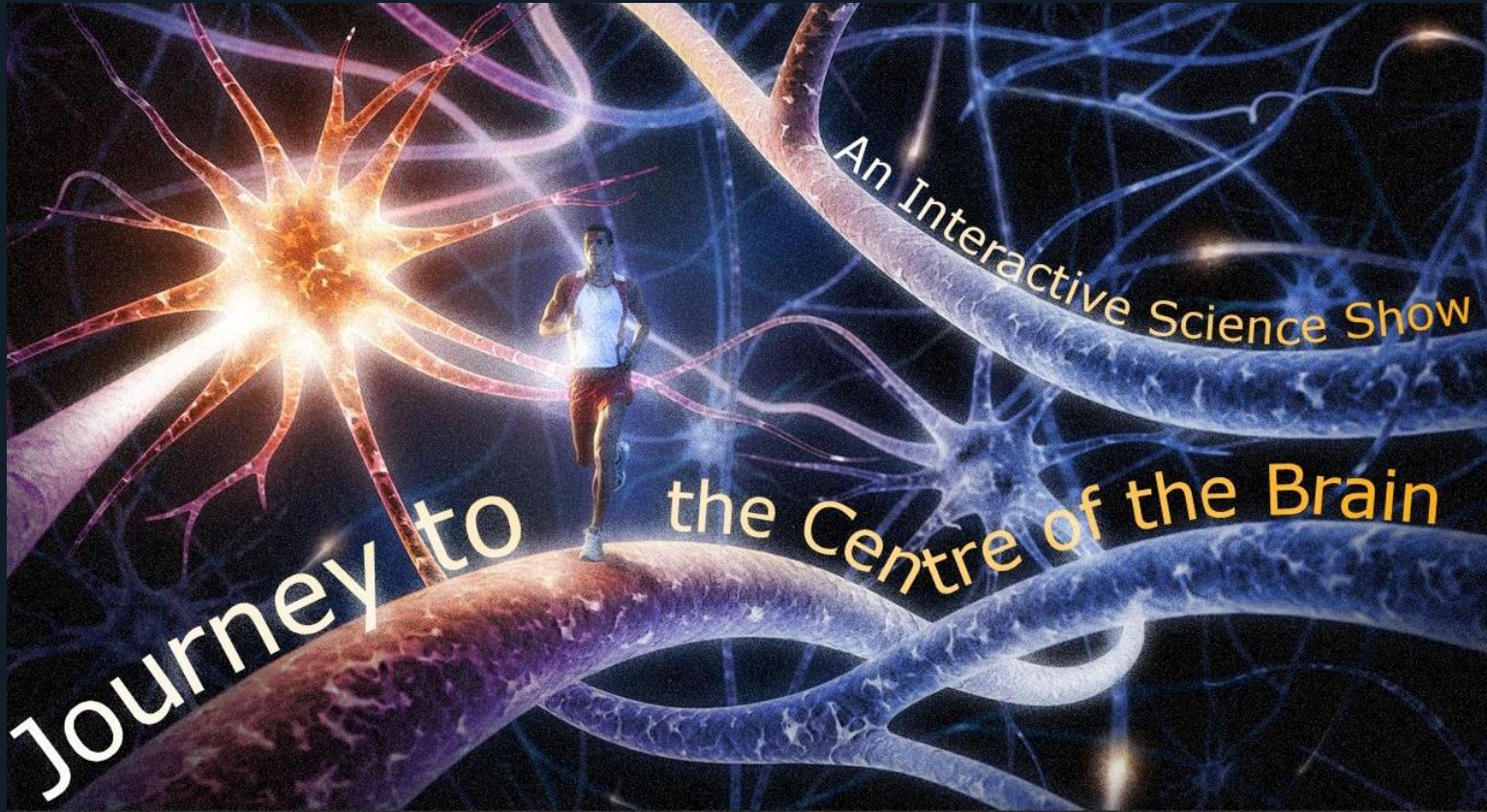


MakeBelieveArts  
*Reimagine Learning*



# Resource Pack

The journey continues in the classroom...

**wellcome**trust



Supported using public funding by  
**ARTS COUNCIL  
ENGLAND**



***"Imagination is more important than knowledge. For knowledge is limited to all we now know and understand, while imagination embraces the entire world, and all there ever will be to know and understand."* -Albert Einstein**



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## Introduction

***"I wish I could hide in my brain all day tomorrow and search for the answer to the test..."***

This resource pack is full of creative activities to extend and enrich the learning of your pupils, following their participation in Journey to the Centre of the Brain.

For MakeBelieve Arts, the aims of the *Journey to the Centre of the Brain* interactive science show are to:

- progress pupils' knowledge and understanding on how the brain works when we learn;
- develop enquiring minds and scientific skill;
- encourage children to identify the ways they learn best

### **The Show...**

Here are some questions for you to encourage the children to talk and reflect upon the show.

- Ask the class to try and name as many of the characters as they can remember from *Journey to the Centre of the Brain*.
- Who was their favourite character?
- What was their favourite part of the show?
- If they had to take a journey to another part of the body where would they go?

## Journey to the Centre of the Brain Films

MakeBelieve Arts have made nine short films that will deepen and advance understanding about the brain. These films look deeper at each section of the brain and help to explain its function.

The web address for these films is:

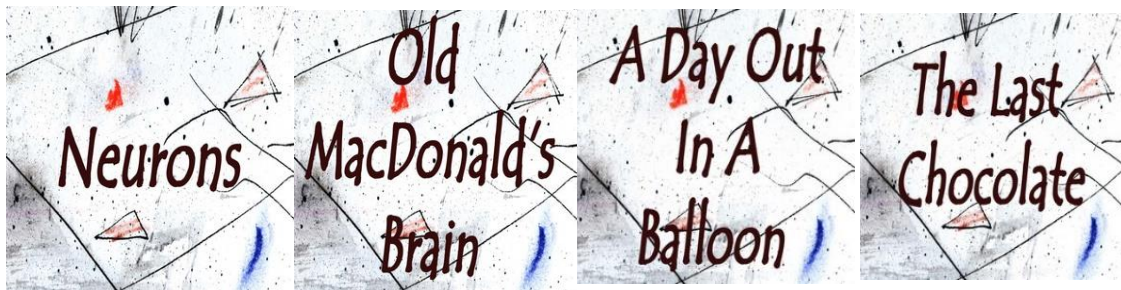
[www.worldinsideme.co.uk](http://www.worldinsideme.co.uk)

The screenshot shows a web browser window with the URL [worldinsideme.co.uk](http://worldinsideme.co.uk). The page features the MakeBelieveArts logo (Reimagine Learning) and the Wellcome Trust logo (Supported by). The main heading is "The World Inside Me" with a blue-tinted image of a human head in profile, showing the brain. Below this, it says "Journey to the Centre of the Brain". A section titled "NINE SHORT FILMS ABOUT THE BRAIN..." includes a paragraph: "The World Inside Me films were created as an online resource to support MakeBelieve Arts interactive touring theatre show Journey to the Centre of the Brain, also funded by the Wellcome Trust. This show first toured to schools across the UK in 2013/14 and returned for a short tour in 2016 accompanying the launch of the films. The theatre show and all the films were conceived through an improvisation process. Scripting and shaping was undertaken by Artistic Director Trisha Lee." The Windows taskbar at the bottom shows the time as 11:41 on 08/07/2016.

The screenshot shows a video player window displaying a film titled "Millions Of Years Ago" from MakeBelieve Arts. The video frame shows the text "Millions Of Years Ago" written in large, dark, hand-drawn letters on a light-colored, textured background. The background also features some faint, abstract drawings of plants and shapes. The video player interface includes a play button, a heart icon, and a volume icon. The Windows taskbar at the bottom shows the time as 11:42 on 08/07/2016.

Each film helps to illustrate the role of particular parts of the brain through easy to understand and humorous footage.

Follow the links or visit the website directly on [www.worldinsideme.co.uk](http://www.worldinsideme.co.uk)



## Brain Facts

1. Your **skin** weighs twice as much as your brain.
2. The brain is made up of about 75% **water**.
3. There are **no pain** receptors in the brain, so the brain can feel no pain.
4. Size at birth. At birth, your brain was almost the **same size** as an adult brain and contained most of the brain cells for your whole life.
5. Your brain uses 20% of the total **oxygen** in your body.
6. While awake, your brain generates between 10 and 23 **watts of power**—or enough energy to power a light bulb.
7. You can't **tickle** yourself because your brain distinguishes between unexpected external touch and your own touch.
8. **Memories** triggered by scent have a stronger emotional connection, therefore appear more intense than other memory triggers.
9. Five minutes after a dream, half of the **dream is forgotten**. Ten minutes after a dream, over 90% is forgotten.
10. **Juggling** has shown to change the brain in as little as seven days. The study indicates that learning new things helps the brain to change very quickly.
11. Each time we **blink**, our brain kicks in and keeps things illuminated so the whole world doesn't go dark each time we blink (about 20,000 times a day).
12. **Laughing** at a joke is no simple task as it requires activity in five different areas of the brain.
13. **Music** lessons have shown to considerably boost brain organisation and ability in both children and adults.
14. The average number of **thoughts** that humans are believed to experience each day is 70,000.
15. **Einstein's** brain was similar in size to other humans except in the region that is responsible for maths and spatial perception. In that region, his brain was 35% wider than average.

Here is an extract from the show script. Read it with your class as an interesting starting point for a PSHE discussion.

## A Letter from School...

**Zac:** I try to listen.

**Mum:** You haven't even done your homework, if you'd told me I could have helped you. I don't know what to do with you sometimes, you have to stop daydreaming and focus, go and clean your teeth and then get into bed.

**Zac:** Mum I don't want to do it, I don't think I'm good at tests. I didn't give you the letter cos I wanted it to go away. I thought if I put it in the draw it might not happen. Mark's good at learning, he always get top marks, I thought he could help me. But when he came round I wanted to show him my dinosaurs, and then we started playing.

**Mum:** You just need to try a bit harder. Do your homework, concentrate in your lessons.

**Zac:** I don't feel very well. My head feels hot and my tummy hurts.

**Mum:** You're not hot. You're just pretending so you can get out of the test tomorrow.

**Zac:** But if I was sick would I be able to miss school?

**Mum:** You're not going to be sick.

**Zac:** Mum, Have I got a brain?

**Mum:** Of course you have a brain, you just need to learn to focus it sometimes.

**Zac:** Rebecca said I was thick, because I got a question wrong? She said I didn't have a brain, if I do have one, I don't think it's working properly.

**Mum:** Just do your best, that's all I ask. Now go to sleep, at least make sure your rested for the test. Night love





## The Story of Brain Evolution

Millions of years ago, the first living things crawled out of the swamp. Their brains were tiny, controlling their heartbeat, their temperature, their ability to wriggle and squirm. These reptiles did little more than eat, sleep, and survive. Time passed and in some creatures things began to change.

