

Today's Goals

- Review the parts of a science paper
- Begin the eggs-periments!



Let's Review!

- go to: <https://kahoot.it>
- enter the code!
- choose a team name!



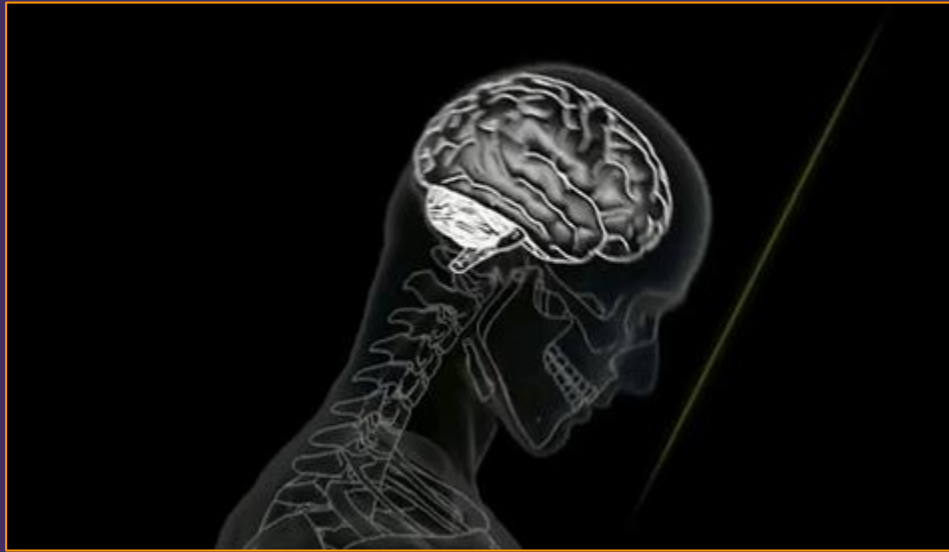
1. Design an experiment
2. Do the experiment
3. Write a science paper



Question

What do you want to know?

What do you want to know?



Our Question:

What do
you think



protects
the brain?

Our Question:

