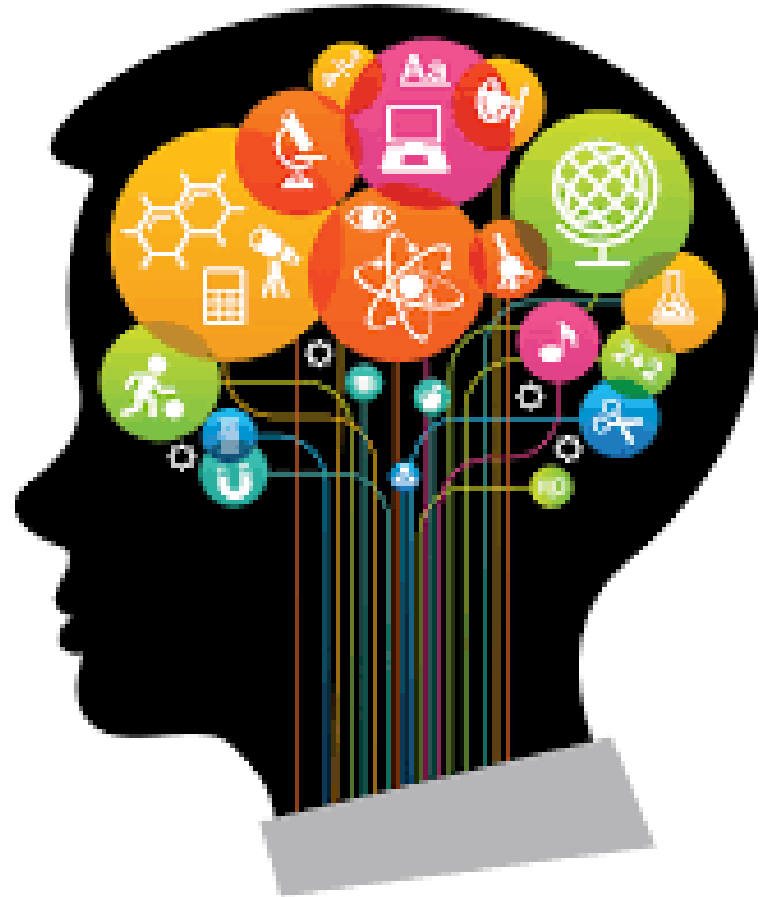


# Your Brilliant Brain

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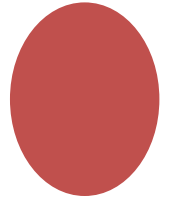


