

# Being Brainy Activity Pack



## Worksheets to go along with Being Brainy videos:

- Worksheet 1: What is a brain? Drawing and describing what a human brain looks, feels and smells like.
- Worksheet 2: The incredible human brain. Identify and label the key areas of the brain.
- Worksheet 3: Brain Benders. Matching the key anatomical areas of the brain to their correct functions.
- Worksheet 4: How to make a brain hat.
- Worksheet 5: Design your own dancing alien neuron.
- Worksheet 6: Draw and label a neuron.
- Worksheet 7: Optical illusions.

## Bonus worksheets:

- How to make a brain hat mobile
- Help the neuron get the message to the brain
- Poster design
- Write your own brain song!

## Want to do more activities?

Register on [www.beingbrainy.com](http://www.beingbrainy.com) and get access to more fun activities and experiments, lesson plans, slides, and more.

And make sure you check out our Being Brainy Lab video series - you'll get to meet some of our scientists, try some cool experiments and learn more about your amazing brain. You'll find them on our website [www.beingbrainy.com](http://www.beingbrainy.com).

The Being Brainy Brain Education Program is funded through the Brain Research New Zealand Centre for Research Excellence.

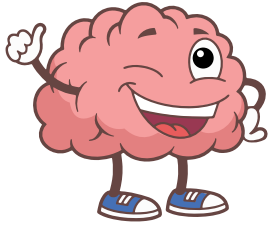
For further information and access to this site please go to:

[www.beingbrainy.co.nz](http://www.beingbrainy.co.nz)



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# Worksheet 1



## What is a brain?

In the box below, draw what you think your brain looks like.

Label any important parts.

Be creative!

Choose a couple of adjectives to describe what you think your brain might

**Look** like: .....

**Feel** like: .....

**Smell** like: .....

My brain is important because .....

.....

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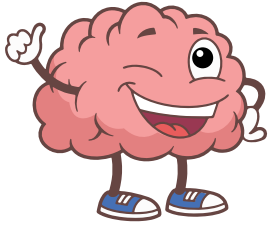
### Learning objective

*Students will:*

- *define what they think a brain looks like and its role and importance to our lives*



# Worksheet 2



## The incredible human brain!

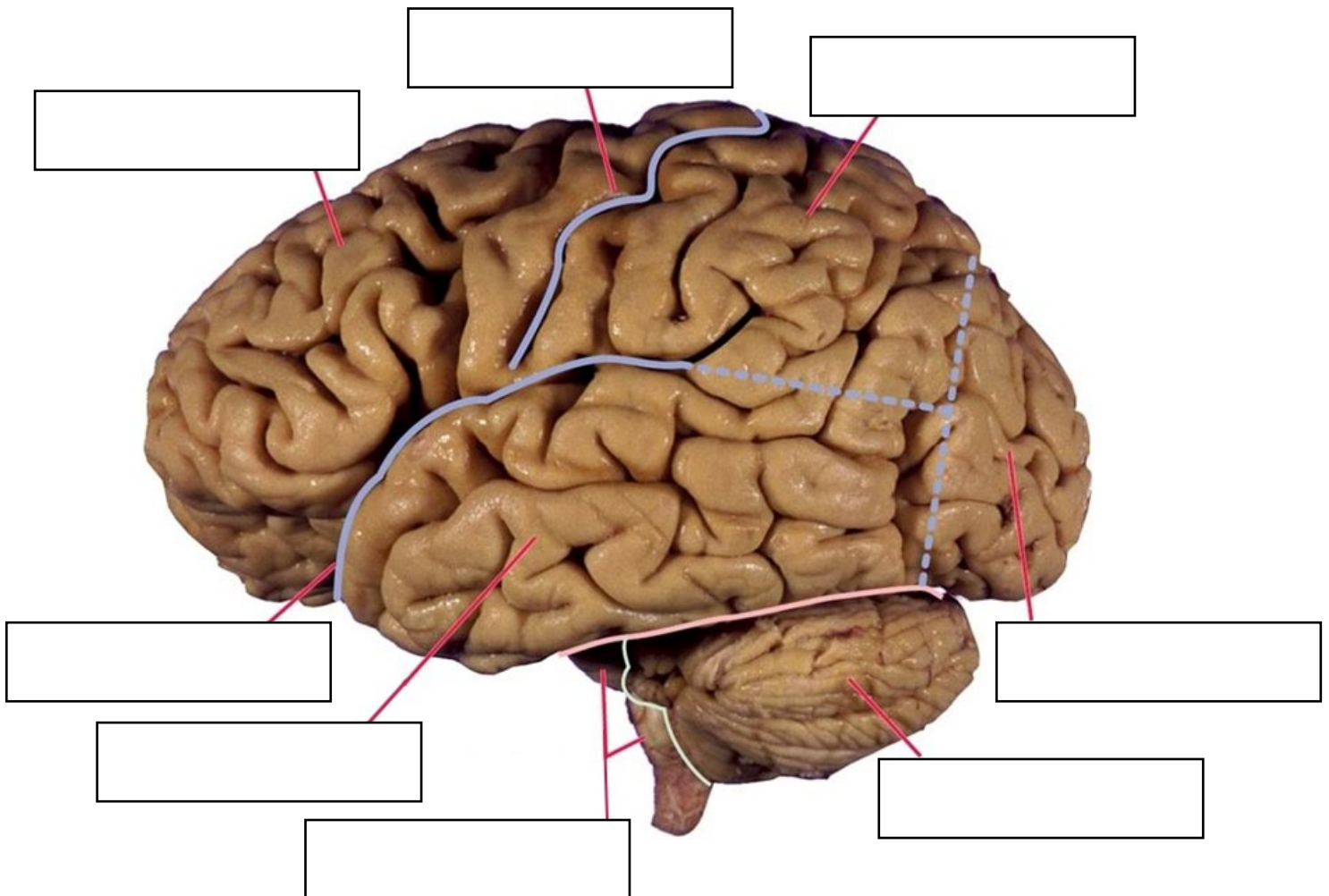
On the diagram below, identify and label the following key areas.

