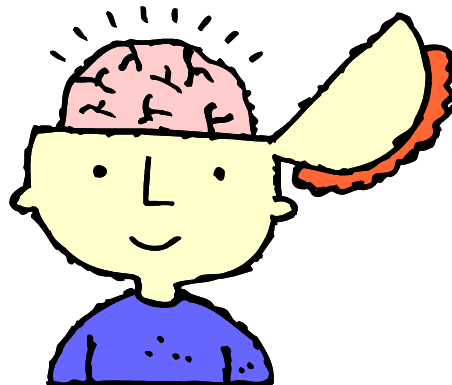
### WHAT CAN YOU DO FOR YOUR BRAIN ?

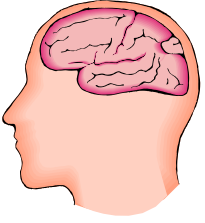
- Eat healthy food
- Don't drink alcohol or smoke cigarettes
- Wear a helmet when you ride a bike, go snowboarding or roller skating. It protects you from head **injuries**.
- Use your brain by doing a lot of things that **forces** it to work. Activities like reading, playing music and **solving** puzzles keep your brain active.



### INTERESTING FACTS ABOUT THE BRAIN

- In an unborn baby , the brain is formed much quicker than other organs
- The brain **reaches** its full **weight** when you are 6 years old.
- The brain does not feel any **pain**. As a result doctors can perform operations on people who are **conscious**.
- Brain cells begin to die if they don't get **oxygen** for three to five minutes.
- The brain gets 20% of your body's **oxygen** even though it only makes up 2 % of your **weight**.
- Everyone's brain has the same **features** but no brain looks exactly like any other.





## THE HUMAN BRAIN

ANSWER THE FOLLOWING QUESTIONS IN YOUR OWN WORDS

What does our brain look like and how heavy is it ? \_\_\_\_\_

\_\_\_\_\_

What happens in the two halves of the cerebrum ? \_\_\_\_\_

\_\_\_\_\_

What is the cerebellum in charge of ? \_\_\_\_\_

\_\_\_\_\_

Name a few things that you do automatically without wanting to ? \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

What happens to stroke victims ? \_\_\_\_\_

\_\_\_\_\_

How can brain tumours be removed ? \_\_\_\_\_

\_\_\_\_\_

What is Down's syndrome ? \_\_\_\_\_

\_\_\_\_\_

How can doctors see what happens in our brain ? Name three methods ! \_\_\_\_\_

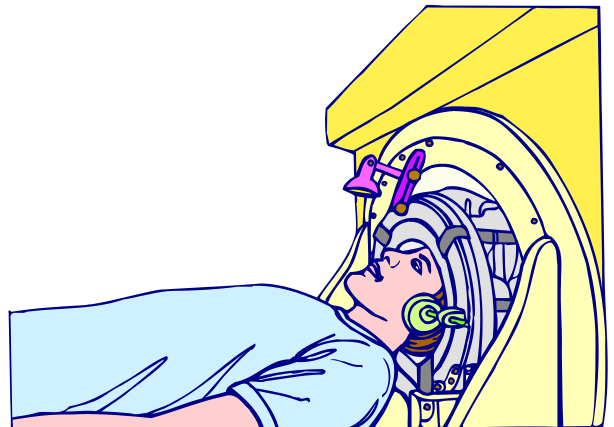
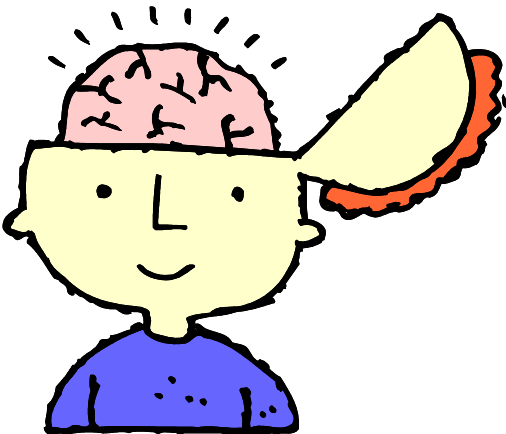
\_\_\_\_\_

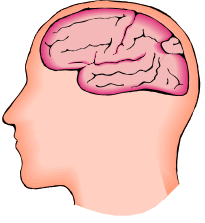
\_\_\_\_\_

What can you do to protect your brain ? \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_





## THE HUMAN BRAIN

DESCRIBE THE FOLLOWING WORDS IN ENGLISH !