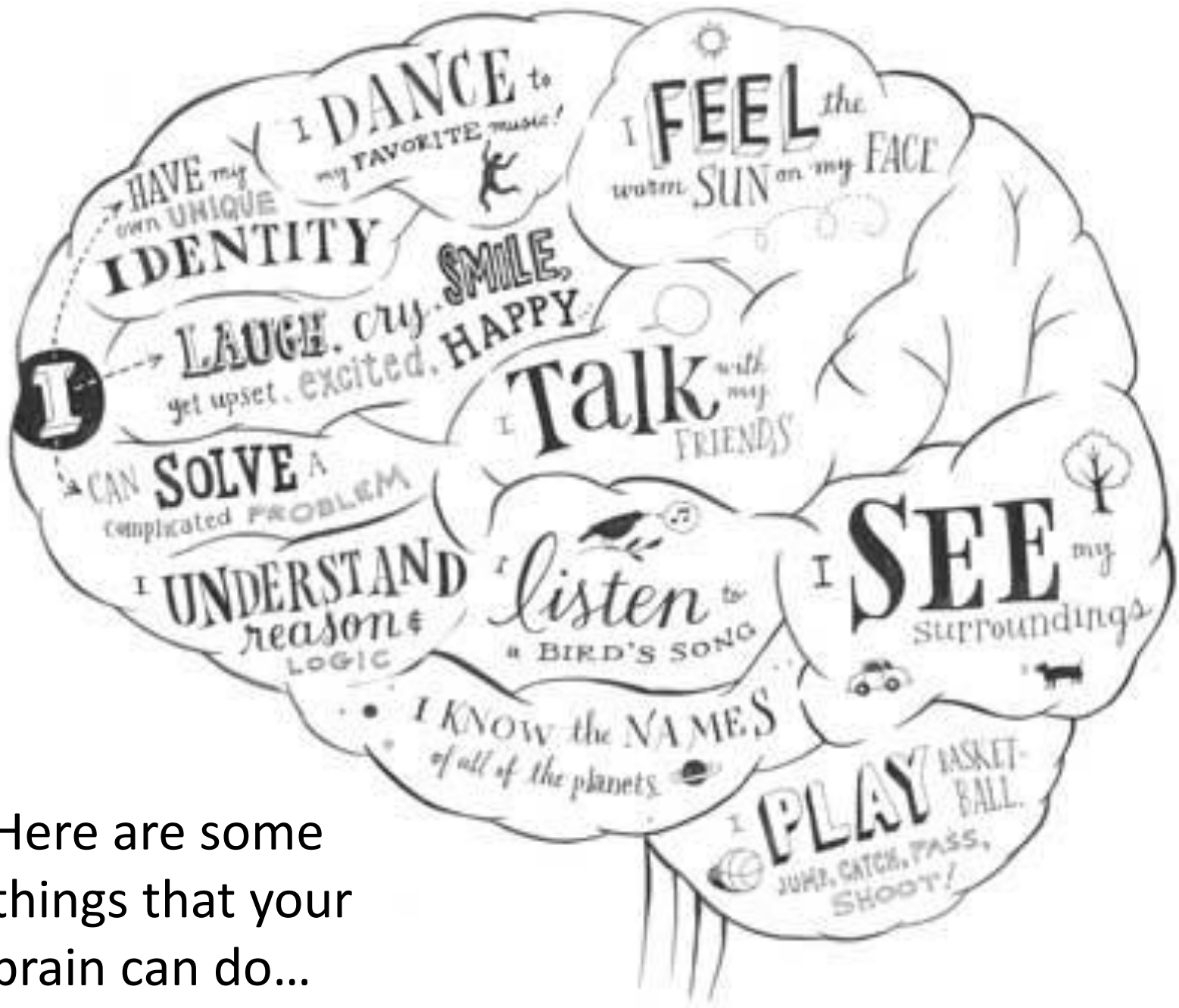
# Your Amazing Brain



The human brain has been described as being like a powerful computer that stores our memories and controls how we think and feel. Our brains can do more than the biggest computer in the world

Can you make a list of some of the things your brain can do?



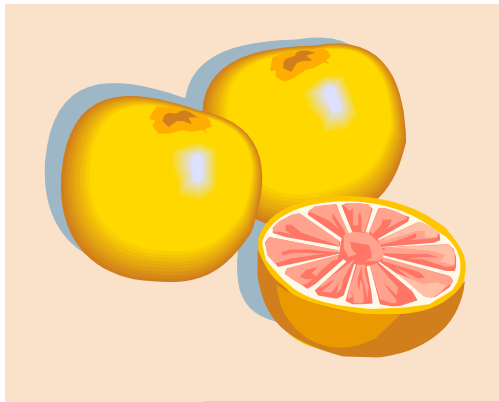


Here are some things that your brain can do...



# What is your brain like?

- What do you think these items tell you about the brain e.g. size, weight, how it feels?



# What is your brain like?



- The adult human brain is a wet fragile mass, a bit like jelly, that weighs about 1.5kg (the same as a large bag of flour).



- It is about the size of a small grapefruit and it can fit in the palm of your hand!



- It has ridges that make it look like a walnut.



There are 4 parts of the brain.

**Frontal  
Lobe**



**Parietal  
Lobe**



**Occipital  
Lobe**



**Temporal  
Lobe**





## Frontal Lobe

### Where is it and what does it do?

The frontal lobe (the blue bit) is at the very front of the head, where your forehead is.



**It helps you with...**

- **Decision making e.g. what to have for breakfast**
- **Problem solving e.g. how to get to school if you miss the bus**
- **Planning**
- **Your personality – your unique characteristics**





## Parietal Lobe – where is it and what does it do?

The parietal lobe is the yellow bit and is located towards the back of the top of your head.



### **It helps you with:**

- **Taste**
- **Temperature**
- **Touch**
- **Processes sensory information**



# Occipital Lobe – where is it and what does it do?

The occipital lobe (the green bit) is located at the bottom back part of your head.