Using a red pen, trace over and label:

- *The major sulci*
- *Central sulcus*
- *Lateral fissure (sulcus)*

Using different colours for each part of the brain, outline, colour and label the major lobes and areas of the brain in the boxes below:

- *Frontal lobe*
- *Occipital lobe*
- *Parietal lobe*
- *Cerebellum*
- *Temporal lobe*
- *Brainstem*

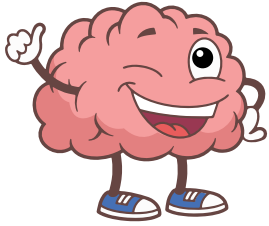


### Learning objective

Students will:

- identify and consolidate knowledge regarding the major anatomical parts of the brain

# Worksheet 3



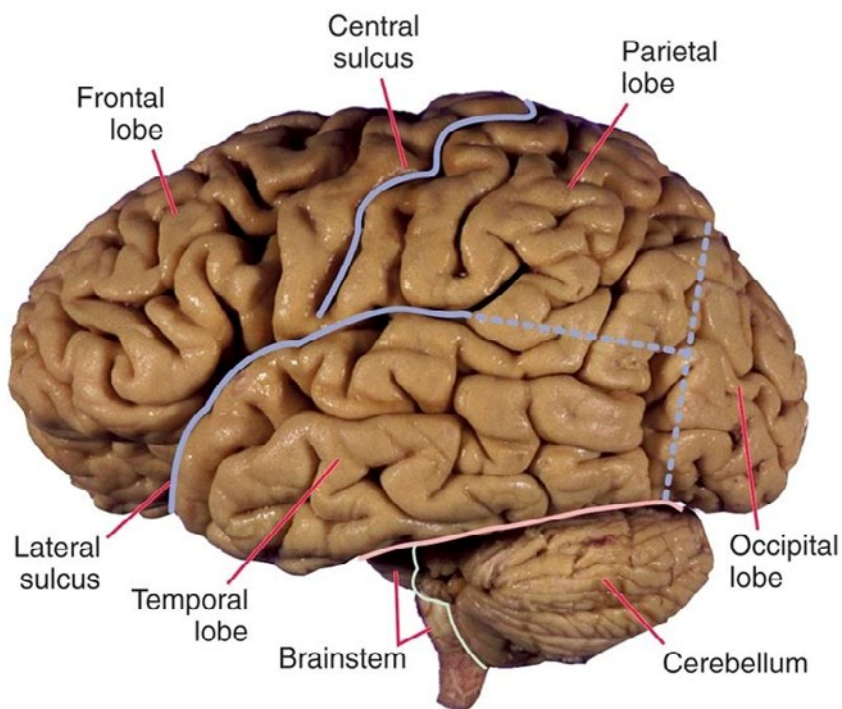
## Brain Benders!

Match the main anatomical areas of the brain to the correct functions by colouring them in the same colour.

The first one has been done for you as an example.

Major lobes or area of the brain	Function
Frontal lobe	Working memory formation (long and short term), auditory (hearing), emotions and language skills.
Parietal lobe	Vision
Temporal lobe	Ability to make sense of the world, spatial awareness skills, facial recognition, mathematics and language skills.
Occipital lobe	Biorhythms for a normal life
Cerebellum	Intelligence, learning and problem solving skills, behaviour and personality, emotions and speech and writing skills.
Brainstem	Coordination and balance

You can use the diagram below to check your answers to worksheet one!