What do
you think

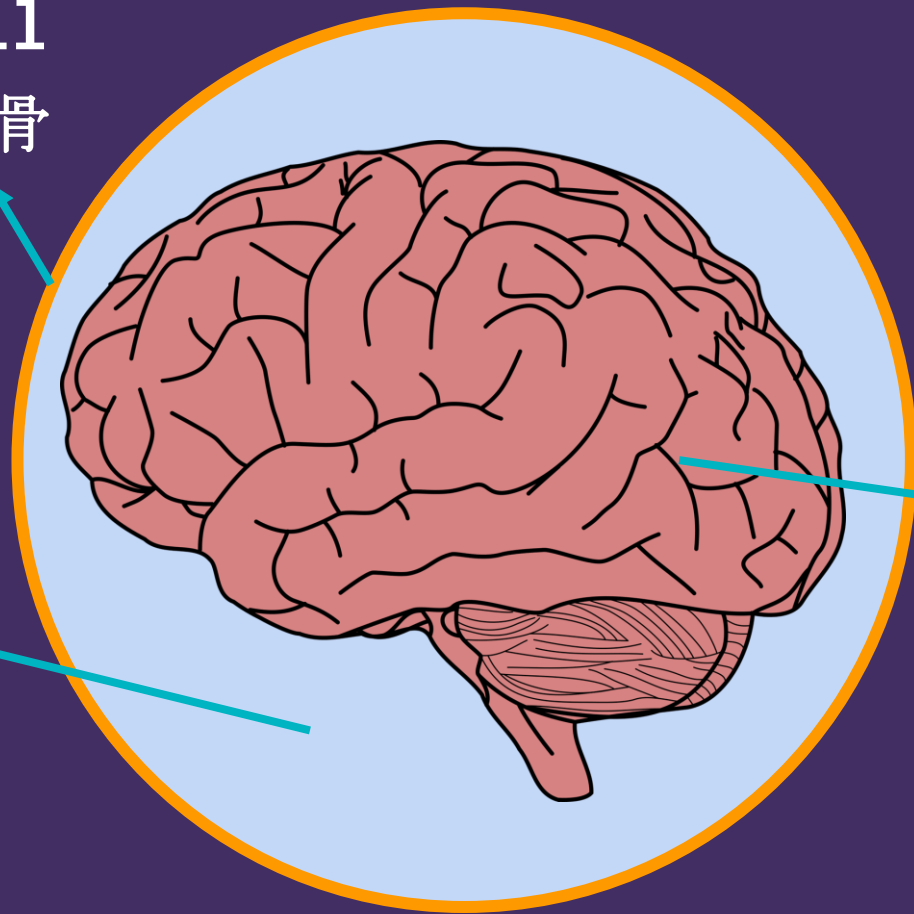


守る
protects
the brain?

The background is a dark purple color. It is decorated with various geometric shapes in different colors and patterns. In the top-left corner, there is a pink circle, a yellow dashed circle, a purple pentagon, and a blue dotted circle. In the top-right corner, there is a blue triangle, a purple circle, a yellow dashed circle, a pink striped circle, and a blue pentagon. In the bottom-left corner, there is a blue pentagon, a pink triangle, a yellow striped triangle, a purple triangle, and a blue dashed circle. In the bottom-right corner, there is a pink circle, a purple pentagon, a yellow dashed triangle, and a blue dotted circle.

Let's find
out!

skull
頭蓋骨



cerebral
spinal
fluid
(CSF)

腦脊髓液

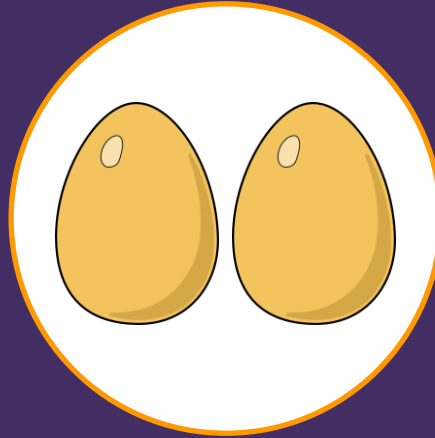
brain
(腦)

How can we answer our question?