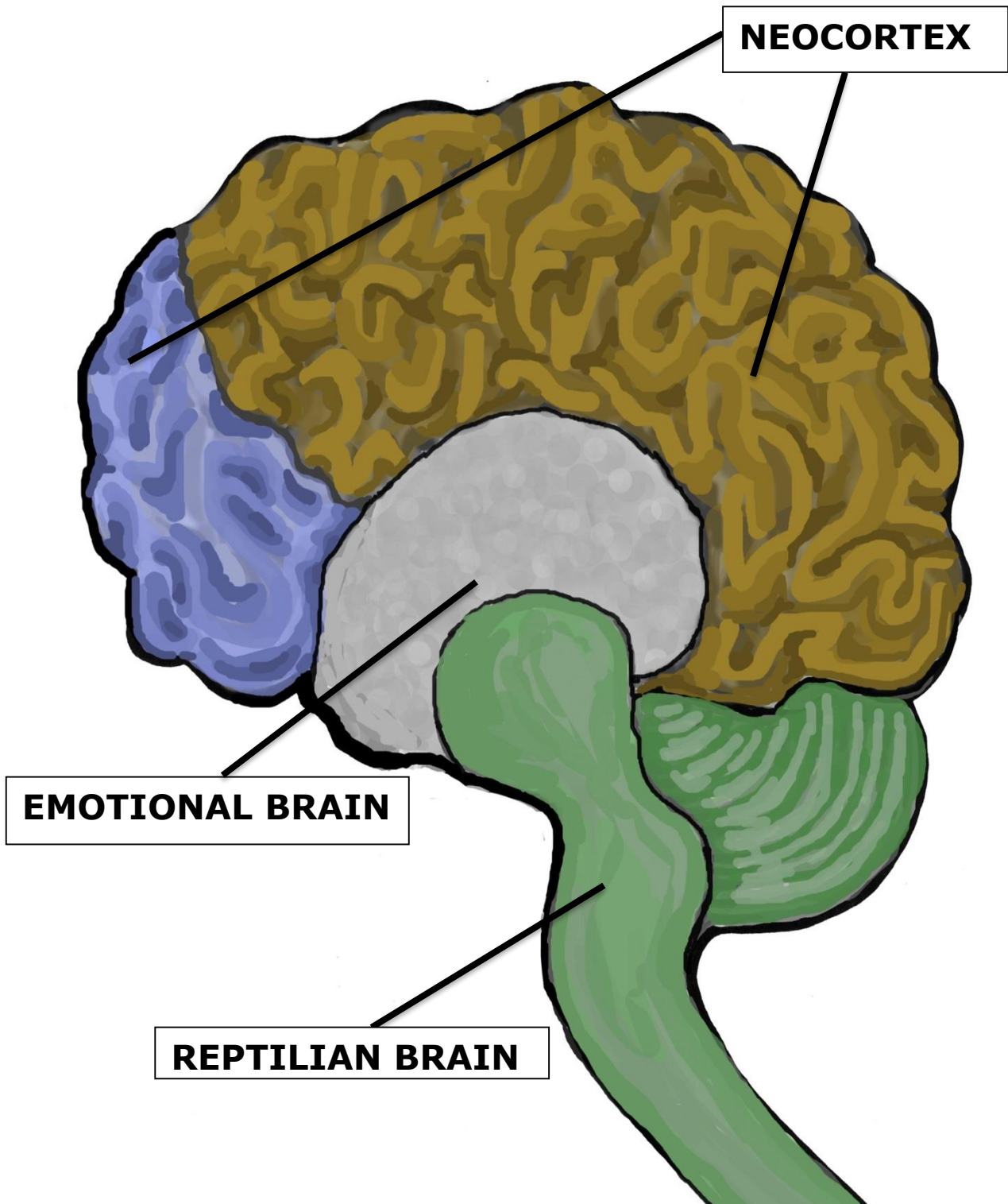
Around their tiny reptilian brain grew another section, the emotional brain. As these mammals, began to crawl on all fours they found safety in numbers. Their emotional brain meant they could work together, hunt in packs, nurture their young and live in close proximity.

Then over 4 million years ago, in the savannah in Kenya, the brain began to evolve further and our first human ancestors stood up: wrapping itself around the emotional brain was the neocortex, the thinking brain. Using this brain, early humans discovered how to make fire, to cook, to sharpen stones and use tools. They began to communicate, they built communities and as their brains developed they were able to work together, to solve problems and support one another.

As their buildings grew taller, their solutions grew more complex, and the human brain began to work faster and faster until it became the amazing entity you are standing in today: a brain in three parts; reptilian, emotional and neocortex.



## Triune Brain

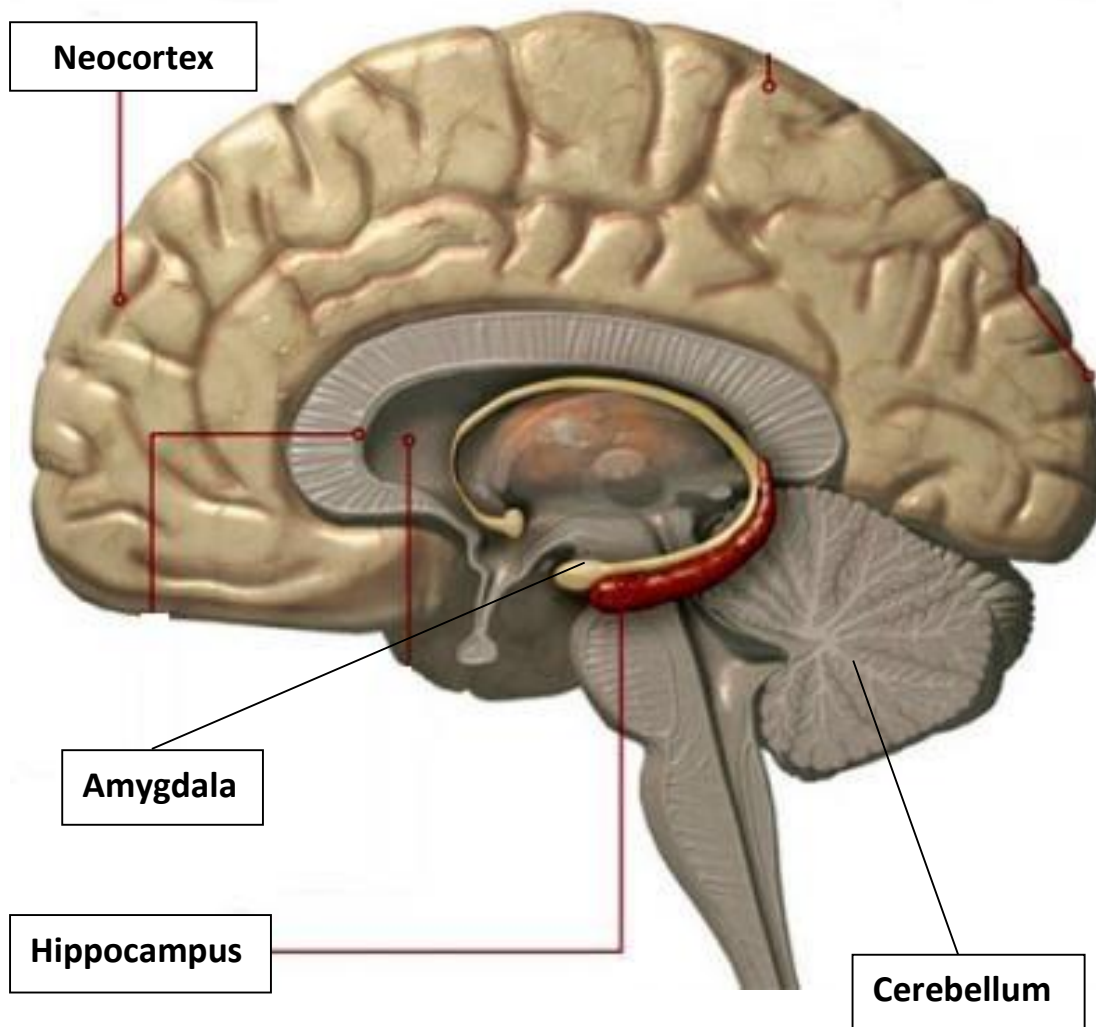


## Brain Map

During Zac's journey, he travels across his brain and came across 4 important parts which would help him on his quest. They were:

- **Neocortex**
- **Hippocampus**
- **Amygdala**
- **Cerebellum**

Below you will see where each of these parts are located in the brain...



Here's a clue to the next activity, look at the shape of each of the labelled parts.

## Who's Who?

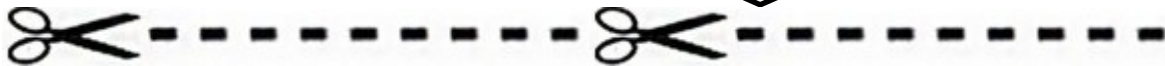
To help understand what these parts of the brain do, we have illustrated them. Above them are 4 speech bubbles, which describe one of the many things that each part of the brain does. See if you can match the correct speech bubble to the correct part of the brain.

I am responsible  
for your memories

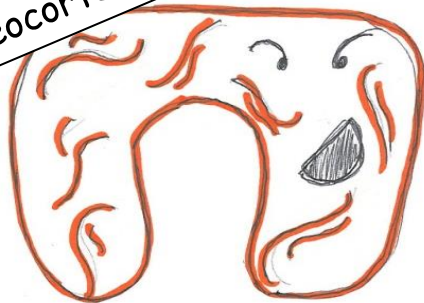
I keep all of the  
information in the front  
of your head

I keep you  
balanced

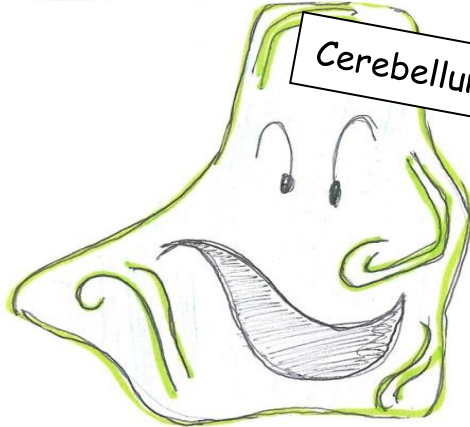
I am your ego where  
all of your desires  
are kept



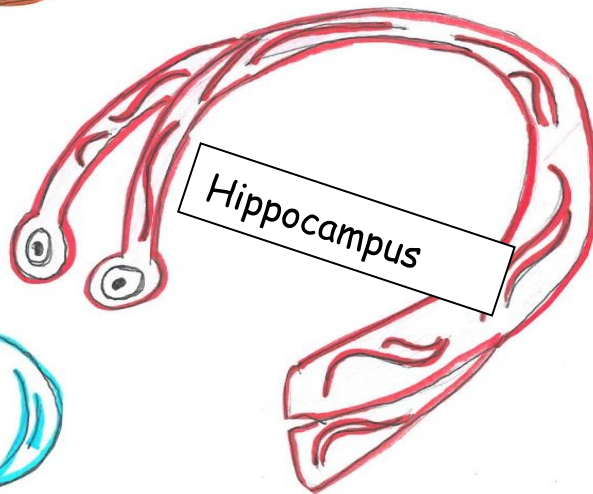
Neocortex



Cerebellum



Hippocampus



Amygdala



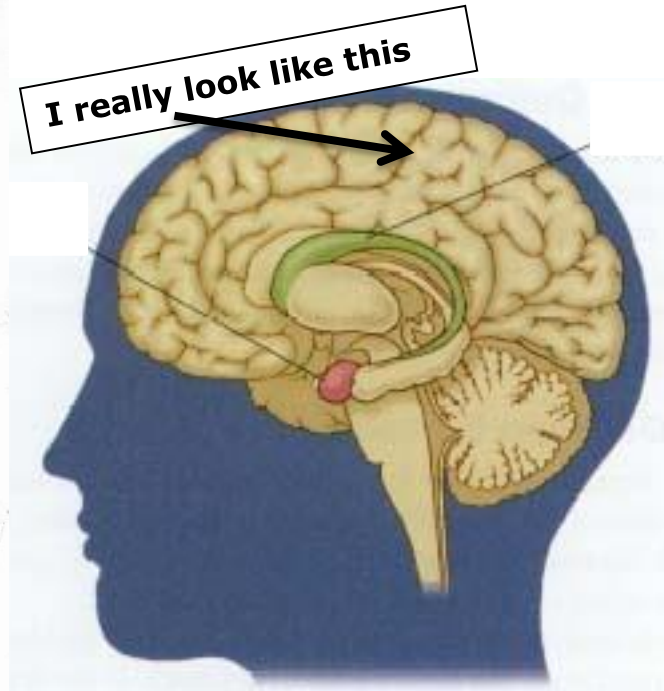
## Imaginary Brain Meets the Real Brain

In the story, the different parts of the brain were represented as the different people who Zac met along the way. To help you remember the name and function of the the parts of the brain, we made those parts into characters who were identifiable and highly visual. Obviously, if we REALLY looked in our brains we wouldn't see these characters, but we would see the parts that they played looking very different.