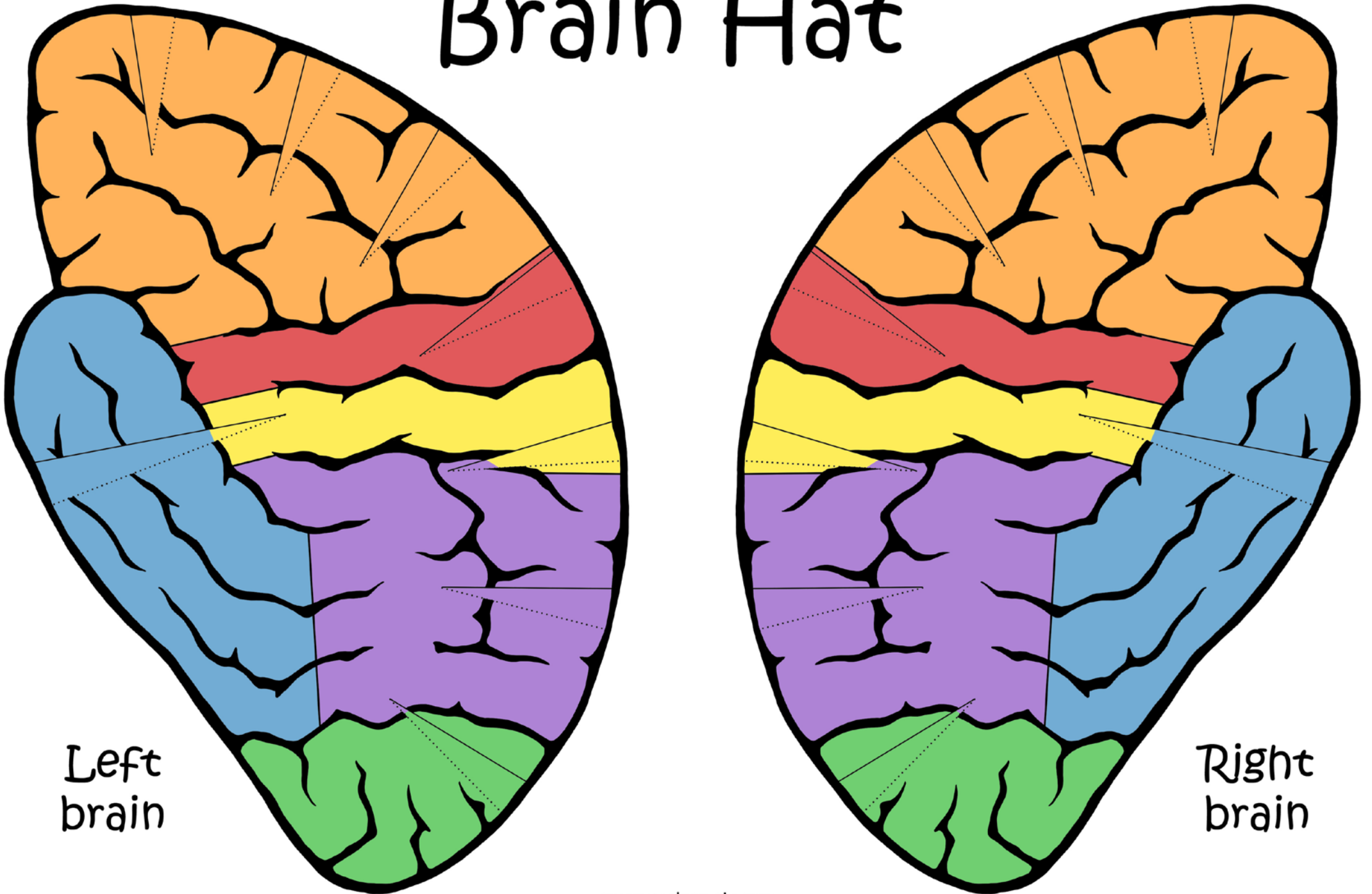


### Learning objective

Students will:

- identify and consolidate knowledge regarding the major anatomical parts of the brain

# Brain Hat

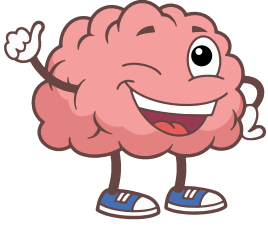


Left  
brain

Right  
brain

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# Worksheet 4: How to make a brain hat



Blow up template to A3 size.

Label each part of the brain hat with the correct anatomical name.

*Extension: Write what each part of the brain is responsible for.*

To assemble hat:

1. Cut out the two hemispheres.
2. Cut along the dotted lines.
3. Pull the dotted line over so it meets the solid line. Sellotape or glue. Do this for both hemispheres.
4. Tape or glue the two hemispheres together to complete your brain hat.

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**Answers for teachers / parents** (Please remove before giving to students)

**Key for brain hat diagram:**

**ORANGE** = Frontal lobe

**RED** = Motor cortex

**YELLOW** = Somatosensory cortex

**BLUE** = Temporal lobe

**PURPLE** = Parietal lobe

**GREEN** = Occipital lobe

**Corpus callosum** – A wide, flat bundle of nerve fibres that connect the left and right sides of the brain, allowing communication between them.

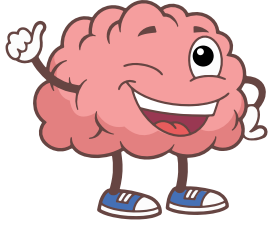
**Premotor cortex** – Area of the brain that is located adjacent to the primary motor cortex. The premotor cortex plans and prepares what movement is to occur. The plan for movement (i.e., motor command) is then sent to the primary motor cortex.

**Basal Ganglia** – Group of brain areas located deep in the brain ('Basal' = base of the brain, 'Ganglia' = group). The basal ganglia are involved with planning and stopping movements.



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# Worksheet 5



## Designing your own dancing alien!

Label:

- the cell body
- the nucleus
- the dendrites
- the axon
- the myelin sheath
- the axon terminal

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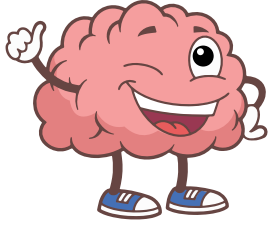
### Learning objective

Students will:

- design their own dancing alien to explore the basic structure of a neuron and the names of each part of the cell.

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# Worksheet 6



**Draw and label a neuron.**

Correctly label:

- the cell body
- the nucleus
- the dendrites
- the axon
- the myelin sheath
- the axon terminal

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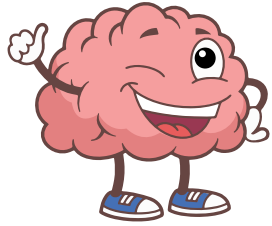
## Learning objective

*Students will:*

- *design their own dancing alien to explore the basic structure of a neuron and the names of each part of the cell.*



# Worksheet 7



## Spot the visual illusions!

Look carefully at the following images.

See if you can spot the visual illusion in each picture.

Study the images carefully.

You may like to use a ruler to check some of your theories!