container

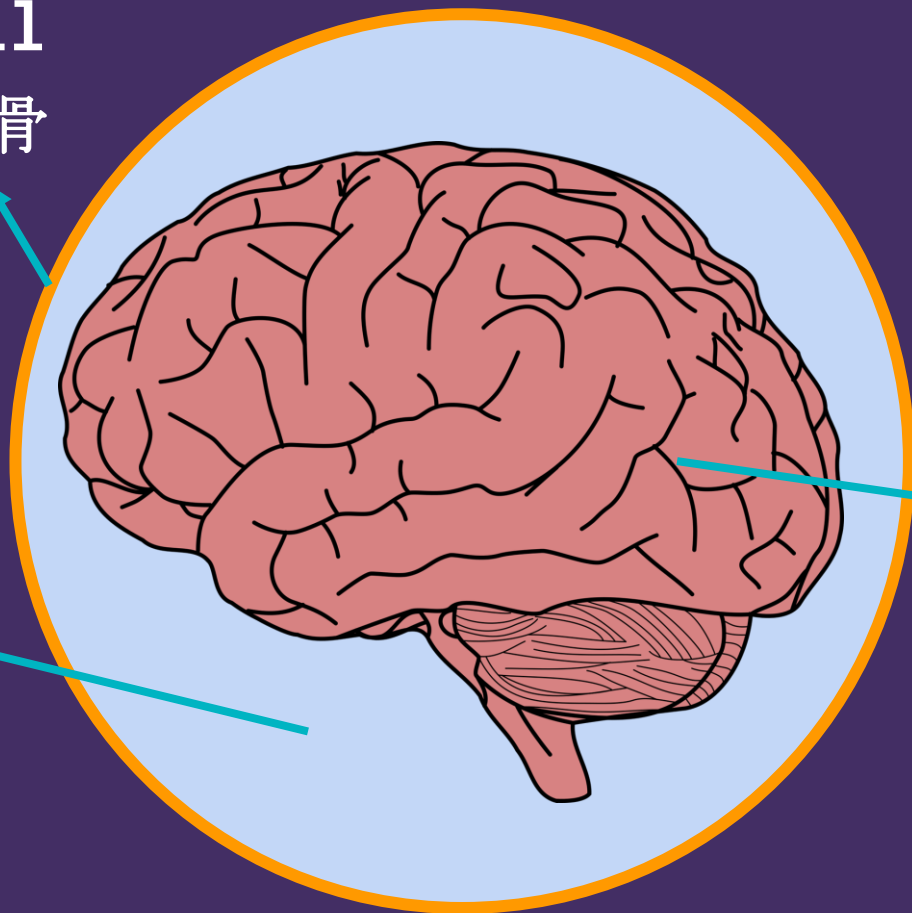
eggs



water

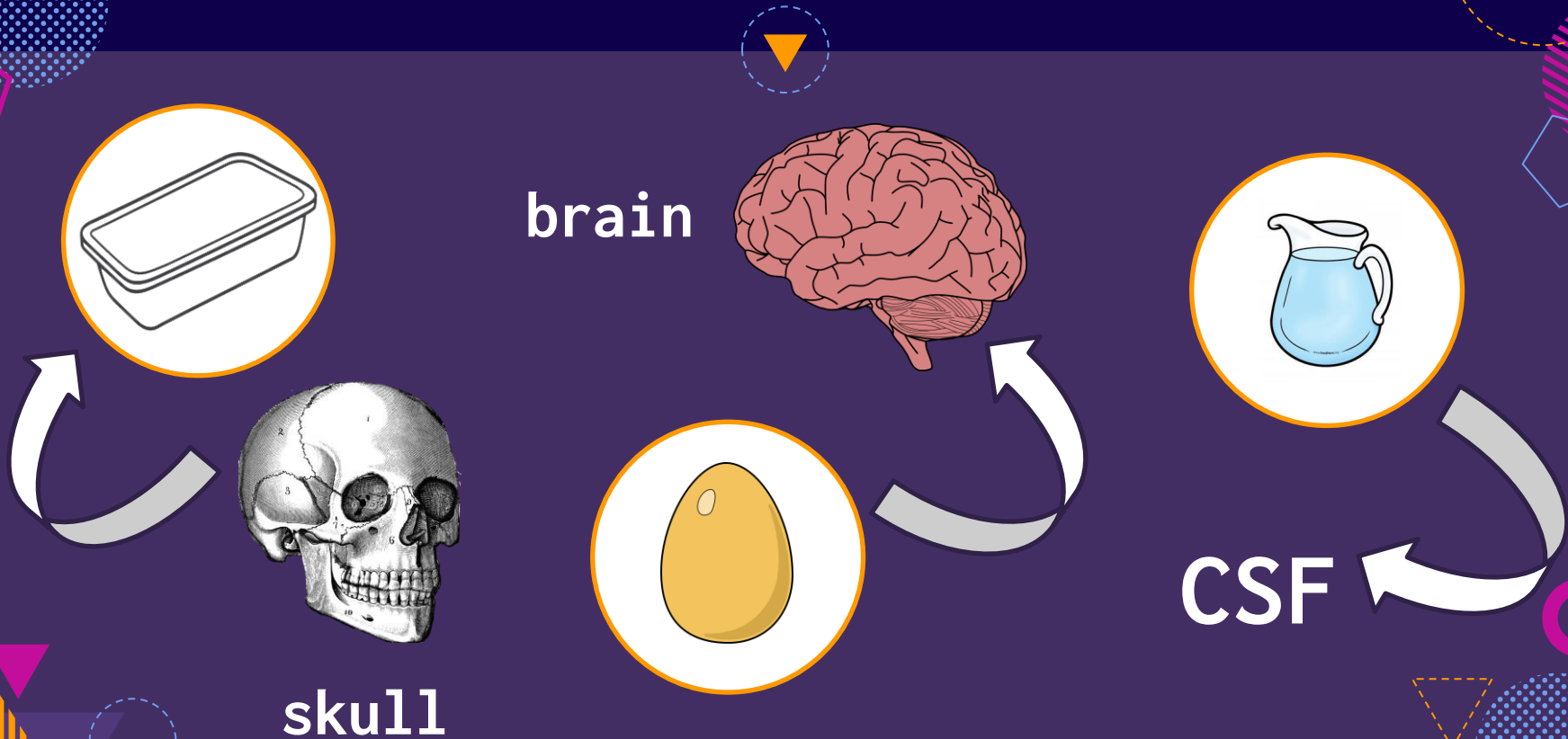
skull
頭蓋骨

cerebral
spinal
fluid
(CSF)
腦脊髓液



brain
(腦)

How can we answer our question?