The designer of the show, Ian Teague, has drawn the characters and on the next few pages; you can see what they really look like in the brain and whereabouts in your brain you would find them!



# NEOCORTEX



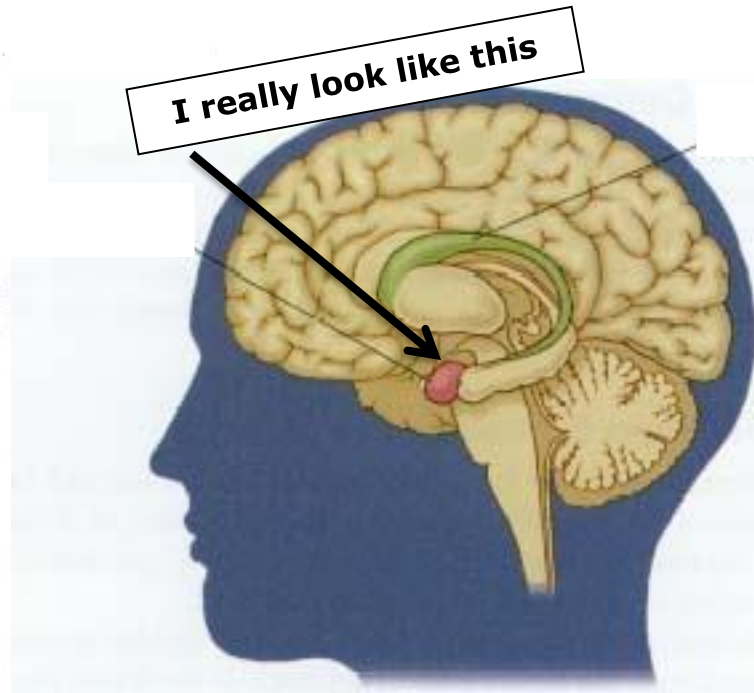
I really look like this

I'm the thinking part of your brain. I'm responsible for conscious thought. I sort out all the jumble of thoughts that come into your brain.



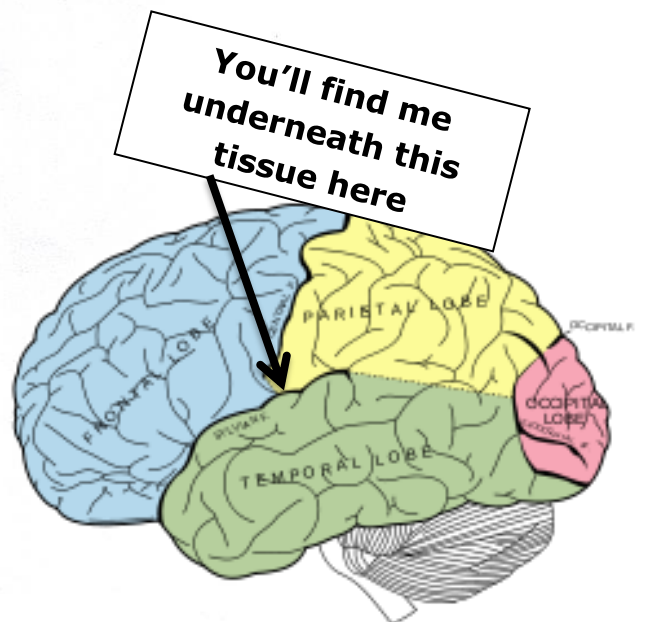
You'll find me here

# AMYGDALA



I really look like this

I'm your ego where all of your desires are kept. I react to things very quickly!

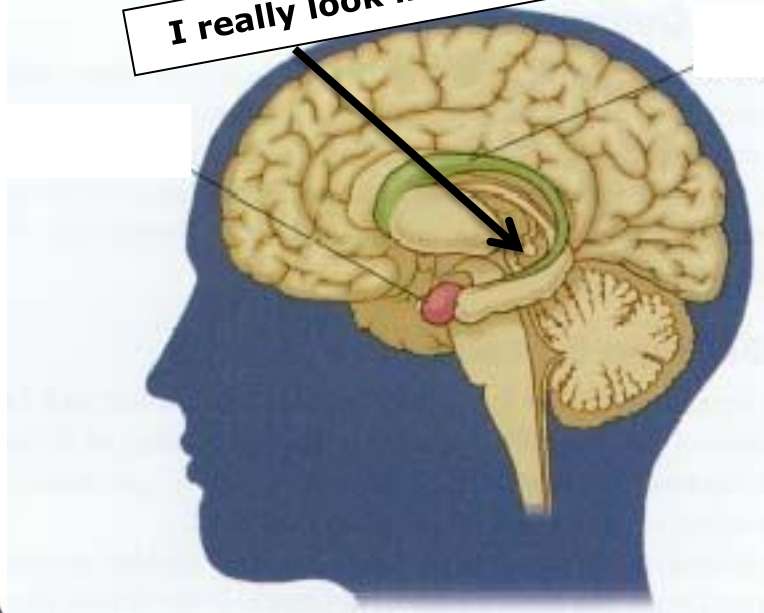


You'll find me underneath this tissue here



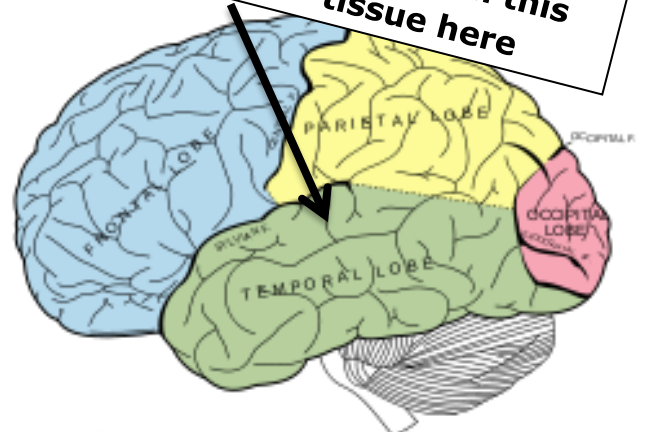
# HIPPOCAMPUS

I really look like this



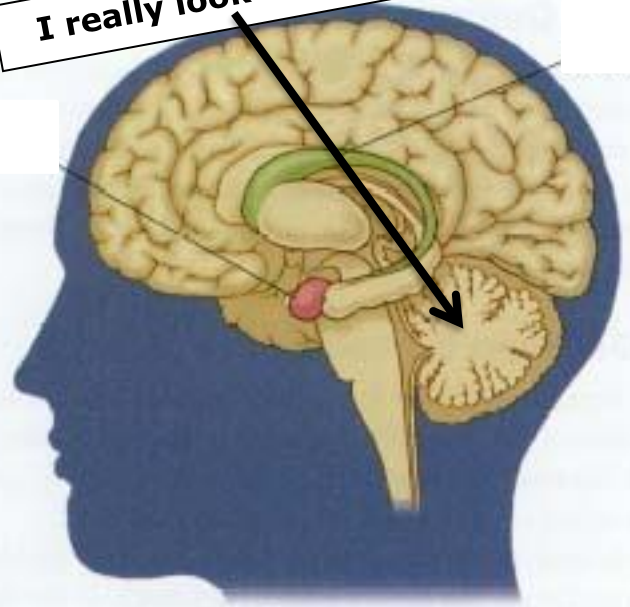
I connect with other areas of your brain. I can find your most distant memories.

You'll find me underneath this tissue here



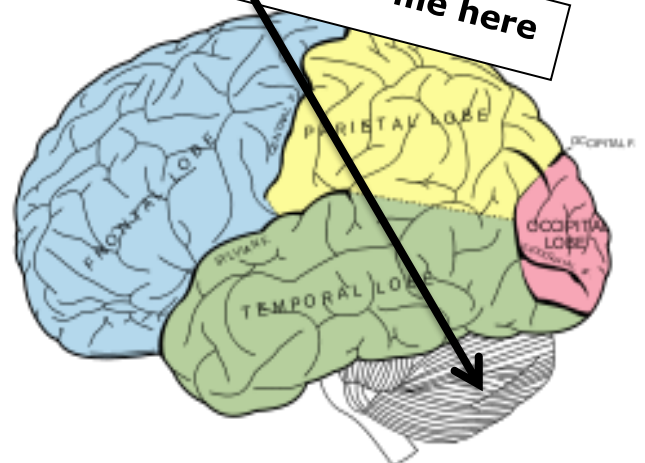
# CEREBELLUM

I really look like this

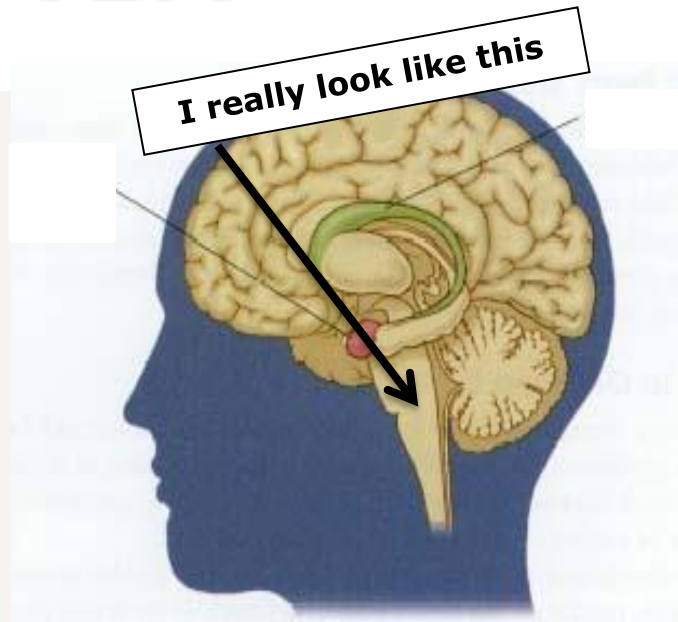


I play a major role in motor functions, your ability to move, coordinate and balance, but I'm also involved in making all areas of your brain work at their best.