It helps you to...

- make sense of what we are seeing from the visual information that is coming in from the world around us such as people, buildings, countryside, animals etc.
- Helps you make sense of emotional information conveyed through body language (smiling, arms crossed etc), signs, symbols and written language.



What do you see in the picture? Ask you brother, sister, mum or dad. Do they see the same?



Did you see a duck? A rabbit?  
Something else?

- Sometimes people see different things in the same picture or situation. How cool is that?!
- This can happen in other situations too e.g. in the playground. Different people might experience the same situation differently or recount a story differently to a friend.





## Temporal Lobe – where is it and what does it do?



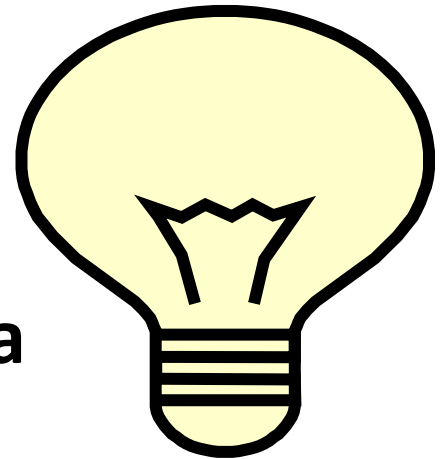
The temporal lobe is the pink bit in the picture and it is located at the bottom middle part of the head, right behind the temples.

### **This part of the brain:**

- **Is involved with hearing and listening**
- **Receives sensory information such as speech or sounds**
- **Makes sense of what we hear**
- **Helps us to understand what someone is saying**

# More about the brain

- **We use most of our brain most of the time – even when we are asleep!**
- **When we are awake the brain produces enough energy to power a small light bulb!**
- **The more we think the more calories we burn!**



## The brain is LIKE a muscle-

- Like our muscles get stronger through exercise, our brains get bigger and stronger through learning and practice.



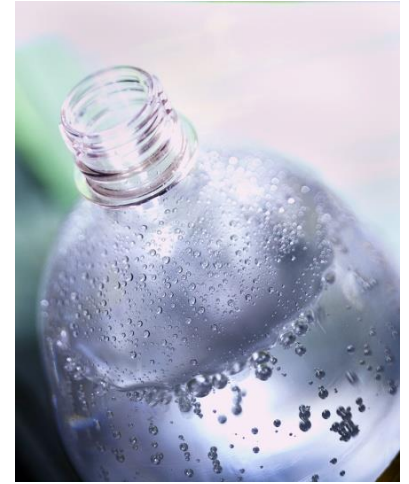
**What 4 things does  
your brain need?**





# Answer...

- Sleep
- Water/Hydration
- Food
- Exercise



# Water or hydration

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- Our brains need to be hydrated to work properly.
- When you are thirsty, it is more difficult to keep paying attention.
- It is harder to do mental maths calculations if you have not had enough to drink.



**Fruit and  
vegetables**

**Bread, rice,  
potatoes, past  
and other starchy fo**



**Meat, fish,  
eggs, beans**  
other non-dairy  
sources of protein

**Food and drinks  
high in fat and/or sugar**

**Milk and  
dairy foods**

**A  
balanced  
diet –  
some food  
from each  
section of  
the plate.**



# Exercise

- **Exercise makes your heart beat faster which is great for your body and your mood**
- **After you have exercised your body produces a chemical which makes your brain more willing to learn. Wow!**

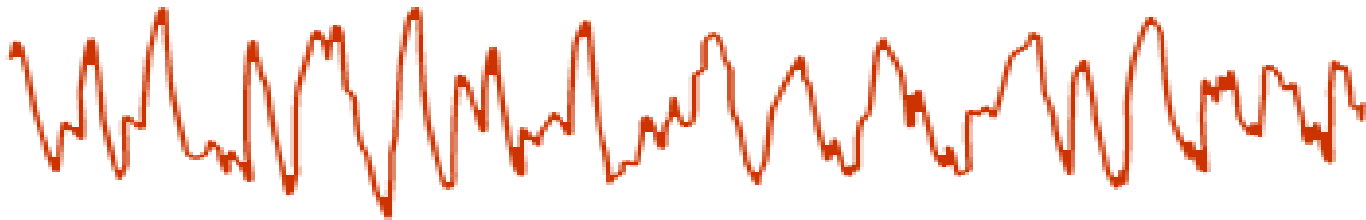
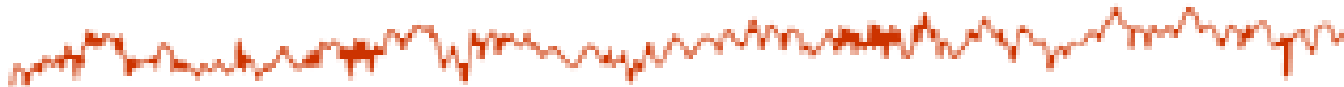
# Exercise