1. Design an experiment

2. Do the experiment

3. Write a science paper



Methods

How do we do the experiment?

Two Groups

Experimental
Group

実験
グループ

Control
Group

対照群

Two Groups

Experimental
Group

実験
グループ

Control
Group
対照群

METHODS – Control Group (对照群)

Put the instructions (指示) in order from 1 to 9.

_____ Hold the container with the egg with both hands above the newspaper.

_____ Put the lid on the container tightly.

_____ You will need two desks, newspaper, one container with a lid, one egg, and a water bottle.

_____ Check on the egg. If the egg *broke*, write your group number on the **Yes** side of the board. If your egg *did not break*, write your group number on the **No** side of the board.

_____ Carefully fill the container with water until the egg is covered with water.

_____ Shake the container back and forth for 30 seconds. You can shake it hard!

_____ To clean up, bring the container with the egg, the water bottle, and the newspaper to the front of the room.

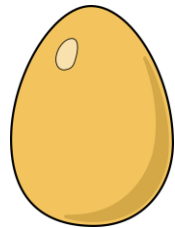
_____ Take off the lid and put the egg inside the container.

_____ Place newspaper on top of two desks that have been pushed together.

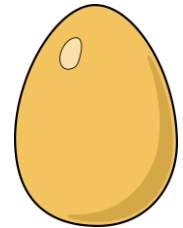
What will we change?



**Experimental
Group**



**Control
Group**



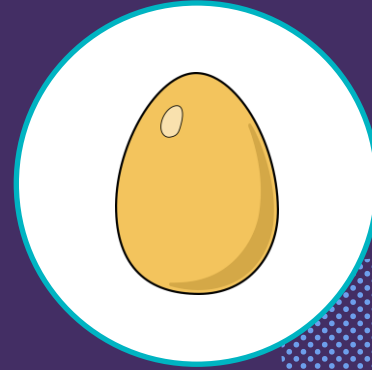
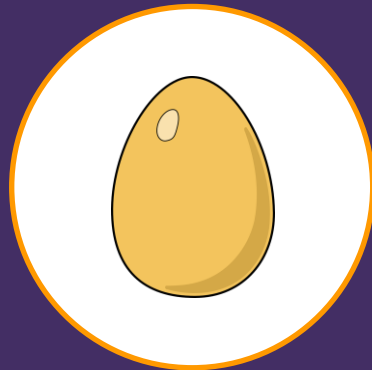
Two Groups



Experimental
Group

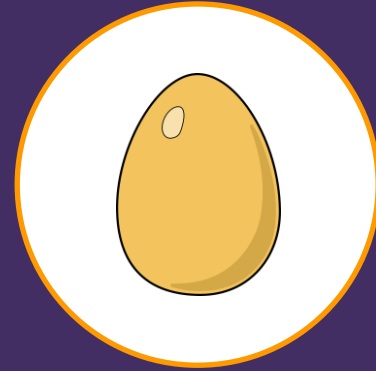
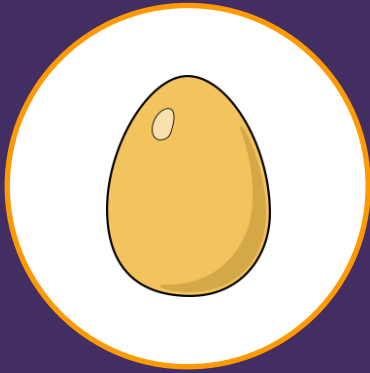


Control
Group



What is inside the container?

No Water



Water

Methods



Put the egg in
the container and
put on the lid
tightly.



Shake the
container!
HARD!



What happened to
the egg? Write it
down!