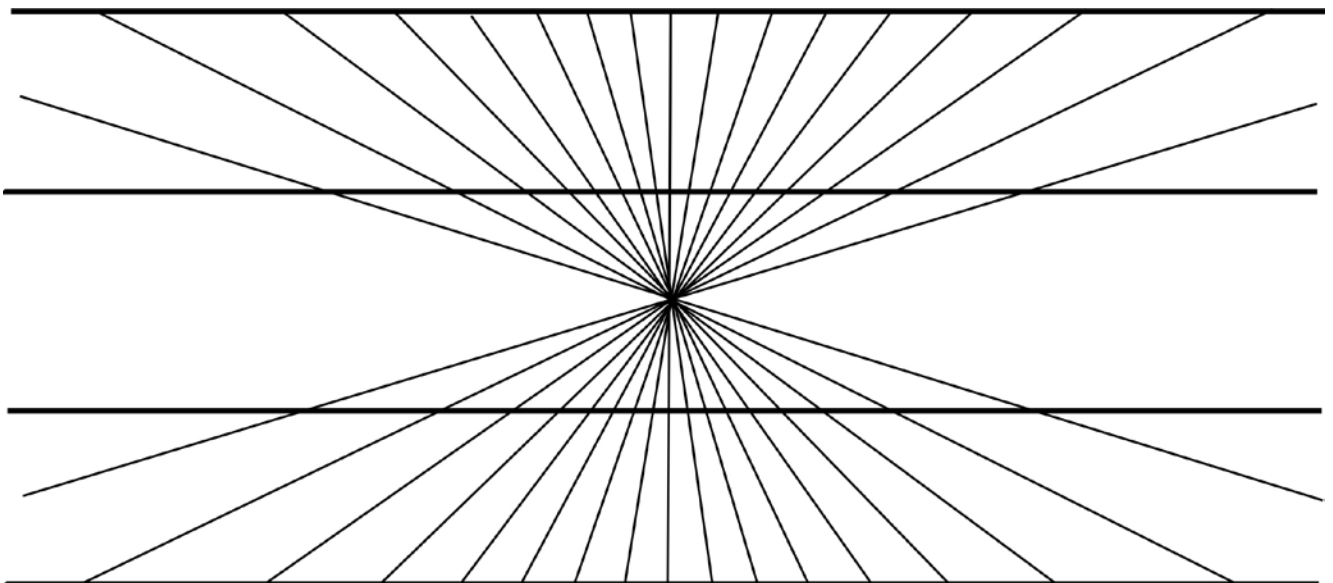
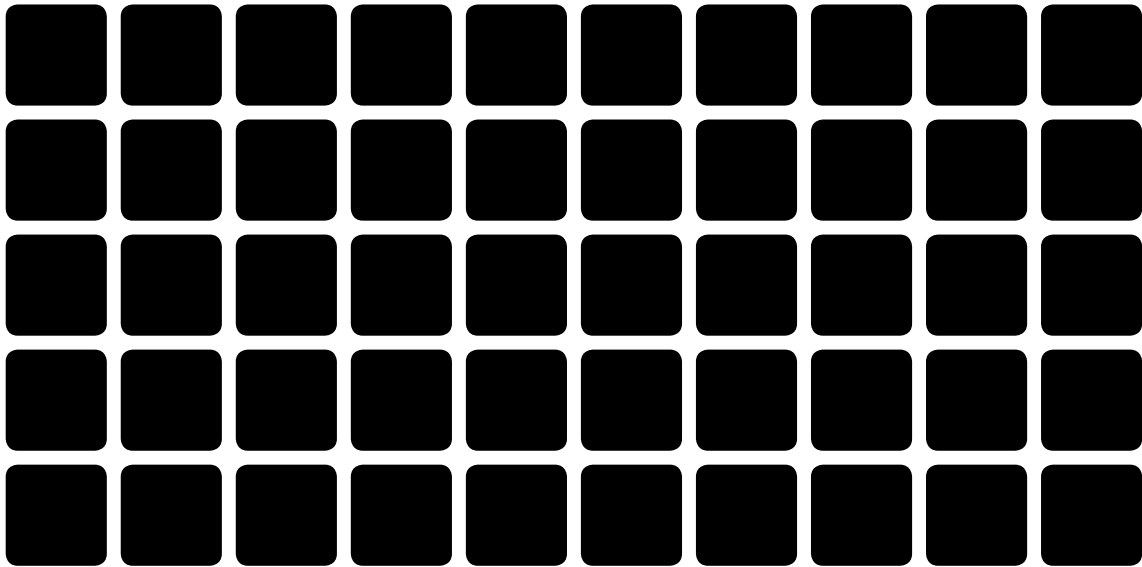


Image 1: The grey dots disappear if you focus on them.

Image 2: The lines running across the image are all straight.