Spinal cord \_\_\_\_\_

Neuron \_\_\_\_\_

Stroke \_\_\_\_\_

Brain tumour \_\_\_\_\_

Meningitis \_\_\_\_\_

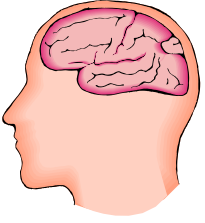
Alzheimer's disease \_\_\_\_\_

EEG \_\_\_\_\_

Computed tomography \_\_\_\_\_

**WHICH OF THESE STATEMENTS ON THE HUMAN BRAIN ARE TRUE OR FALSE ?**

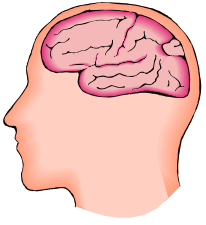
	T	F
Brain cells can be without oxygen for half an hour before they die.		
Drinking alcohol and smoking cigarettes may cause damage to your brain .		
An adult's brain weighs about 1.5 kg.		
The cerebellum is the largest part of the brain.		
The brain stem controls things that happen automatically.		
When a baby is born all neurons are already connected with each other.		
Blood carries oxygen to and from your brain.		
Strokes often happen when your blood pressure is high.		
Huntington's disease occurs mostly when you are very young.		
The EEG can show you pictures of your brain.		
The brain cannot feel any pain.		



# THE HUMAN BRAIN

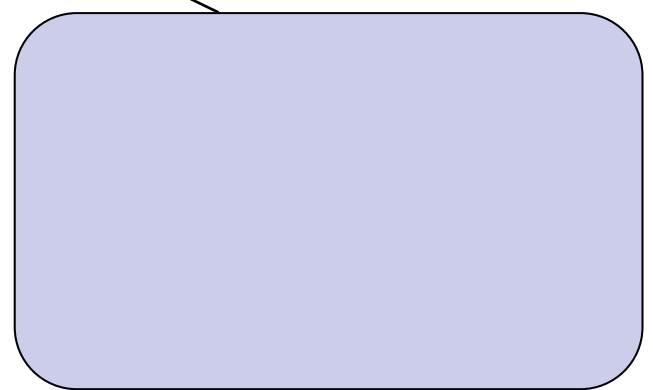
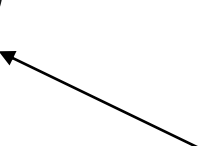
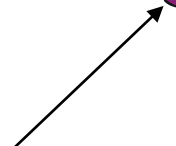
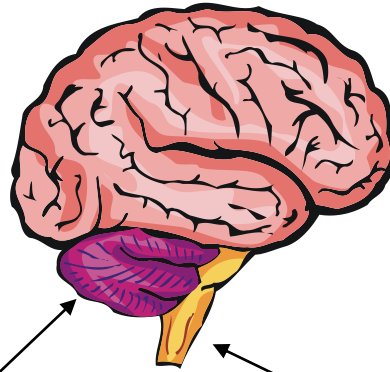
## MATCH THE WORDS WITH THE DEFINITIONS

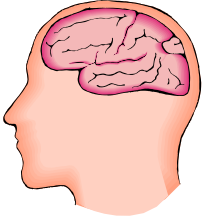
A	breathe		the ability to remember things that have happened
B	brain stem		lines in your skin
C	memory		a tube that carries blood from your heart to the rest of your body
D	solve		when you get hurt
E	wrinkles		when you change your position or move from one place to another
F	disease		to take air into your lungs and send it out again
G	injury		light that goes through a person's body . It can show you pictures of inside organs
H	record		part that connects the brain to the spinal cord
I	X-ray		the feeling you have when your body hurts
J	serious		the form that something has
K	movement		to be awake; if you are able to see and understand the things around you
L	artery		to find a way to do something
M	digest		the gas that is in the air and that we need to survive
N	shape		to write down on a machine
O	oxygen		to change food that you have eaten into things your body can use
P	pain		very bad, dangerous
Q	conscious		illness



## THE HUMAN BRAIN

WRITE A SHORT PARAGRAPH ABOUT THE THREE MAIN PARTS OF THE BRAIN !





# THE HUMAN BRAIN

WORDMIX – UNSCRAMBLE THE WORDS AND MAKE CORRECT ONES

SSDIEAE

\_\_\_\_\_

RSEKTO

\_\_\_\_\_

BCMEEURR

\_\_\_\_\_

NSREVE

\_\_\_\_\_

EBNCLAA

\_\_\_\_\_

NUONER

\_\_\_\_\_

MTROU

\_\_\_\_\_

FIND THE QUESTIONS !

\_\_\_\_\_

it controls movement, balance and the way your muscles work together

\_\_\_\_\_

about one and a half kilograms

\_\_\_\_\_

millions of nerve cells and neurons

\_\_\_\_\_

when brain cells do not get enough oxygen

\_\_\_\_\_

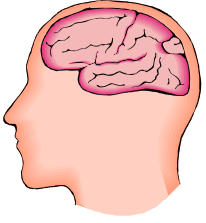
it is a disease that affects membranes

\_\_\_\_\_

after the age of 60

\_\_\_\_\_

sometimes by operation and sometime with drugs



## THE HUMAN BRAIN

COMPLETE THE TEXT ON BRAIN DISORDERS BY FILLING IN THE CORRECT WORDS FROM THE BOX !

Injuries and other \_\_\_\_\_ can damage your brain. Once brain \_\_\_\_\_ are destroyed they cannot be \_\_\_\_\_ .