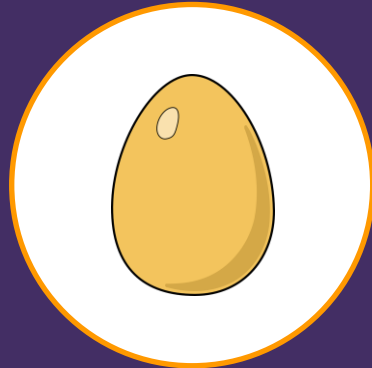
Hypothesis

What do you think will happen to the eggs?

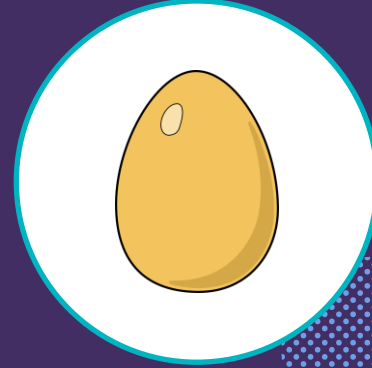
Two Groups



Experimental
Group



Control
Group



What will happen to the eggs?

No Water

Water

Making a Hypothesis

- Make a prediction
(予測)

Future Tense
(未来時制)

- What do you think will happen?

We think...

- What will be the answer to our question?



1. Design an experiment

2. Do the experiment

3. Write a science paper



Results

What happened to the eggs?

Did your egg break?

YES

Group #
Group #
Group #

NO

Group #
Group #
Group #

Our Question:

What do
you think



守る
protects
the brain?

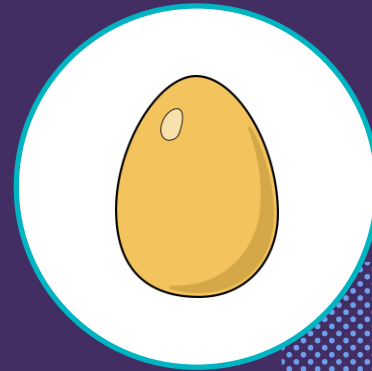
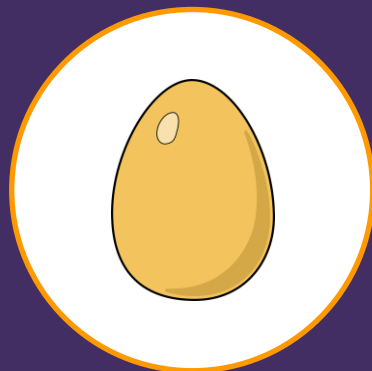
Two Groups



Experimental
Group



Control
Group



Methods



Put the egg in the container and put on the lid tightly.



Shake the container!
HARD!



What happened to the egg? Write it down!



1. Design an experiment

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Results

What happened to the eggs?

Did your egg break?

YES

Group #
Group #
Group #

NO

Group #
Group #
Group #



Good Job!

But what does it mean?