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# Worksheet 7

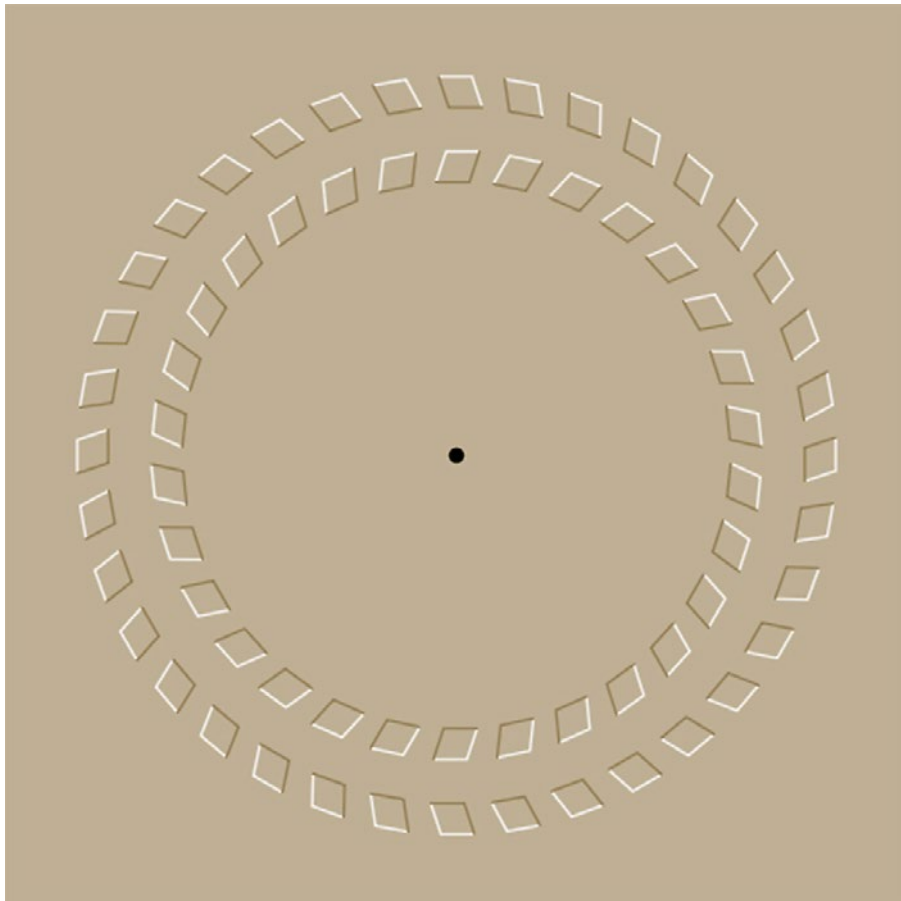
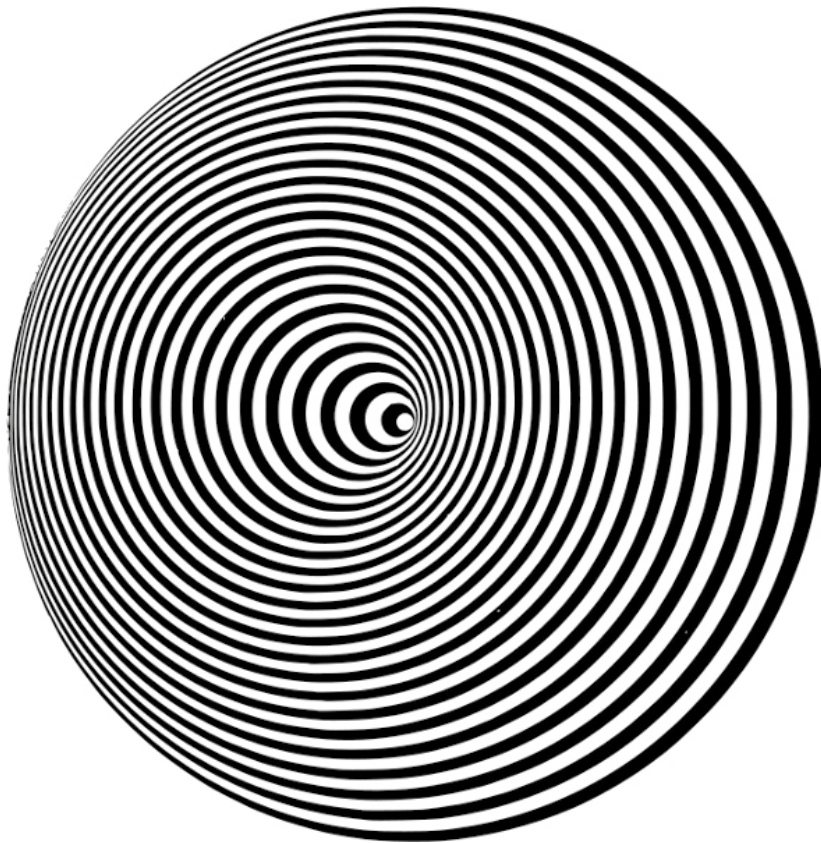


Image 1: Some shapes display depth through their curves.

Image 2: If you stare at the centre dot the outside rings appear to move.