When your \_\_\_\_\_ cannot pump enough \_\_\_\_\_ to your brain it does not get the \_\_\_\_\_ it needs . Brain cells die and certain areas are damaged. Doctors call this a \_\_\_\_\_.

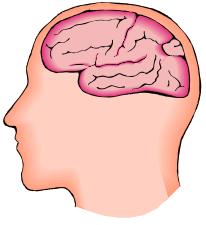
People who this happens to often cannot \_\_\_\_\_ clearly or they cannot use certain parts of their \_\_\_\_\_ any more.

\_\_\_\_\_ grow in your brain when some cells grow too fast and destroy \_\_\_\_\_ ones. Sometimes doctors can \_\_\_\_\_ tumours by operating on patients.

Many diseases can be \_\_\_\_\_ from parents or grandparents. In Down's \_\_\_\_\_ there is one \_\_\_\_\_ too many. Alzheimer's disease \_\_\_\_\_ at an older age. Victims have problems \_\_\_\_\_ things and cannot care for themselves.

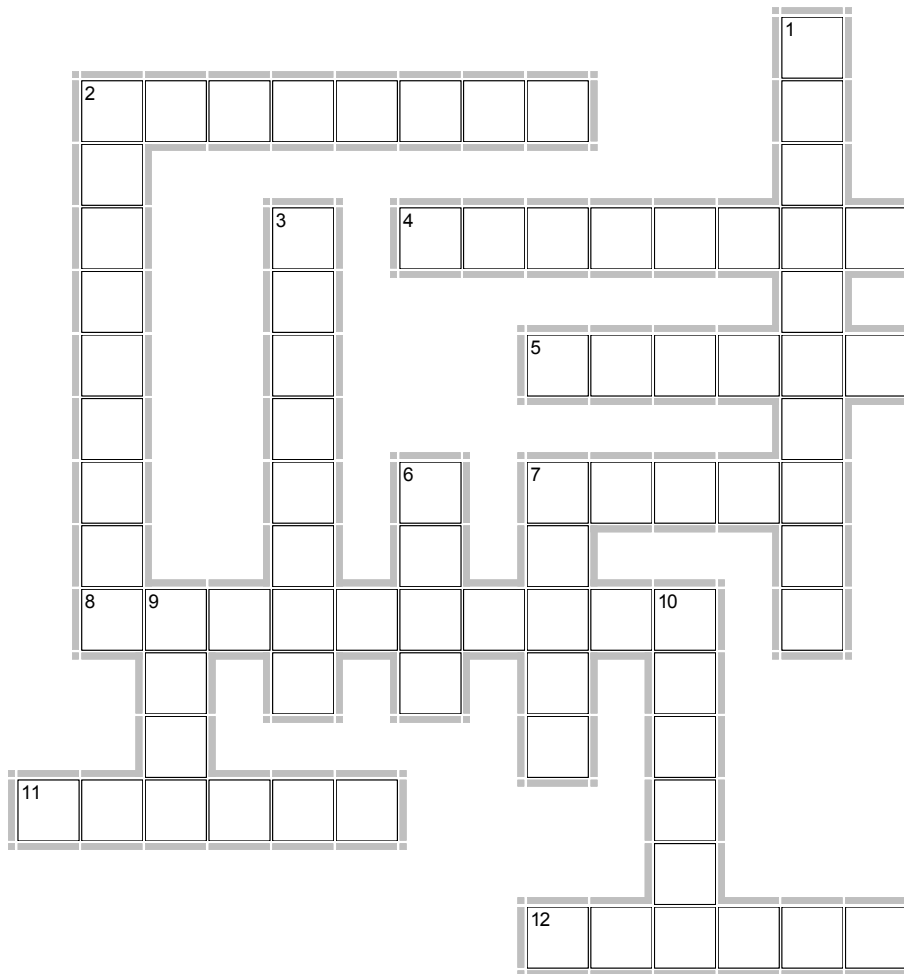
Today, modern medicine can help \_\_\_\_\_ brain diseases with new machines. The \_\_\_\_\_ records what happens in the brain. \_\_\_\_\_ sends X-rays through your brain which can then put together a picture.

blood	EEG	remove
body	heart	replaced
cells	healthy	speak
chromosome	inherited	stroke
computed tomography	occurs	syndrome
detect	oxygen	tumours
diseases	remembering	



# THE HUMAN BRAIN

## CROSSWORD



### Across

2. the largest part of the brain
4. an illness which does not let parts of your body work in the right way
5. the gas that is in the air and that we need to breathe
7. the bones of the head
8. the thick string of nerves that lies in your back. It transports messages to and from your brain (2 words)
11. everything that has to do with your brain
12. a tube that carries blood from your heart to the rest of your body

### Down

1. the part of the brain that is at the back and which controls balance and movement
2. to be awake; if you are able to see and understand things around you
3. a thin piece of skin that covers or connects parts of your body
6. the smallest part of a living thing that can exist by itself
7. to keep things in a place
9. the feeling you have when your body hurts
10. to change food that you have eaten into things that your body can use