You'll find me here

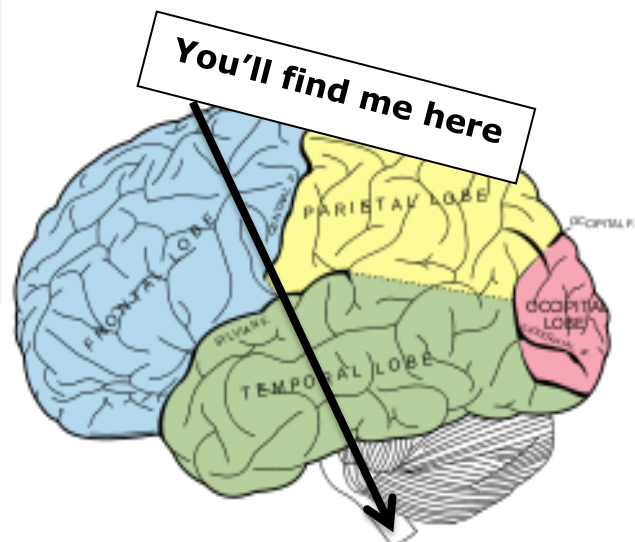


# BRAIN STEM



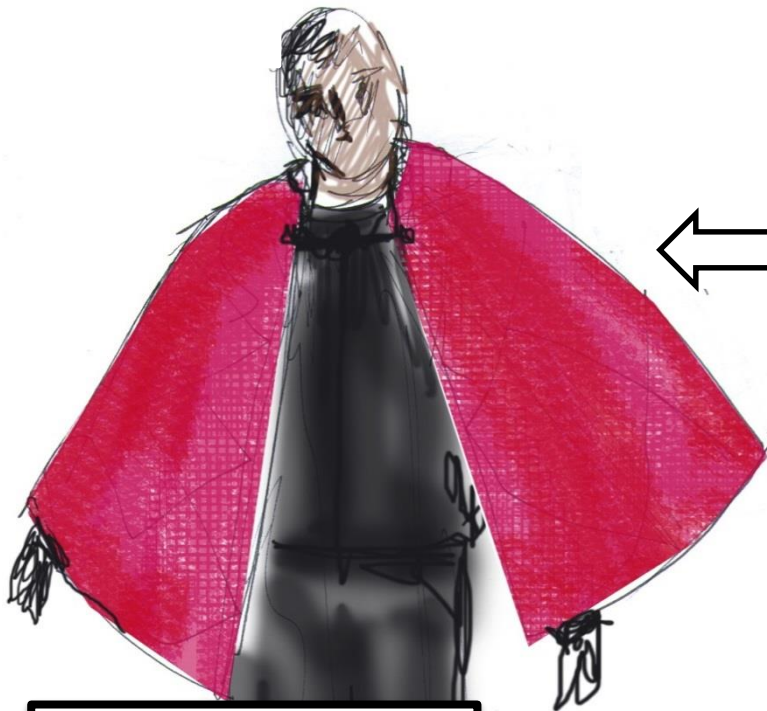
I really look like this

Though I'm small, I'm an important part of the brain as the motor and sensory systems from the main part of the brain to the rest of the body pass through me.

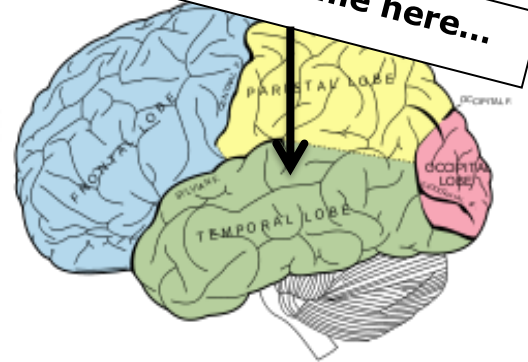


You'll find me here

TEMPORAL LOBE



I am your emotion man, responsible for all your emotions and I am not afraid to feel emotion.



This is me here...

NEOCORTEX'S HELPERS



Well the Neocortex is a very busy place so they'll always need a spare pair of hands!

## Shadow Story

I wish I didn't have to do this test, if I was a bird I could fly away into the sky and never have to worry. I had a bird once, a little pet bird, it was a long time ago and I was in my garden and I found an egg, and I looked after it, and I wrapped it in hay and kept it warm and one day the egg started to break.

A bird hatched out, I called it chirpy, and it started to fly, cos these birds fly all the way to Africa and all the way back. So I showed Chirpy where the garden was, and I showed him the tree, and he started to fly and he saw a friend, and they started to fly together and other birds joined them, and they flew high into the sky, all the way to Africa. And from high in the air they looked down on all the tiny houses. And people came out of their houses and waved at them as they flew past in the sky.

I wish I could fly away.

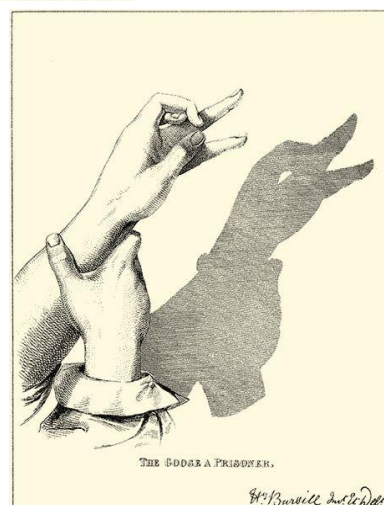
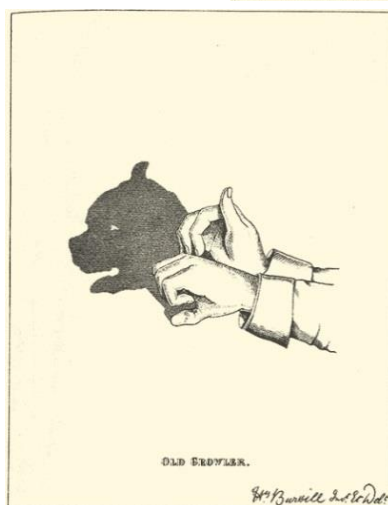
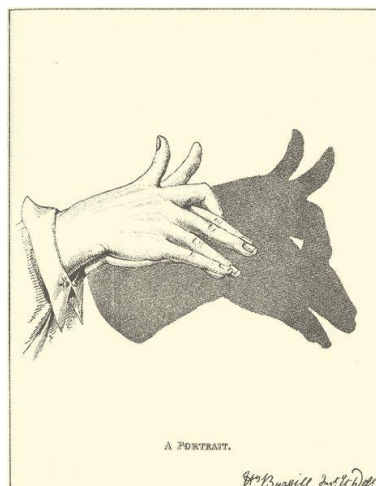
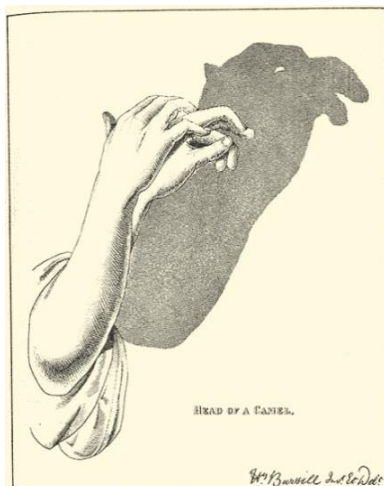
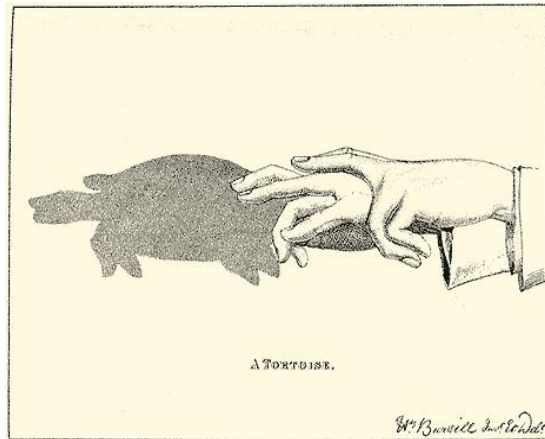
I wish I could roll under my bed and never come out.

I wish I could hide in my brain.

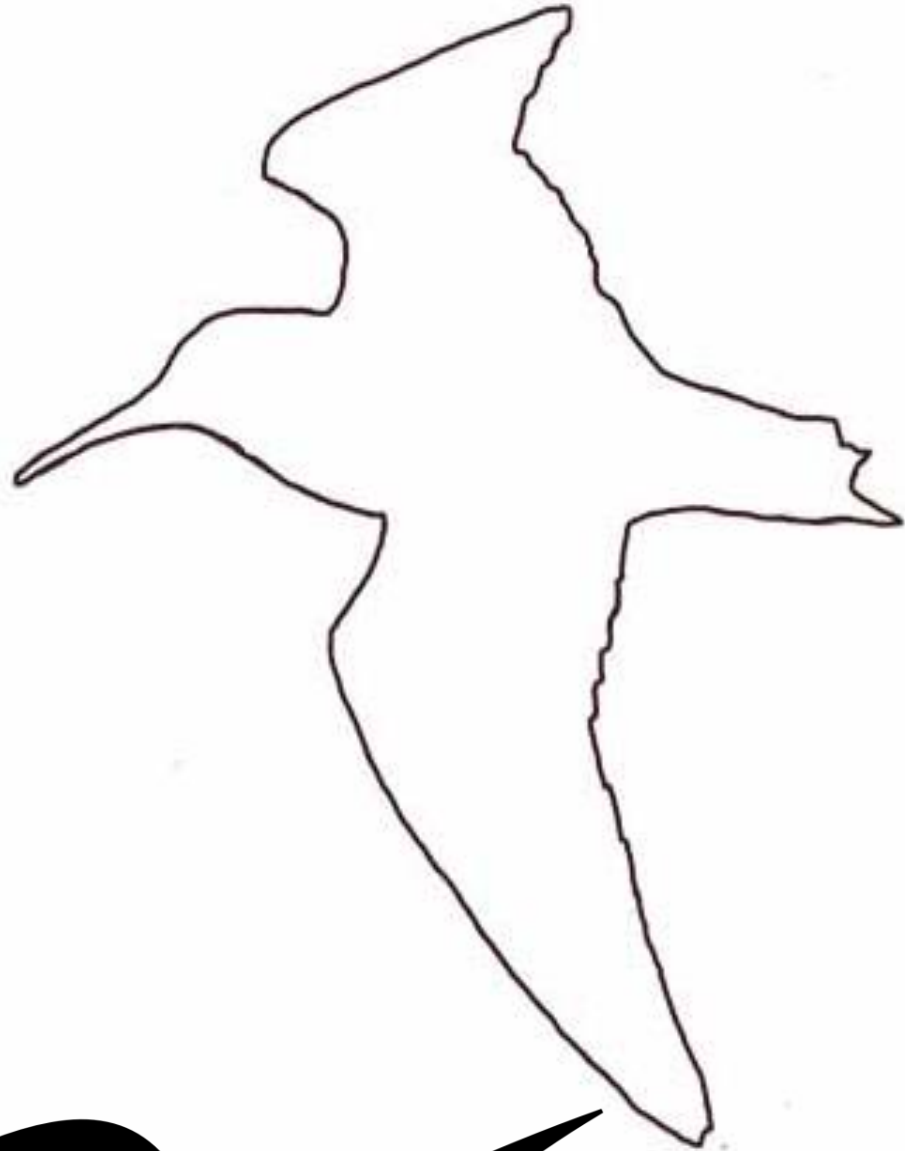


## Shadow Puppet Play

Before Zac got his wish of hiding in his own brain, his room came to life with shadows as he told his bird story. See if you could tell your own short story using shadow puppets. Here's a few which might help...



On the following page you will find an outline of a bird. Use this as a stencil to create your own bird shadow puppet.



## **Receive it, Sort it, Send it Song**

I don't, I don't, I don't  
understand  
I can't, I can't, I can't make a  
plan.

Receive it, sort it, send it  
Receive it, sort it, send it.

So much is going on  
When you make a plan  
Recall a thought  
Try to understand.

Receive it, sort it, send it  
Receive it, sort it, send it.

It's hard to make a plan  
When your brain is full  
And they laugh at you  
In your class at school.

Receive it, sort it, send it  
Receive it, sort it, send it.

I don't, I don't, I don't  
understand  
I can't, I can't, I can't make a  
plan.

Receive it, sort it, send it  
Receive it, sort it, send it.

Information coming in from  
All around  
Sometimes it's lost and  
Then it's found.

Receive it, sort it, send it  
(information)  
Receive it, sort it, send it  
(information)

Setting me a task  
That I find difficult  
I try to be good  
And not someone that's rude.  
I just get distracted  
When I get confused.