# Worksheet 7

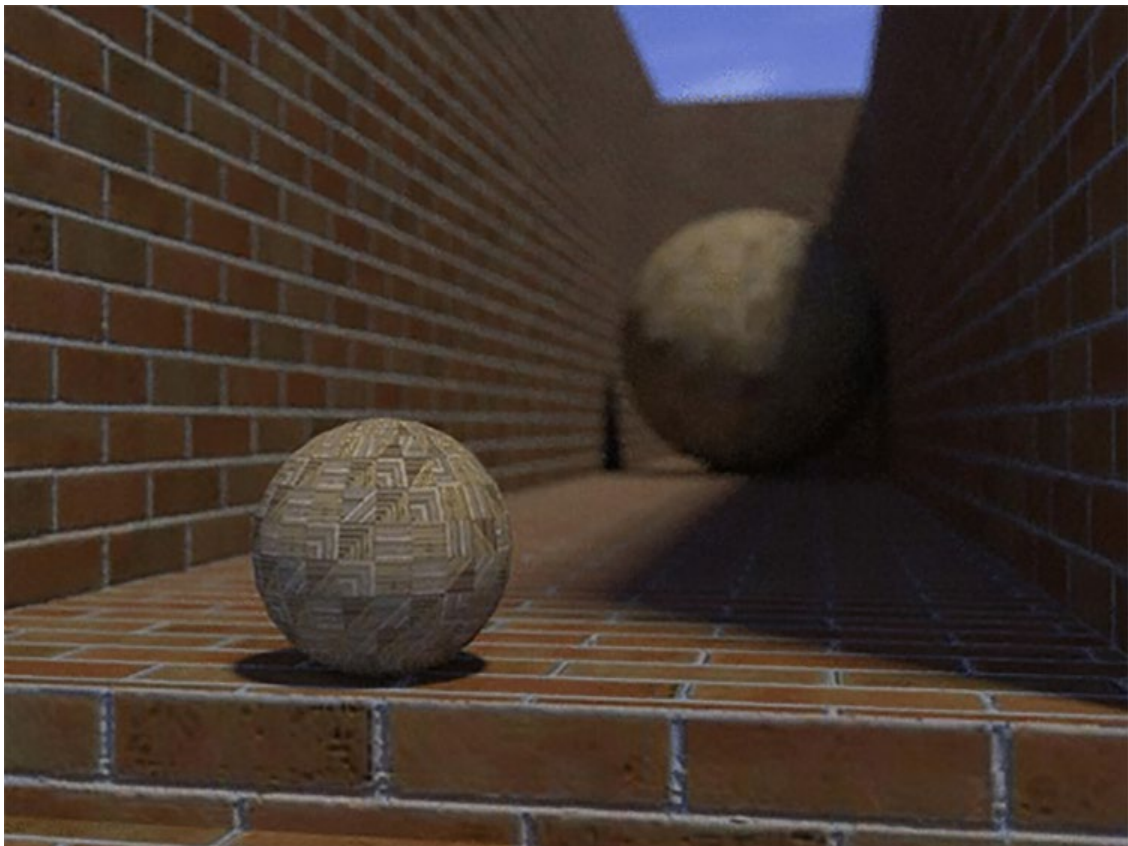
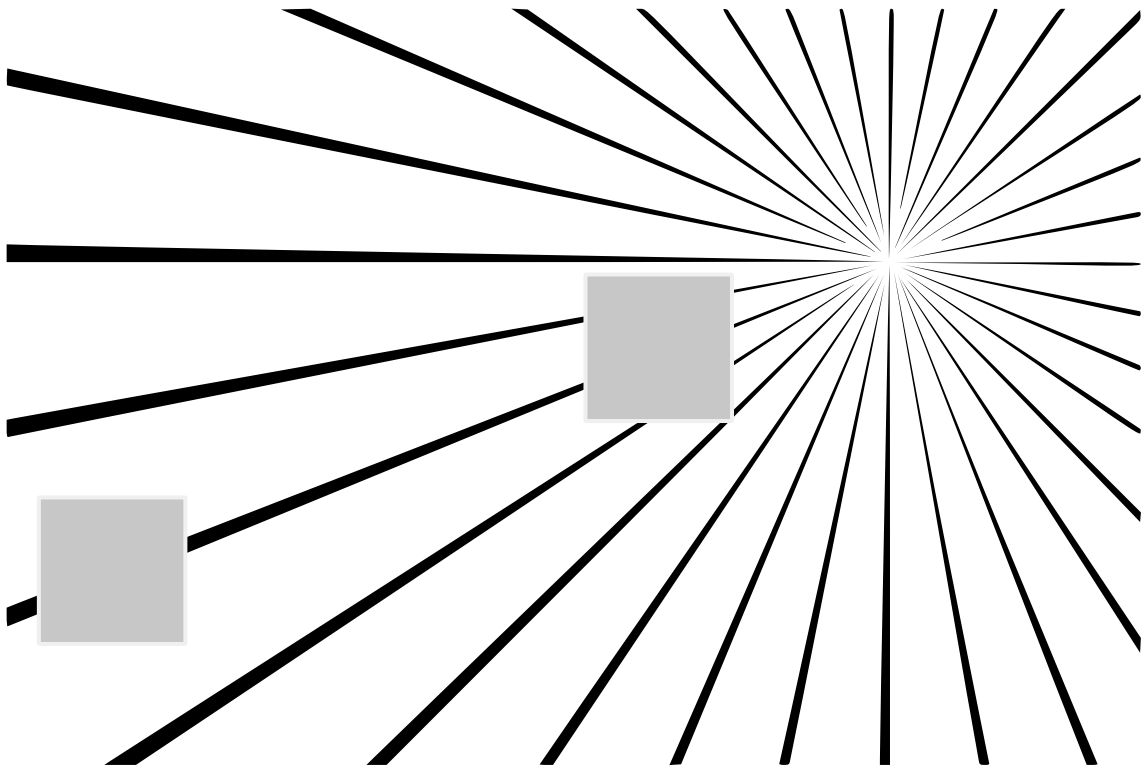
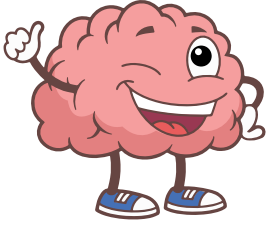


Image 1: The squares are actually the same size.

Image 2: The balls are the same size.

# How to make a brain hat mobile



## Blow up template to A3 size:

- Label each part of the brain hat with the correct anatomical name.
- Extension: Research some fascinating and unusual facts about the brain to write on the mini brain templates provided.
- Colour and decorate.
- Hole punch a hole at the top of the mini brains and thread with string ready to hang off the brain hat.

## To assemble mobile:

1. Cut out the two hemispheres.
2. Cut along the dotted lines.
3. Pull the dotted line over so it meets the solid line. Sellotape or glue. Do this for both hemispheres.
4. Tape or glue the two hemispheres together to complete your brain hat.
5. Insert a strip of cardboard around the base of the brain, on the inside to strengthen it.
6. Hole punch some holes around the base to hang the mini brains.