1. Design an experiment

2. Do the experiment

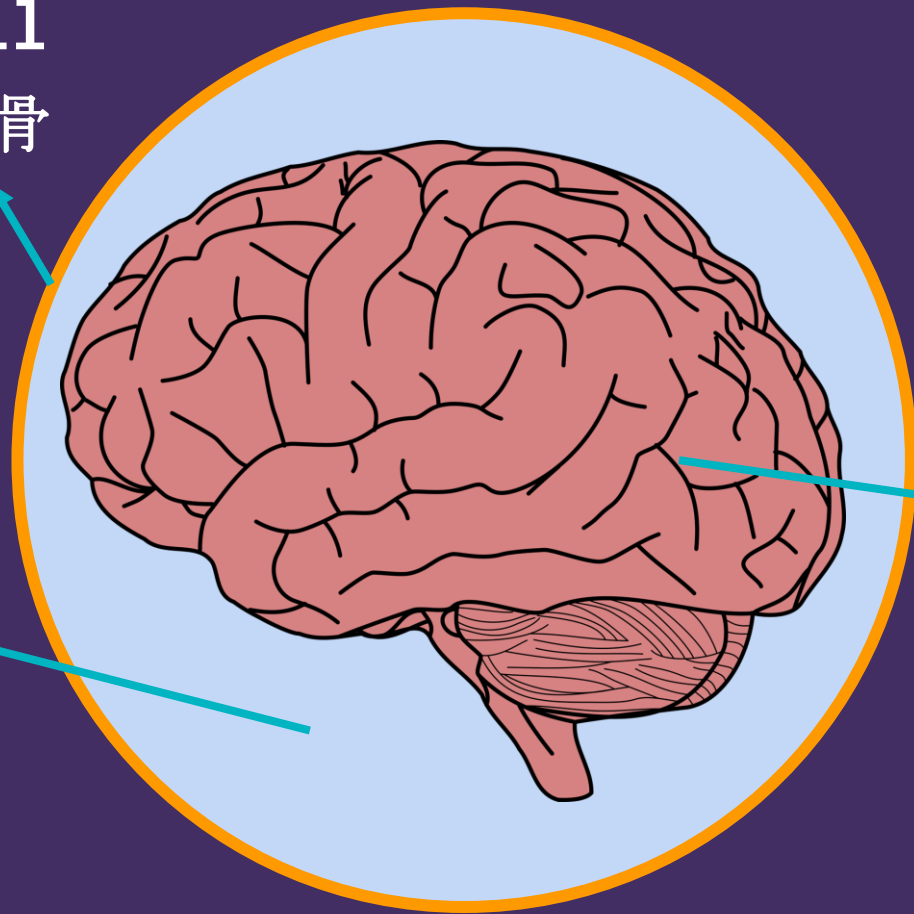
3. Write a science paper



Introduction

What did we learn before the experiment?

skull
頭蓋骨



cerebral
spinal
fluid
(CSF)
腦脊髓液

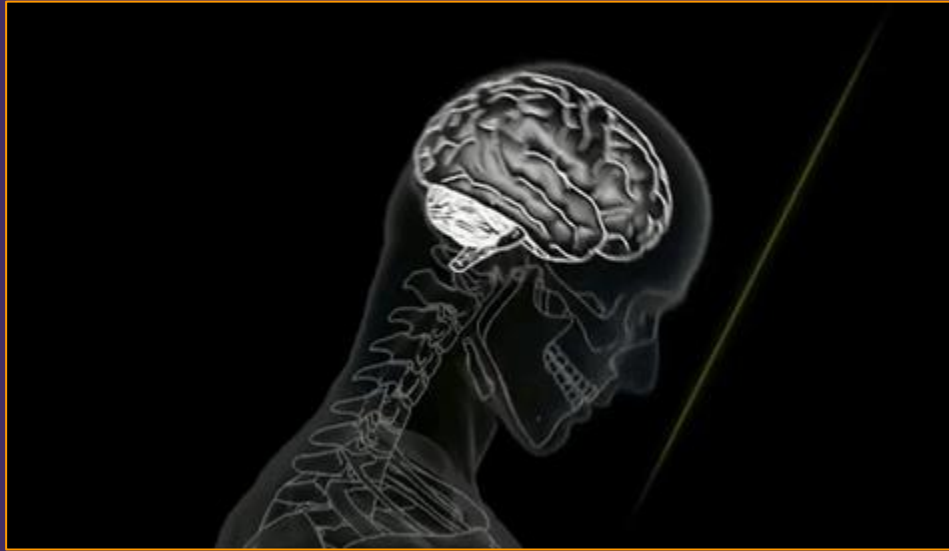
brain
(腦)



Question

What do you want to know?

What do you want to know?



Our Question:

What do
you think



protects
the brain?



Hypothesis

What did you think would happen to the eggs?

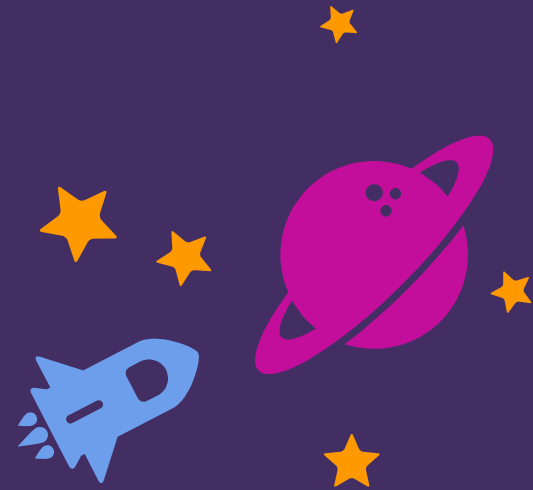
Reporting a Hypothesis

① What prediction (予測)
did you make?