Receive it, sort it, send it  
(information)  
Receive it, sort it, send it  
(information)  
Receive it, sort it, send it  
(information)

RECEIVE, SORT, SEND!  
Information. I've got it!

Here is a link to the video on our YouTube channel:

<http://goo.gl/3lxqeY>





## Templates

A template is a group of nerve cells that join together because they want to store the information which you will want to remember. During the show everyone was asked to think about a cat. When you thought about the cat a picture came to mind. This picture may be different to someone else's but you had your own picture of a cat and your brain pulled together all of the information you know about cats. Like this, for example...

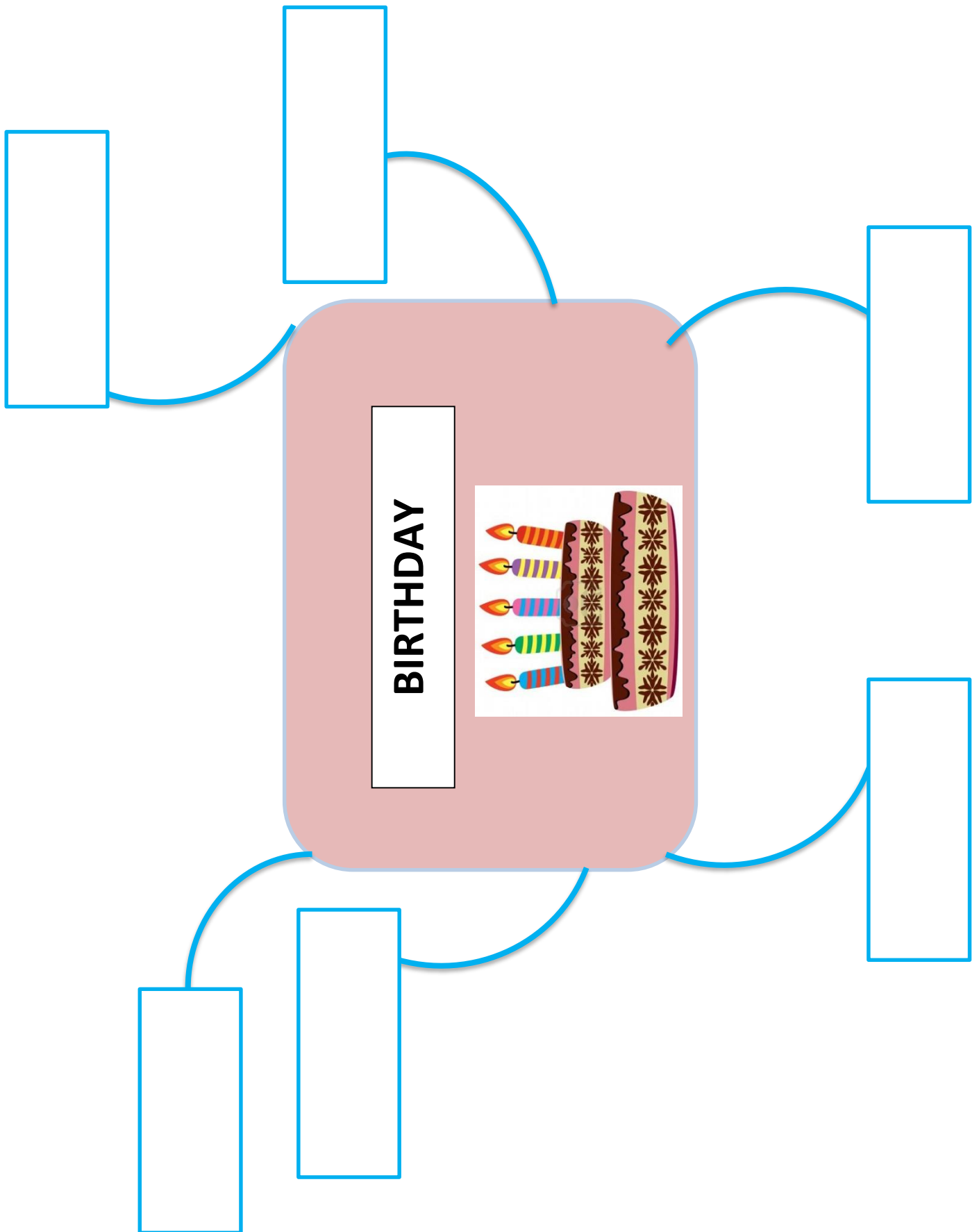


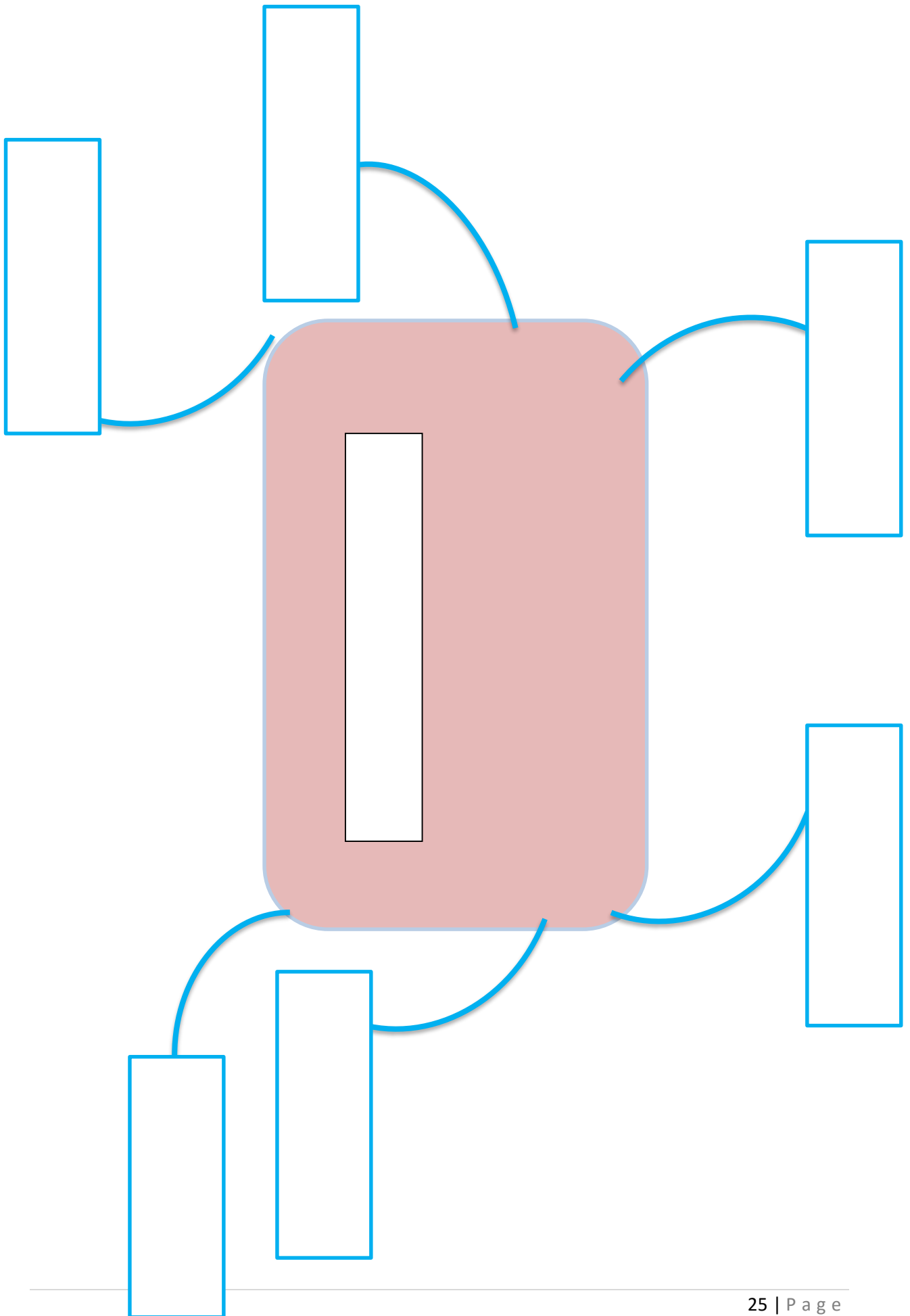
All the pieces of information that you formed go back years and years from when you first learnt what a cat was. It takes us a nano second to think up templates. Every time we think of anything, millions of templates light up all over our brains.

On the next two pages you will see a birthday template. When you think of 'birthday', what picture do you get in your mind? Write six words that describe that picture in the empty boxes.

When Zac was asked by Neo to think up his own template, he thought about dinosaurs.

Give the empty template a title (e.g. beach) and fill in the empty boxes with the 6 words which spring to mind!









# *Hippocampus*



*Just remember, the more you  
feel, the better you learn and  
the more you retain.*







## The Neuron's Story

*Once upon a time, there was a little lonely Neuron nerve cell just waiting for something to interest him. He looked around a bit but he wasn't that active. Now this Neuron knew that somewhere out there in the vastness of the brain was a reason why he was here. But he didn't know what it was, so he waited, and he waited. Until one day out of the blue, an image of a dinosaur fired into the brain.*

*That's when Neo Cortex, the thinking bit, suddenly received messages from all over the brain saying how exciting this was. Now you wanted to hold onto your excitement so a chemical called Glutamate was sent down to the Neuron to make sure it stayed excited.*

*And the neuron began to get all fired up. In fact lots of neurons started getting excited. But you were more than just excited about dinosaurs, you felt passionately about them. You wanted to learn more about them.*

*So the emotional brain sent another chemical, Dopamine to stop the flow of Glutamate.*

*And Dopamine made sure the Neurons kept activated at just the right level and because the image of the dinosaur was so interesting, the Neuron started to spread out. They wanted to find others like themselves to connect to, and as their fingers of neuroplasm reached out across the brain they began to form synapses, little gaps between them, across which they fired together, wired together, so that whenever you think about dinosaurs they spark into life.*

## Memory Mapping

Here's a game for the visual and interpersonal learners amongst you!

In order for us to remember things, we need to form templates.

### Activity

- Divide the class into groups of 5;
- In each group they need to number themselves from 1 – 5;
- Every group is given a pen/pencil and a sheet of A3 paper;
- Explain to the group that they will see a picture with lots of images and information on;
- Their aim as a group is to work together to recreate the picture, but they will only get one chance each to look at the picture;
- Each person is going to get 10 seconds to look at a picture;
- When they have had their chance to look at the picture they return to the group, sit on their hands, and explain to the next person using only words what they can remember;
- Begin by calling all the number 1s, who have 10 seconds to look at the picture;
- Tell all of the number 2s to be ready waiting with the pen/pencil and paper;
- The number 1s return to their group and describe to their number 2 what they can recall, who draws it;
- Give them about 30 seconds then they must give the pen to number 3 while number 2s take their turn to look at the picture;
- Continue until everyone in the group has had a go at drawing and a look at the picture to describe what they have seen;
- Have a look at the pictures and see how each group has done;
- You can award a point for each thing they got right

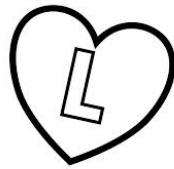
### Things to Remember

- Only the person who has just looked at the picture is describing to the person drawing
- When describing they must sit on their hands– this is to encourage the use of descriptive language: shape, size, directional language: top left of the page, etc.

### Reflection

- Ask the children which part of the activity they found harder – looking and describing or listening and drawing?
- Why did they find this hard?
- How can the looker help the listener?
- How can the listener help the looker?
- What strategies do they think they would use next time?

On the following pages you will see two memory maps.