## Key for brain hat diagram:

**ORANGE** = Frontal lobe

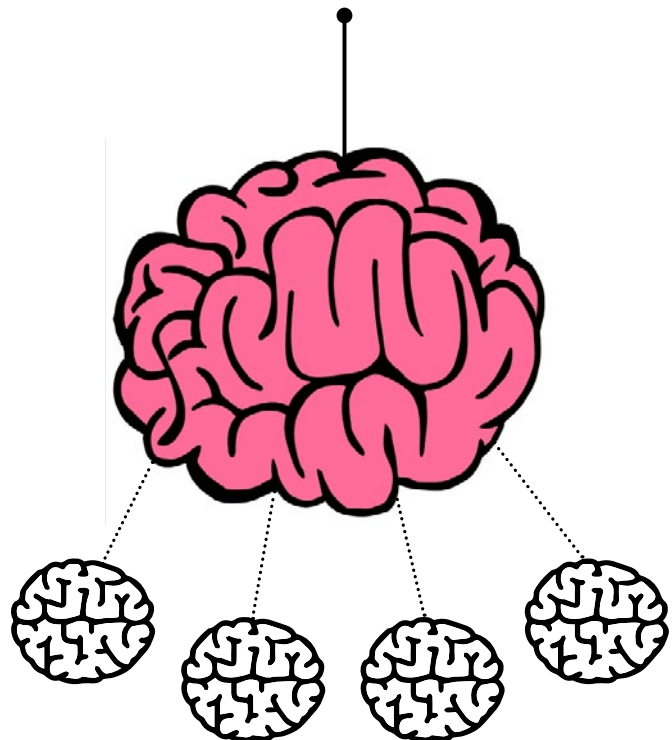
**RED** = Motor cortex

**YELLOW** = Somatosensory cortex

**BLUE** = Temporal lobe

**PURPLE** = Parietal lobe

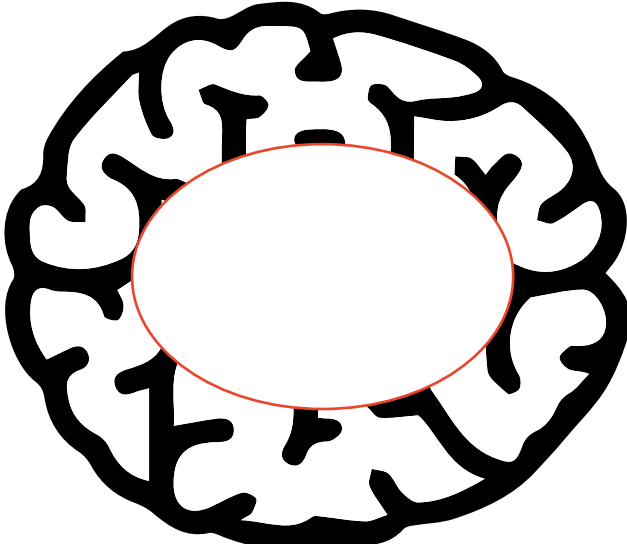
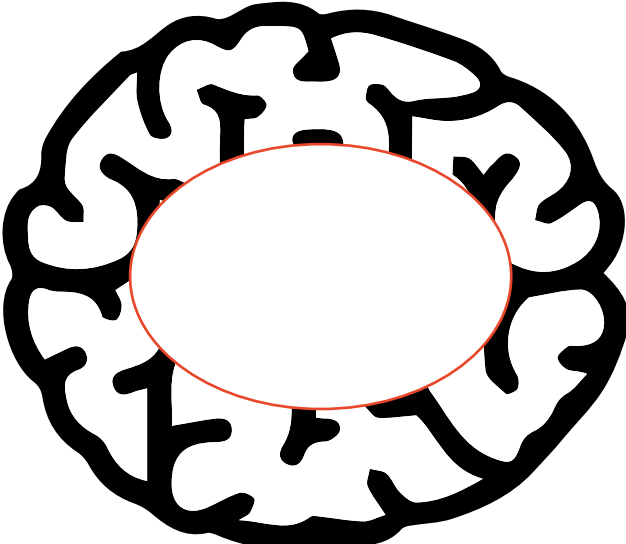
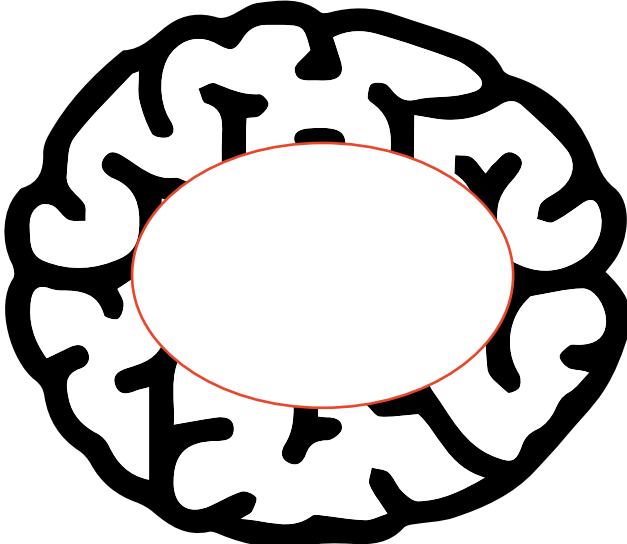
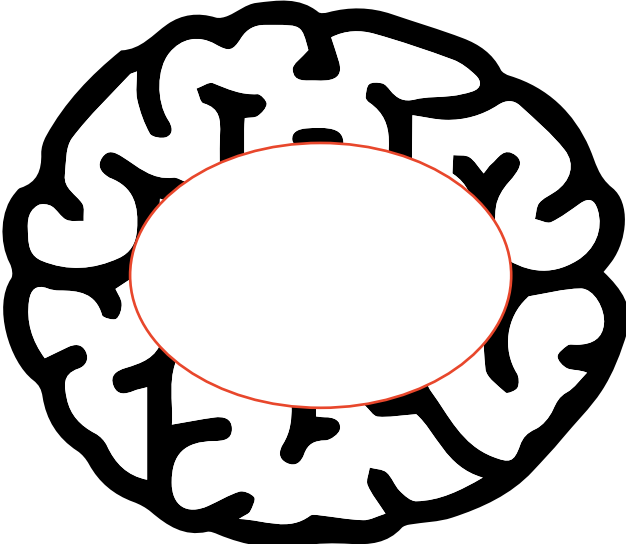
**GREEN** = Occipital lobe