- How much exercise do you do each week?
- NHS choices recommend to maintain a basic level of health, children and young people aged 5 to 18 need to do:
  - at least 1 hour of physical activity every day.
  - Children and young people should reduce the time they spend sitting watching TV, playing computer games and travelling by car when they could walk or cycle instead.
- Some schools encourage pupils to run a mile a day. What could we do in our school to increase our exercise? What other brain breaks could we do?



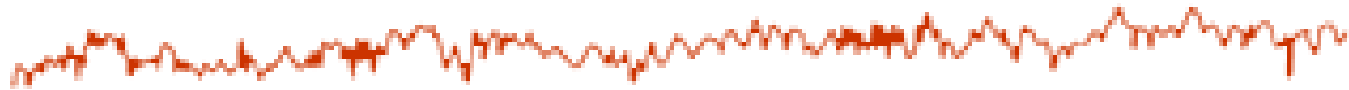
# Sleep

- **These waves show a person's brain activity while they are awake and asleep.**
- **Which do you think is for when a person is awake?**

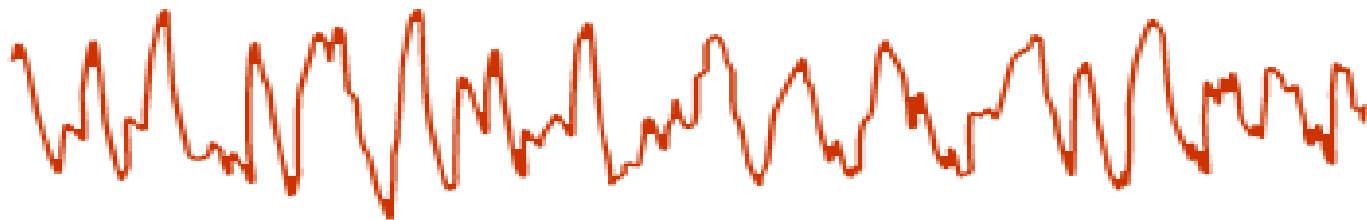


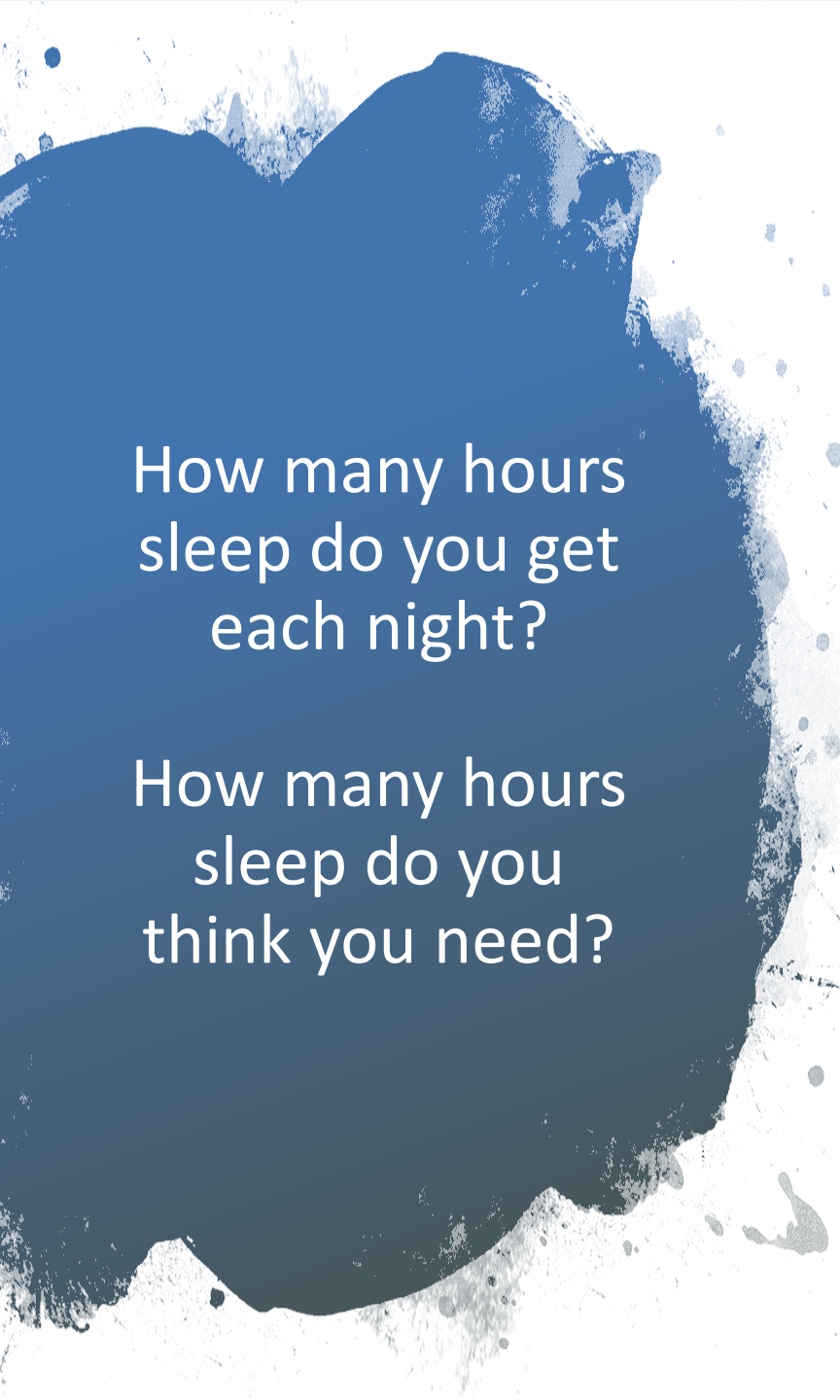
# Did you get it right?

- 1. Awake



- 2. Asleep





How many hours  
sleep do you get  
each night?

How many hours  
sleep do you  
think you need?

NHS Choices  
recommendations the  
following:

- **5 years** - 11 hours
- **6 years** - 10 hours, 45 minutes
- **7 years** - 10 hours, 30 minutes
- **8 years** - 10 hours, 15 minutes
- **9 years** - 10 hours
- **10 years** - 9 hours, 45 minutes
- **11 years** - 9 hours, 30 minutes
- **12 years** - 9 hours, 15 minutes
- **13 years** - 9 hours, 15 minutes
- **14 years-16 years** - 9 hours