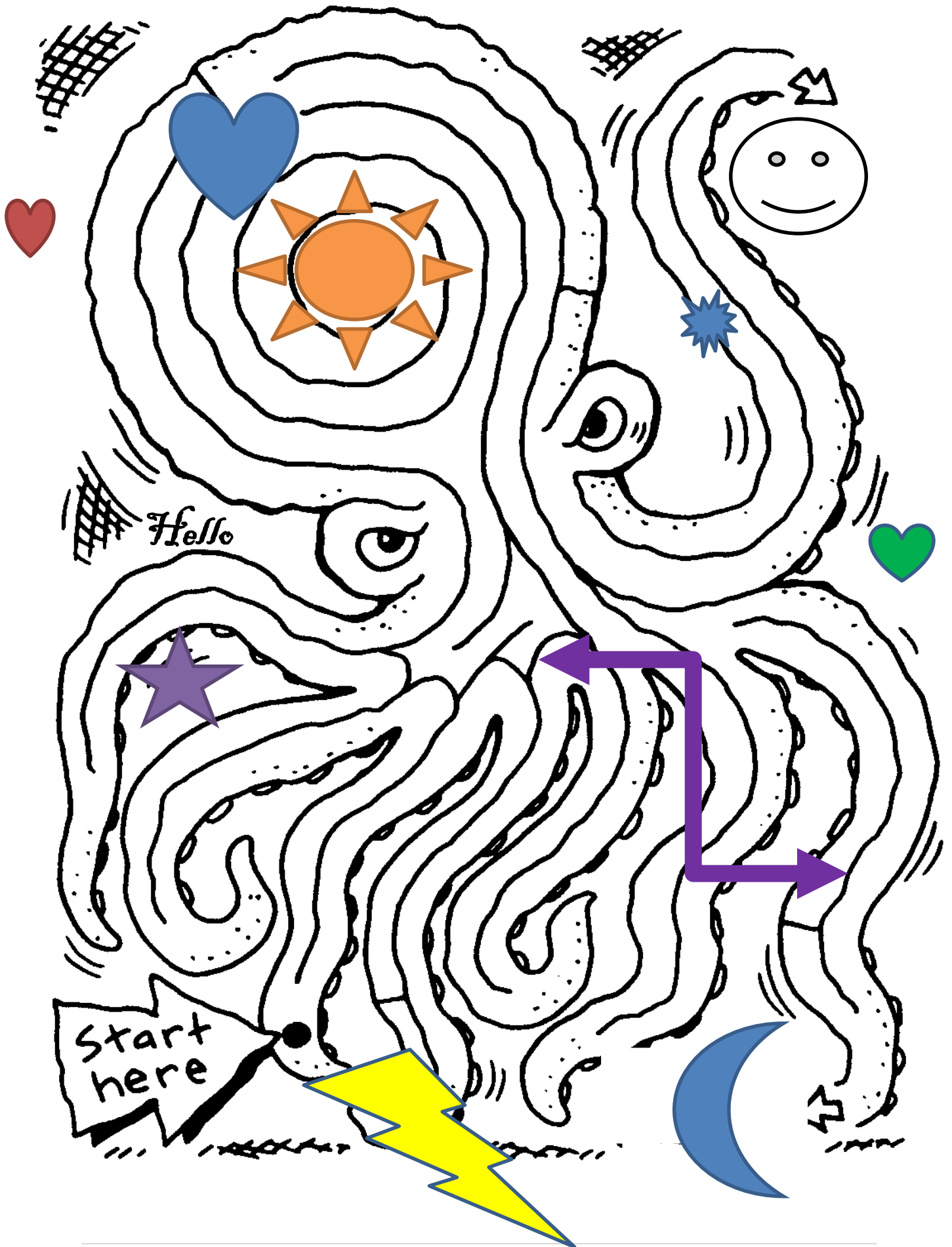
$$\begin{array}{r} 3 \\ 2 \\ \hline 5 \end{array} +$$

$\pi$



R





## Would You Rather?

On his journey, Zac had to make choices about what he was going to do; should he run away from the test or should he find the answers to the test? Should he listen to his Neo Cortex or his Amygdala?

### Activity

- Explain to the class that you are going to give them five choices to choose from and they can only choose one.
- Then ask the group the question "What would you rather?"

Know the answer  
to any question?

Remember all of  
your memories?

**Would you  
rather?**

Have superhuman  
balance and  
coordination?

Have a  
creative  
mind?

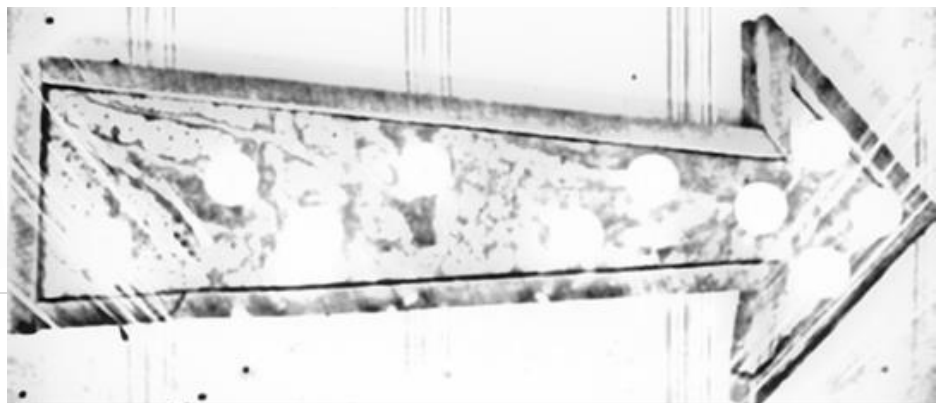
Be the most  
intelligent person in  
the world?

- On 5 separate A4 sheets of paper, write down each option (you may want to reduce the options to 3, depending on age group)
- After asking the question, lay one option out at a time, saying the option as you lay it on the floor.
- Make sure the options are spread out around the room.
- Before the children make their choice, ask them to reflect on each one individually without talking (this is to make sure that choices are not influenced by other children).
- Then ask the children to walk to the choice they would rather.
- When they have arrived at their choice, ask them to turn to other people who share that choice and explain why they chose that option out of all of the others.
- Go to each group and ask some children to share their reasoning with everyone in the class.
- Once all of the options have spoken, explain to the group that you are going to give them one chance to move to another option if they want.
- If children have moved options, ask those children what persuaded them to change their mind? Did they agree with someone else's point of view?

**ROLL UP**  
COME AND HAVE A GO, TAKE A CHANCE, BE YOUR LIFE, LIVE YOUR DREAMS  
**ROLL UP**



**CEREBELLUM'S**



## The Little Treasure at the Bottom of your Brain

*"Every time you want to move, I am there at the bottom of your brain helping your coordination, your precision your timing.*

*When you are walking. When you play football. Score a goal and cheer. When you have your swimming lessons.*

*As you climb that tree in the garden and even when you brush your teeth. You are an amazing brain to be inside. You push me to my limits. Within your brain i can work at my best.*

*Acrobatics cartwheels, precision and dexterity, you are never still.*

*We think we're pretty important – our name in Latin means little brain.*

*We like to think of ourselves as the little hidden treasure at the bottom of your brain, working away, keeping you moving, making everything work at its best, without anyone knowing we're here."*







## Multiple Intelligences

After meeting Cerebellum, Zac learnt that he was very talented when it came to using his body, and only wished he could be tested on acrobatics rather than maths. In this case, we could call Zac a kinaesthetic learner as he uses his body a lot and as Neo said, "you sometimes learn better through doing." Below you will see a list of learning styles with characteristics attached to them. Have a read through each of the learning styles and then complete the questionnaire to see which learning styles you are most suited to.

**Linguistic intelligence** relates to words and/or word meanings. Characteristics:

- Remember words and meanings
- Write poetry
- Enjoy reading
- Play word games
- Put words easily into orders and patterns

**Logical-mathematical intelligence** is related to numbers and/or reasoning. Characteristics:

- Create mathematical sequences
- Solve puzzles
- Conduct experiments
- Have an inquisitive nature
- See patterns and relationships

**Visual-Spatial intelligence** relates to space and images. Characteristics:

- Have a visual memory
- Like to draw
- Are more likely to be artists and designers
- Learn from charts and graphs
- Like visual puzzles

**Kinaesthetic intelligence** is related to controlling body motions and manual dexterity type skills.

Characteristics:

- Work with their hands
- Like movement
- Act things out
- Learn by doing
- Like touch

**Musical intelligence** relates to musical skills.

Characteristics:

- Learn through music or rhythms
- Create music
- Identify with music
- Play a musical instrument
- Be sensitive to sounds around them

**Interpersonal intelligence** focuses on relating to people. Characteristics:

- Can read other people and their emotions
- Have a lot of charisma
- Are typically leaders
- Have a lot of friends
- Learn through groups and interaction

**Intrapersonal intelligence** allows one to understand his inner world. Characteristics:

- Prefer to work alone
- Are usually quiet
- Are deep thinkers
- Like to reflect
- Have a strong will and strong opinions

**Naturalist intelligence** relates to sensitivity toward other living things, such as animals and plants. Characteristics:

- Recognize and classify things in nature
- Show an interest in Earth sciences
- Enjoy being outdoors
- Describe relationships in nature
- Show concern for the environment

## How are you clever?

Looking at the questionnaire below, colour in the dot if the statement is true about you.

<b>Linguistic</b>	<input type="radio"/> I enjoy reading <input type="radio"/> I enjoy listening to the radio <input type="radio"/> I can persuade my parents to do things <input type="radio"/> I sometimes get in trouble for talking too much
<b>Logical</b>	<input type="radio"/> I can do maths in my head easily <input type="radio"/> I can spot mistakes easily <input type="radio"/> I like to plan ahead <input type="radio"/> I like to play games like Chess
<b>Visual</b>	<input type="radio"/> I enjoy doing puzzles <input type="radio"/> I am good at following maps <input type="radio"/> I like to draw or doodle <input type="radio"/> I can picture things easily in my mind
<b>Kinaesthetic</b>	<input type="radio"/> I like working with my hands <input type="radio"/> I find it hard to sit still <input type="radio"/> I need to touch things to learn about them <input type="radio"/> I use my hands when I talk
<b>Musical</b>	<input type="radio"/> I tap my feet my I hear music <input type="radio"/> I like to sing a lot <input type="radio"/> I hum/sing when I work <input type="radio"/> I sometimes get into trouble for tapping the table
<b>Intrapersonal</b>	<input type="radio"/> I like working on my own <input type="radio"/> When I have a problem I sort it out myself <input type="radio"/> I know what I'm good at <input type="radio"/> I know what I want to do when I grow up
<b>Interpersonal</b>	<input type="radio"/> I like working as part of a team <input type="radio"/> I am good at working out how other people feel <input type="radio"/> When I have a problem I ask someone else for help <input type="radio"/> I like to play team activities/sports
<b>Naturalistic</b>	<input type="radio"/> I enjoy spending time outside <input type="radio"/> I like playing the park <input type="radio"/> I like looking after animals <input type="radio"/> I look out of the window a lot

Which two intelligences have you coloured in the most?

I am a \_\_\_\_\_ learner as well as a \_\_\_\_\_



## ***Information Coming Through!***

### **Song**

Glutamate activates  
Dopamine keeps it keen

Nerve cells ready, they begin their map  
Synapses formed, there's a gap

Information  
Firing through

Templates formed  
Unique to you

Information firing through  
Information firing through

Here is a link to the video of the song on our YouTube channel:

<http://goo.gl/qgUj8G>

## Understanding the Amygdala

**Zac:** Excuse me! Have you got a minute? I wanted to find out if you are okay, you look so cross.

**Amygdala:** *(I'm scared about the test)*

**Zac:** I know, I'm scared too.

**Amygdala:** *(I know I'm going to fail)*

**Zac:** I don't want to fail either, but I don't know what I can do. Is that what you were doing to my temporal lobe. I felt so anxious inside when you were doing that.