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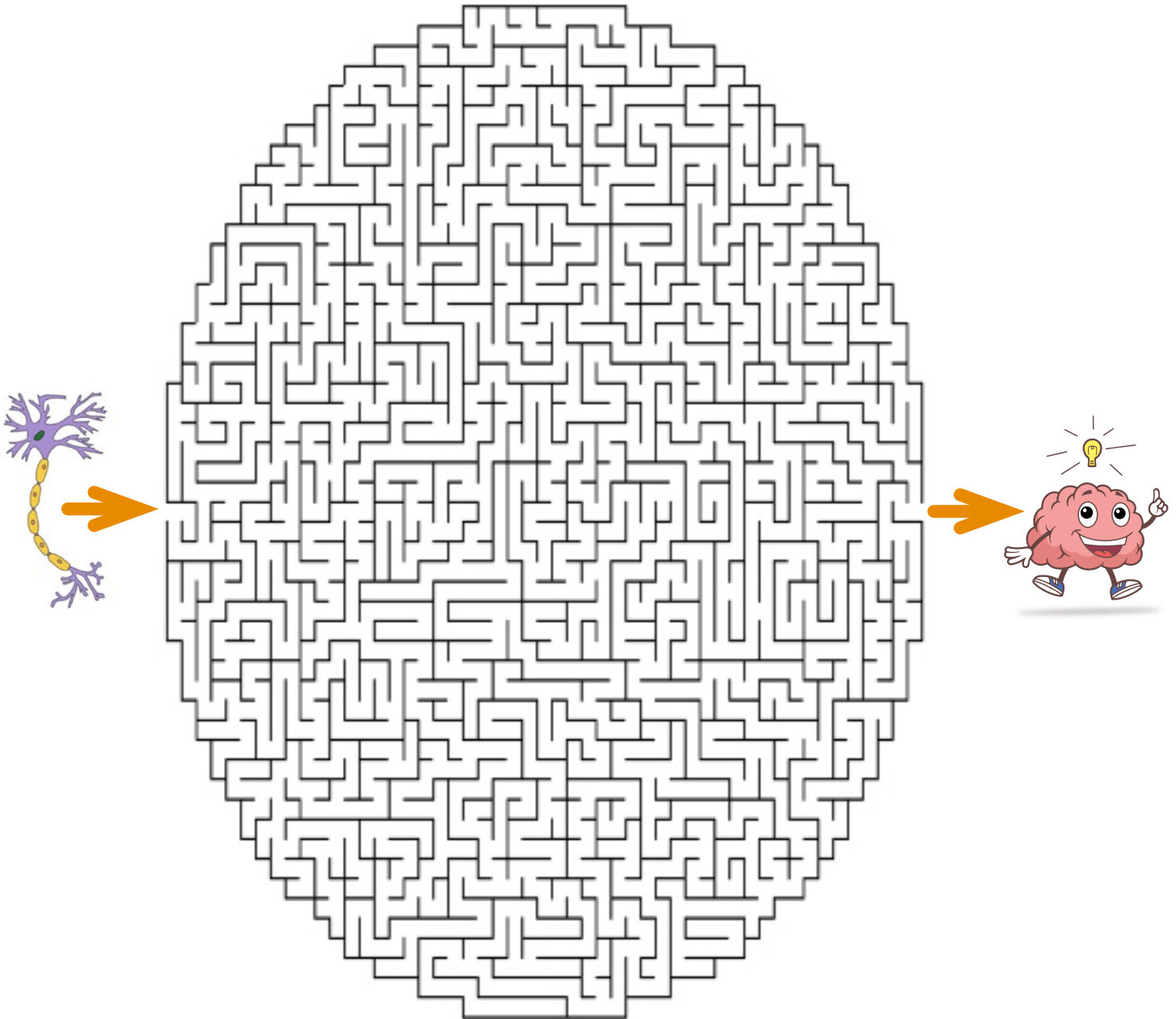
# Mini brain templates for mobile

Blow up to A3 size



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# Help the neuron get the message to the brain

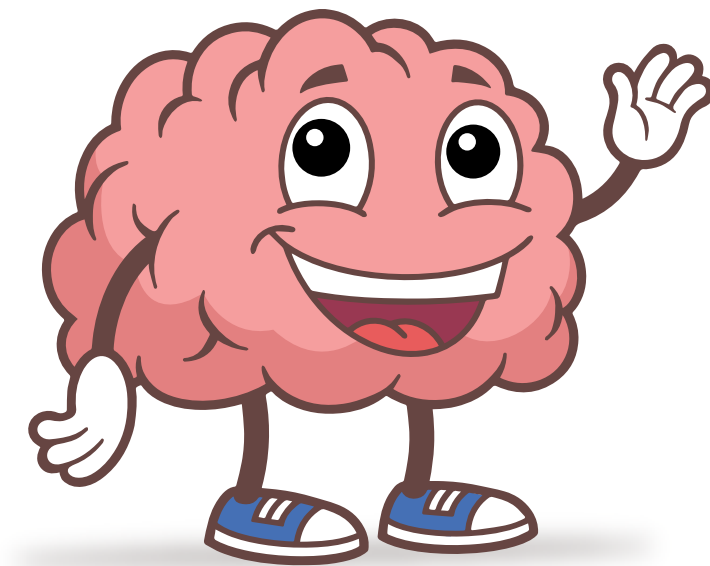


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# Poster design

## Design an informative safety poster inspiring people with some simple ways they can protect their brains from injuries

- Use some of the ideas from your brainstorm discussions to come up with a clear safety message
- Make sure your poster is colourful and eye catching
- Give reasons as to why protecting your brain is important
- Research some facts and figures to give your message more impact
- Present your message in an original way so that people remember your advice.



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# Write your own brain song!

Below is a link to some different songs that have been written about the brain.

Most people have chosen very common, simple tunes that will be familiar and easy to learn.

Make up your own song about something you have found fascinating during this unit that you would like to communicate to other students.

Be creative and have lots of fun!

<https://faculty.washington.edu/chudler/songs.html>