Past Tense
(過去形)

② What did you think
would happen?

We thought...



Methods

How did we do the experiment?

Writing about Methods

- Talk about what you did

Past Tense (過去形)

- Talk about the equipment and materials you used

We used...

- Talk about each step

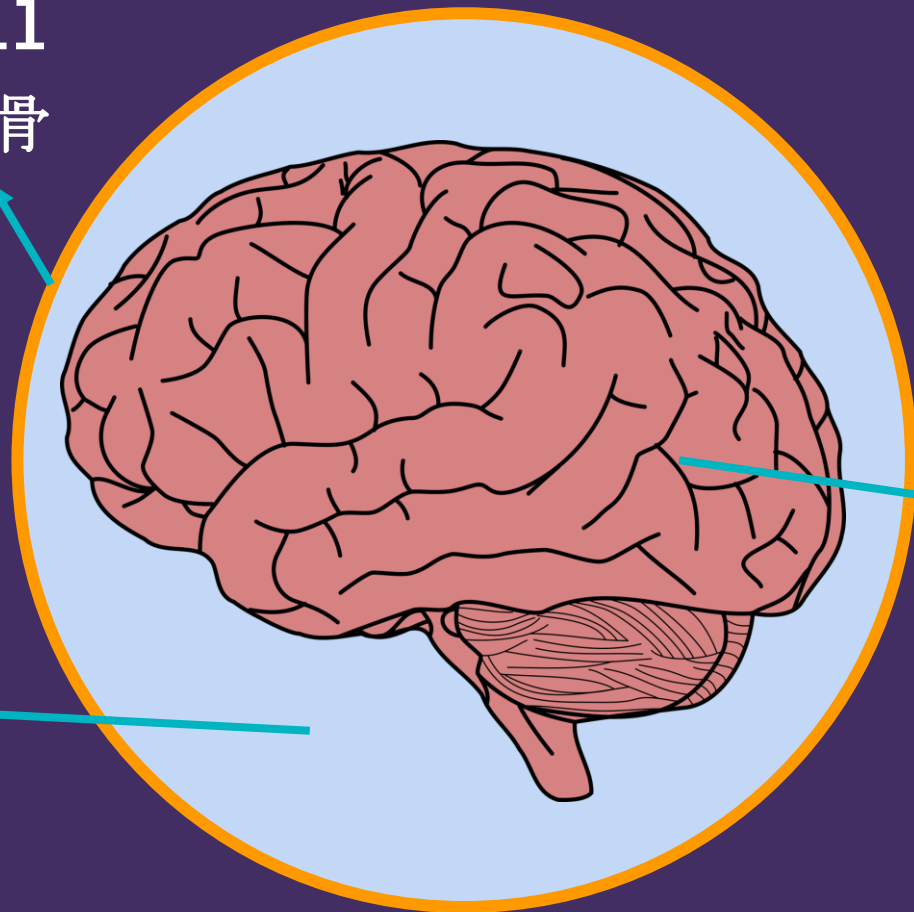
First / Second
Next / Last
After that / Finally

A central illustration on a dark purple background featuring a blue rocket ship, a pink planet with rings, and several yellow stars. The background is decorated with various geometric shapes in shades of purple, blue, and pink, including circles, triangles, and polygons, some with patterns like polka dots or stripes.

Results

What happened? What did we find out?

skull
頭蓋骨



brain
(腦)

cerebral
spinal
fluid
(CSF)

腦脊髓液

skull
頭蓋骨



brain
(腦)

cerebral
s
f
(CSF)

腦脊髓液

Writing Up the Results

● What was your hypothesis?

→ We thought..

● What did you find out?

→ We found...

● What is the answer to your question?

→ Therefore...



Figures

How can we show our results?