**Amygdala:** *(Take it)*

**Zac:** I suppose I could run into school, grab the test paper and rip it up.

**Amygdala:** *(Run from it)*

**Zac:** Or I could not go into school, pretend I was sick.

**Amygdala:** *(I'm scared about the test)*

**Zac:** I know, I know. Look hang on a minute, I want you to meet someone. Neo come here. I'm really disappointed in you. I thought you were better than that. You're supposed to be the thinking part of my brain. Have you ever stopped for a moment and thought about what she wants. Have you even read what she's saying?

**Neo:** I'm a bit short-sighted.

**Zac:** I know you are. Now put on your glasses and read her signs.

**Neo:** Oh you're worried about the test. Why didn't you say?

**Amygdala:** *(Why doesn't anyone listen to me)*

**Zac:** So if you listened to each other, maybe we would be able to sort it out.

**Zac:** You are connected you know, and you need to be part of this as well.

**Neo:** Oh! That's feeling a bit better  
I'm starting to think a bit straighter  
I can just start to put a few thoughts together.

## The Power of Story

The brain is quite a complex thing to get your head around as there is a lot going on in there!

To help you remember how the brain works, we created a story with some parts of the brain being turned into characters who were recognisable and very distinctive in what they could do.

In his book, "Story Proof", Kendall Haven has created a number of activities to prove that story can improve our memories by 100%.

### Activity:

- Set the class the challenge that they can improve their memories through using story.
- First of all, read the sentences from List 1.
- Randomly ask the pupils who the character was who...e.g "Who pulled out the tooth?", "Who built the boat?"
- Ask the pupils to reflect on why it might have been hard to retain the names of those particular people.
- Then, try out List 2 (following the same process as before)
- Reflect on why the pupils thought the second list was possibly easier to obtain and remember?

List 1	List 2
John walked on the roof	Santa walked on the roof
Bill picked up the eggs	The Easter Bunny picked up the eggs
Frank built the boat	Noah built the boat
Harvey used the telephone	Alexander Bell used the telephone
Mike wrote the play	Shakespeare wrote the play
Mary pulled out the tooth	The Tooth Fairy pulled out the tooth
Andrew used the broomstick	Hermione used the broomstick

Could you use story to remember the planets in the solar system?





## Discussion and Debate

Science is about more than learning facts and experimenting with ways of finding things out. It's also about developing ethics and morals, encouraging children to think about what is important to them, and why.

### Philosophy for Children Enquiry

This is a simple step by step guide to facilitating an enquiry with your class which will get them speaking and listening to each other. The images we have included as a starting point link to the how we learn theme of Journey to the Centre of the Brain, but you can use any picture that you think will inspire an interest in your children.

#### How to choose a question to explore

- Give the children an opportunity to look at the picture;
- Ask them to say the first word that comes into their head when they look at the picture;
- In groups of 3 – 5 get the children to come up with questions that they would like to ask about the picture and write these questions down;
- As a group look at the questions and use the **question quadrant** as a guide to thinking about the answers – there may be questions you can answer or that the children can research;
- In terms of a philosophical question to explore, you are looking for a question that falls into the 'Inspired by Picture' square. A question with lots of different answers, not focusing on right or wrong;

#### How to set up an enquiry

- Ask one child to begin by sharing their thoughts on the question;
- You can use a talking piece to focus the group's attention on the person speaking, or each child can be given 3 lolly sticks, placing one down each time they make a point;
- When the enquiry comes to a close – this may be due to time or everyone having said what they want to say – recap on the points and any conclusions that the group have come to.

#### Top tips:

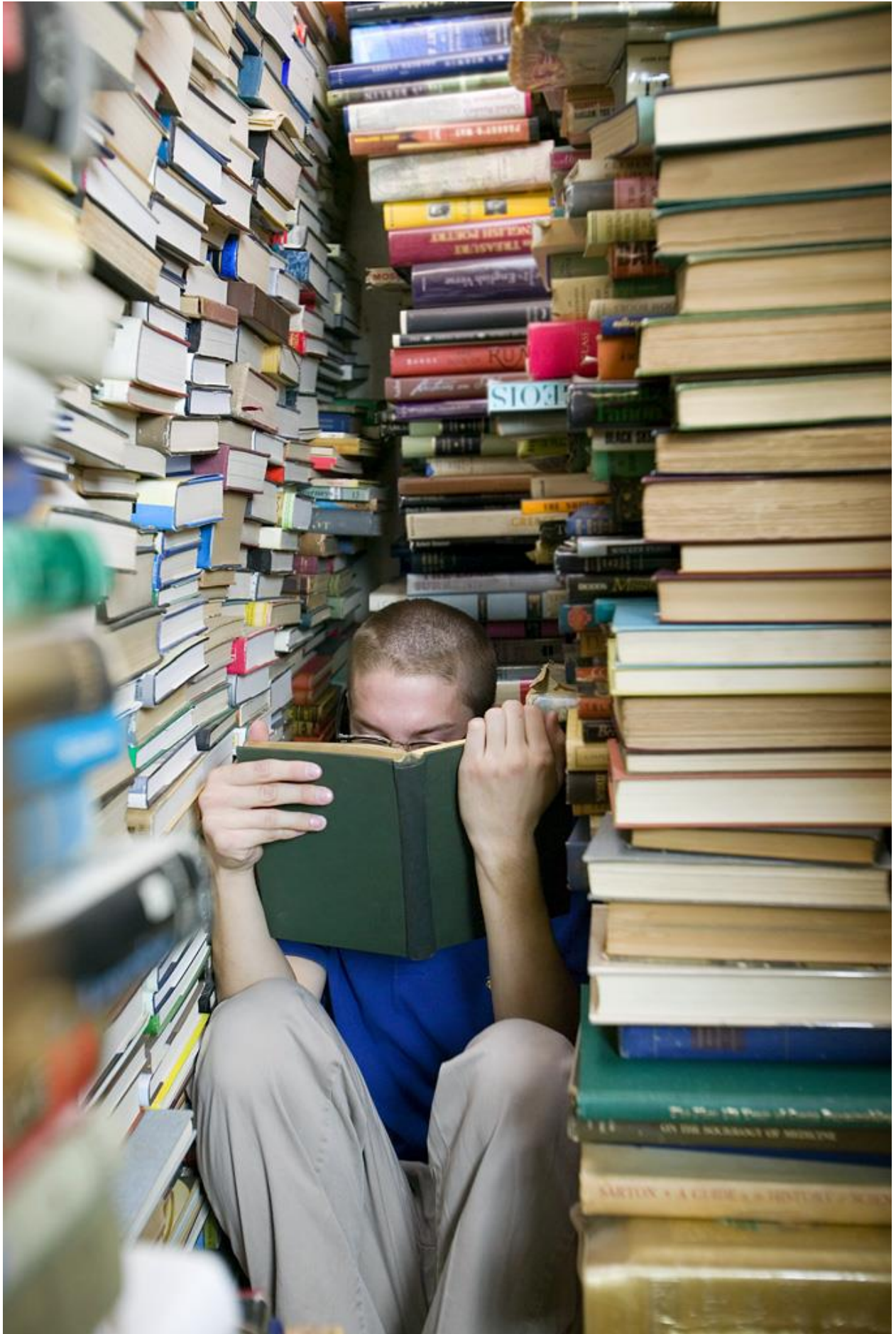
- When facilitating an enquiry think of yourself as the guide from the side;
- Thank each child for their contribution but do not compliment or criticise comments, unless you believe them to be inappropriate or offensive;
- Clarify a point if you need to, but check with the child that you have understood their meaning correctly;
- Encourage connections and continuations: I agree/disagree with... Also/ In addition/ However/ But...

## Question Quadrant

	<b>Look at the picture</b>	<b>Look at the picture</b>	
One right answer	How many hands does the robot have?	What physical similarities does the robot have with a human?	Many possible answers
	Do all robots need to be controlled by someone else?	Does living mean feeling?	
	<b>Go and find out</b>	<b>Inspired by the Picture</b>	









## Exercising your Mind

As Zac discovered, the quest of learning can be quite a complex one, as sometimes a question might not only have one answer. Sometimes some questions have lots of different possible answers.

Below you will see some questions taken from Ian Gilbert's "The Little Book of Thinks". So, what answers do you have to the following questions?

- *If I borrow a million pounds am I a millionaire*
- *Is there more future or past?*
- *Is a computer cleverer than a brain?*
- *Can you have more than one best friend?*
- *Would you rather be a brave fool or a clever coward?*
- *Can a baby commit a crime? How about a dog?*
- *If I switch the lights off does the wall change colour?*
- *Is a broken down car parked?*
- *If we borrow every single book from a library is it still a library?*
- *If we moved the entire school and everything and everybody in it to Africa, would it still be the same school?*
- *If I swapped brains with you would you still be you and me still me? What about hearts?*
- *Which is heavier, an inflated or deflated balloon?*





## Brain Training

### Books

*The Little Book of Big Stuff about the Brain* – Andrew Curran

ISBN Number: 978 – 184590085 – 4

*The Little Book of Thunks* – Ian Gilbert

ISBN Number: 978 – 184590062 – 5

*Neurocomic* – Dr Matteo Farinella & Dr. Hana Ros

ISBN Number: 978 – 907704 – 70 – 3

*Story Proof* – Kendall Haven

ISBN Number: 978-1591585466

### iPad App's

Get access to FREE downloadable brain App's by typing these titles into App search bar...