Now our brain is ready to learn, what else can help?





# Paying Attention and Good Memory

- **Here is a fun activity to try. Let's see how much attention you are paying today and what your memory is like...**
- 

# 1. Kim's Game



Ask your brother or sister or Mum/Dad to play this game with you.



Put a selection of objects on a tray (10 - 15 would be a good number)



Talk about each object one at a time.



Take a couple of minutes to focus on each item. Can you think of ways to remember them?



Somebody (perhaps the adult) should cover the tray with a tea towel and take one object away.



Can you guess which object is missing.



Replace the item and then take turns to remove an item and guess.



# Science for Kids – Brilliant Brains


If you would like to learn more about the brain, how it works and what it can do, follow the link below to watch an episode of (or some of it) **Operation Ouch!**

<https://www.youtube.com/watch?v=GUCcsMmZVec>

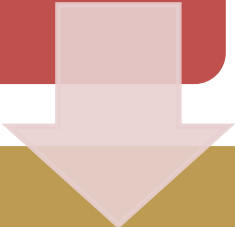

**Dr Chris and Dr Xand look at the amazing things our brains can do! Operation Ouch is a British Science Show for kids that is full of experiments and biological learnings.**

Today we  
were  
learning...

What your  
brain looks  
like



What each  
part of your  
brain does



What your  
brain needs  
to work well

