

## 5.2.2 The brain

### AQA GCSE Biology (Higher) Question and answer notes

For more resources, visit [www.mooramo.com](http://www.mooramo.com)

#### How to use these notes

These notes cover everything you need to know for this part of the specification. They have been written in question-answer format to make them easier for you to study from.

In order to study successfully, I recommend you do the following for each question and answer:

- Read it carefully and make sure you **understand** it.
- **Memorise** the answer.
- **Practice** applying your understanding to past exam questions.

A good way to memorise information is to use **retrieval practice**. This is when you practise retrieving information from your memory. You could do this by making a flashcard for each question with the question on one side and the answer on the other. Or you could use a flashcard app. Alternatively, use a sheet of paper to cover up the answer so you can only see the question. Try to answer the question and then check how you did.

You should practise retrieving each answer from your memory until you can do it perfectly. Even once you can retrieve the answer perfectly, your ability to retrieve it will probably fade as time passes without practising. Therefore you will need to keep going back to the questions that you have previously mastered and practising them again. However, each time you re-learn the answer, the memory will be stronger and will last longer than the time before.

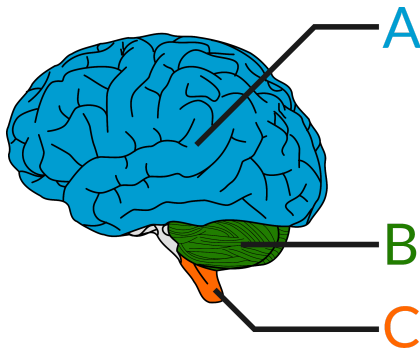
#### What is the function of the human brain?

The function of the human brain is to control complex behaviour.

#### What is the brain made of?

The brain is made of billions of interconnected neurones, along with other types of cells.

**What are the names of the parts of the brain labelled A, B and C in the diagram below?**



A = Cerebral cortex  
B = Cerebellum  
C = Medulla

**What is the function of the cerebral cortex?**

The cerebral cortex is responsible for conscious thought and awareness, language, and memory.

**What is the function of the cerebellum?**

The cerebellum is responsible for balance and coordinating body movements.

**What is the function of the medulla?**

The medulla is responsible for breathing, heart rate and involuntary actions like sneezing and vomiting.

**What methods do scientists use to investigate how the brain works?**

Scientists use the following methods to investigate how the brain works:

- Studying patients with brain damage
- Electrically stimulating different parts of the brain
- Using MRI scanning techniques

**How does studying patients with brain damage help scientists understand how the brain works?**

When a person has brain damage, scientists can look at which regions of the person's brain are damaged, and which of the person's brain functions have been affected by the damage. It is likely that the regions of the brain that are damaged are responsible for the functions that have been affected.

**How does electrically stimulating different parts of the brain help scientists understand how the brain works?**

Scientists can electrically stimulate different areas of the brain and then observe how the person's brain functions are affected. It is likely that the brain area that was stimulated is responsible for whatever functions were affected by the stimulation.

**What is MRI scanning and how does it help scientists understand how the brain works?**

MRI scanning is a technology that can be used to take images of structures inside the body. MRI scanning can be used to see how much blood is flowing to each region of the brain at any moment in time. Scientists can ask people to carry out tasks whilst their brains are being scanned by an MRI scanner. The regions of the brain that receive extra blood flow during these tasks are likely the regions that are responsible for those tasks.

**Why is it difficult to treat brain disorders?**

It is difficult to treat brain disorders because the brain is very complex and delicate. There is a lot that we do not understand about how the brain works, so it is hard to know how different treatments might affect the brain. When carrying out surgery on the brain it is very easy to unintentionally cause damage.