Brain Tutor 3D

3D Brain

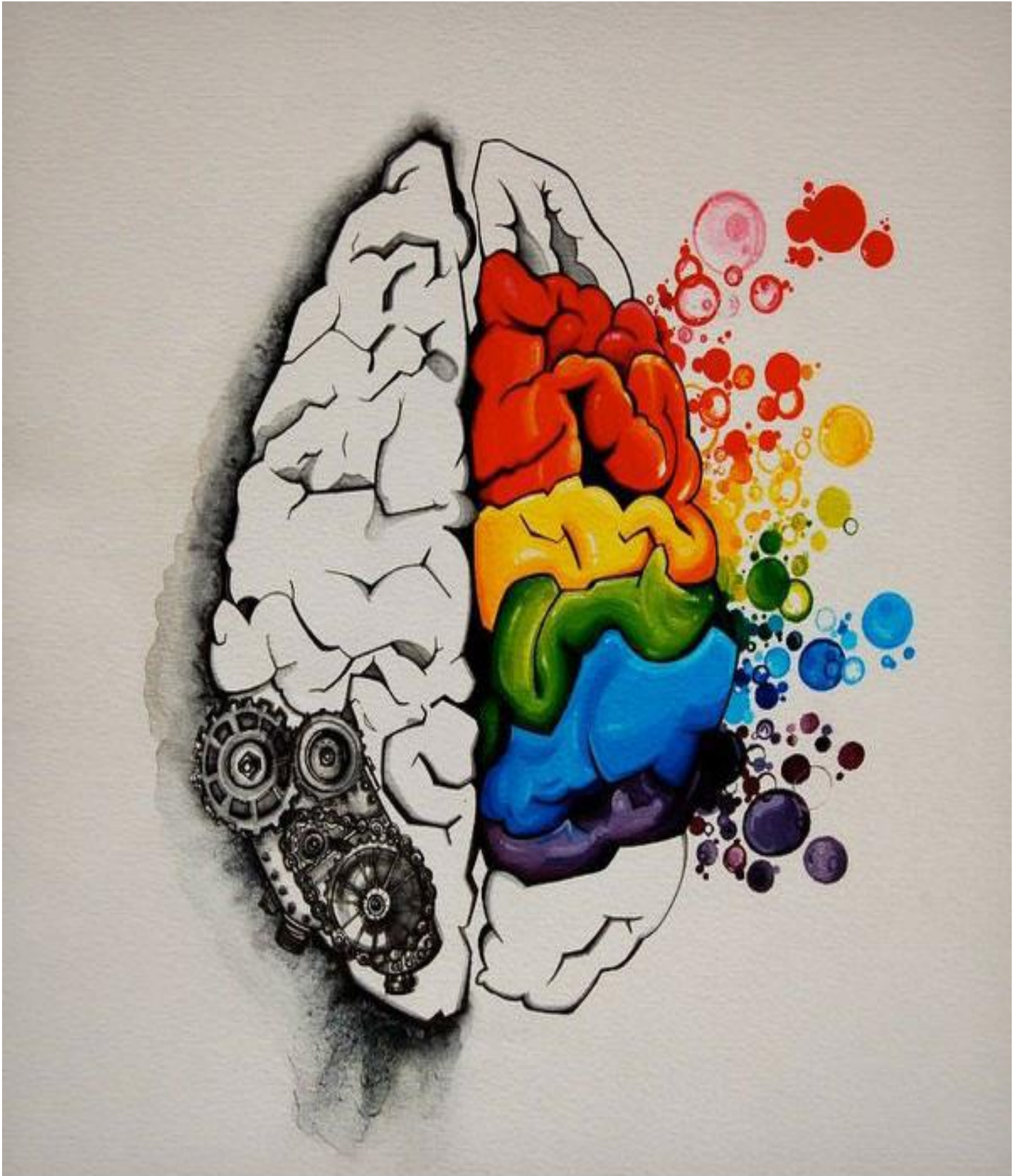
### Website

Access our nine online films about the brain at:

[www.worldinsideme.co.uk](http://www.worldinsideme.co.uk)





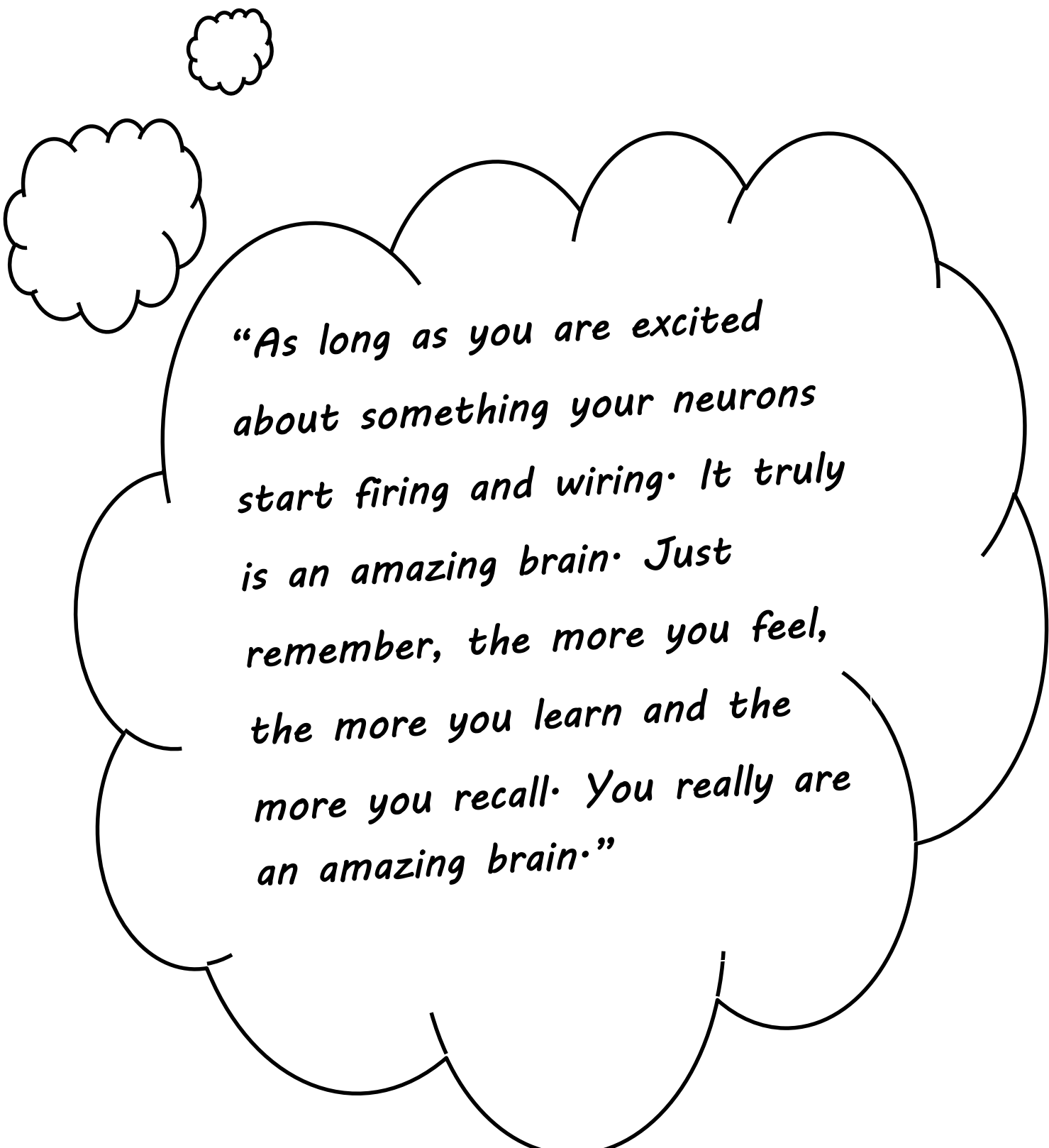


## Returning from the Brain

- Zac:** I think what I'm learning is that all the parts of the brain are important. Reptilian, emotional and Neo Cortex. They're all connected, and if we don't listen to our emotions we'll never learn anything.
- Neo Cortex:** As long as you are excited about something your Neurons start firing and wiring. It truly is an amazing brain.
- Hippocampus:** Just remember, the more you feel, the more you learn and the more you recall.
- Cerebellum:** You really are an amazing brain to be inside.



## Don't Forget...



*“As long as you are excited about something your neurons start firing and wiring. It truly is an amazing brain. Just remember, the more you feel, the more you learn and the more you recall. You really are an amazing brain.”*

## MakeBelieve Arts Team

Journey to the Centre of the Brain was created, imagined and brought to life by the following people...

**Trisha Lee – Artistic Director** - Director, writer and show development

**Ian Teague – Designer and Maker** - Set and props design and making, show development

**David Baird – Musical Director** - Sound design and show development

**Claire Payton – Stage Manager**  
Production and school liaison on tour

**Paul Andrew – Actor**  
Performer and show development

**Jai Vethamony - Actor**  
Performer and show development

**Steffi Walker - Actor**

**Alice Lamb - Actor**

**Bill Moody – Company Administrator**  
Booking tour and school coordination

**Dr. Andrew Curran – Neurobiologist**  
Consultant on science and brain content

Actor devisors in 2014/15 tour – Brett Fancy and Hannah Johnson

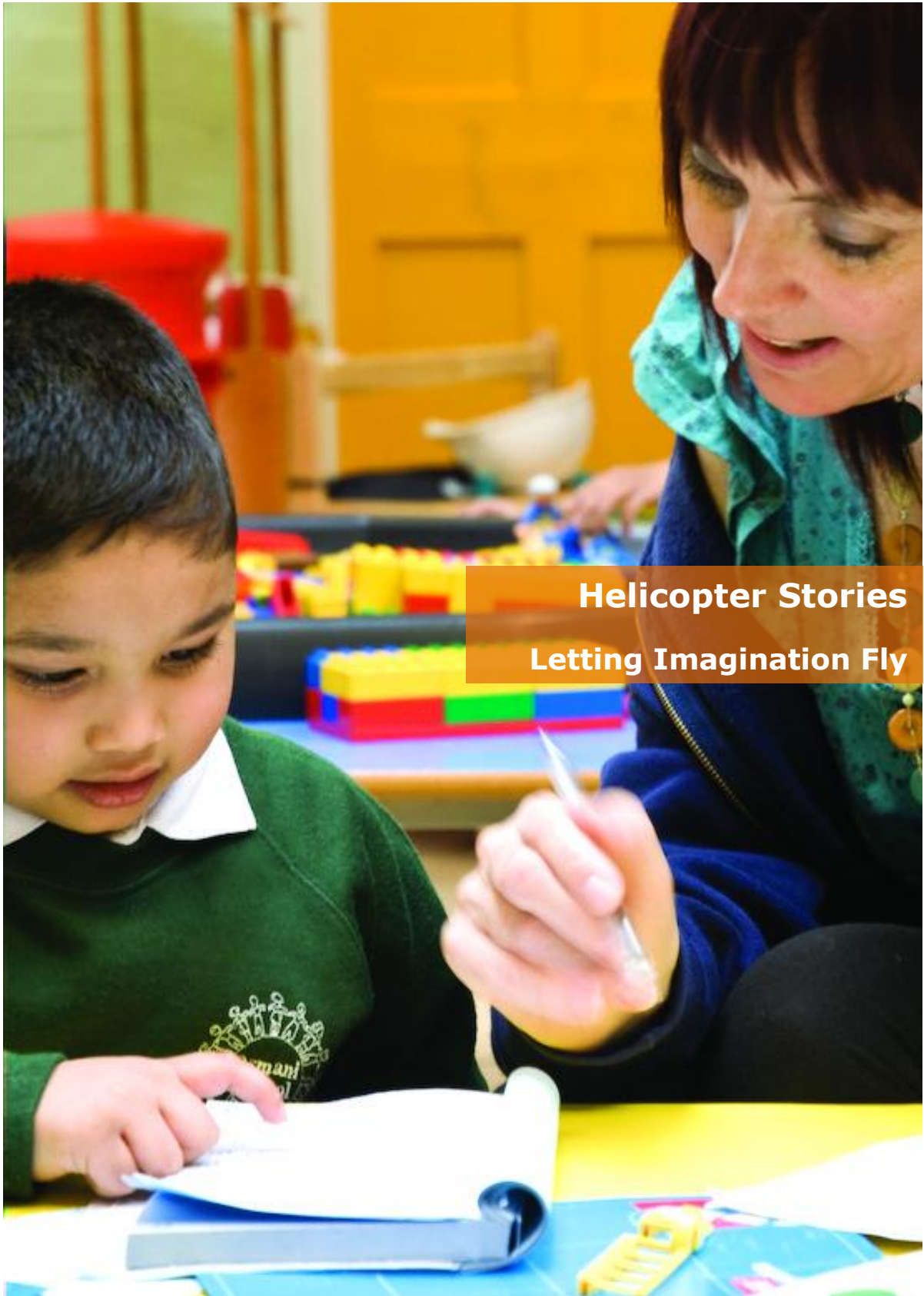
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Resource pack compiled by MakeBelieve Arts.

If you wish to contact us please call on 020 8691 3803 or email us at [info@makebelievearts.co.uk](mailto:info@makebelievearts.co.uk) alternatively for more information please visit our website on [www.makebelievearts.co.uk](http://www.makebelievearts.co.uk)

To find out more about our unique approach to storytelling and story acting in the Early Year and Foundation Stage please visit <http://www.makebelievearts.co.uk/early-years-storytelling/>





**Helicopter Stories**  
**Letting Imagination Fly**