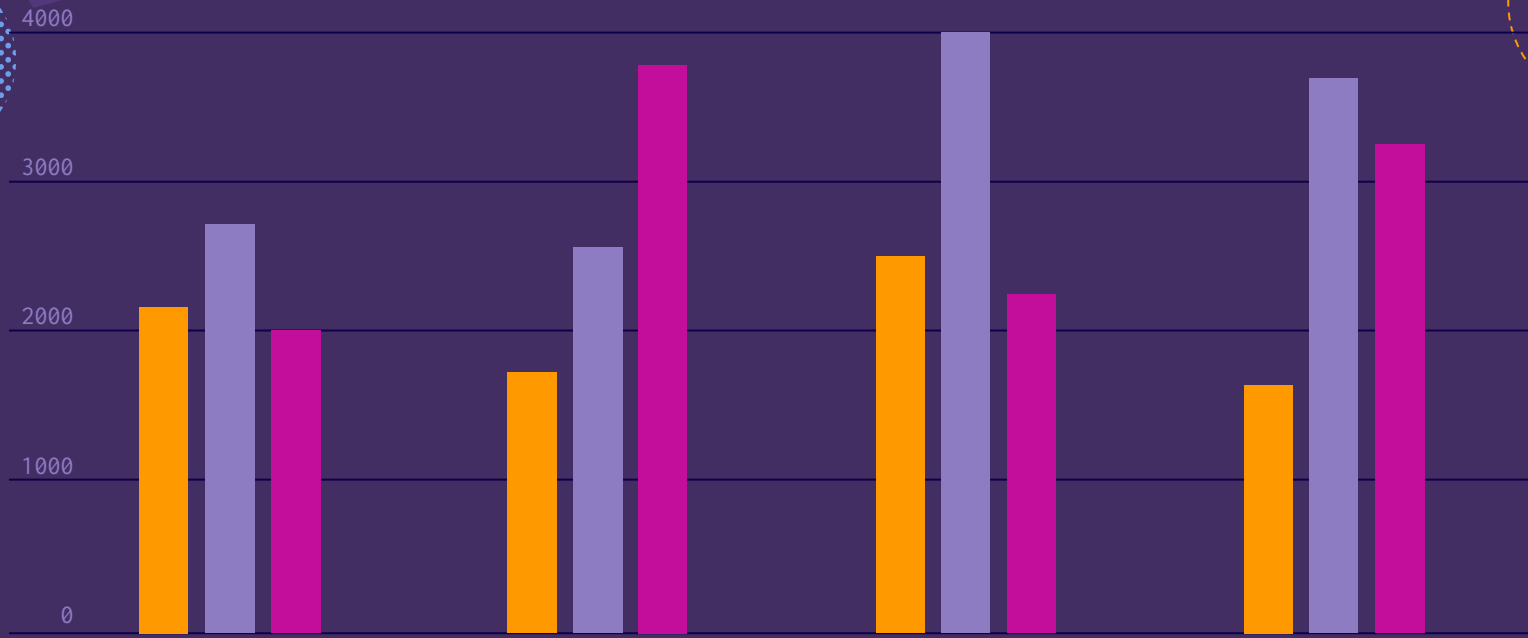
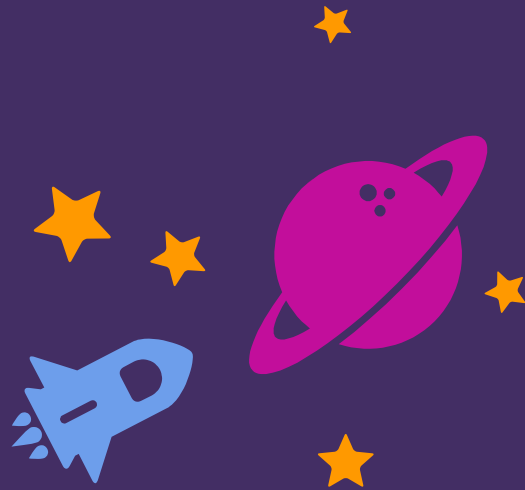


Figure Caption



Figure #: This graph shows...



Conclusion

What do our results mean?

Writing a Conclusion

- Write a summary (まとめ) of what you did and what happened.

In our
experiment...

- What do the results mean?

Therefore...

- Think BIG PICTURE - how do your results affect the world?

This is important
because...

- What do you want to find out next?

In the future...



Title

One-sentence summary (まとめ)
of the most important result