

# Teaching and Learning Conference

Key Stage 3 Assessment Cycle 2

# Why do you have assessments?

Teachers can measure your progress.

We can prepare you for future exams.

We can report to parents.

Assessments let teachers know what you have learnt and what you have not so that their teaching can be even better.

# What assessments do you have?

Re-call Assessment - tests  
information you have learnt

Skills Assessment - applying skills you  
have been taught to a new  
question/s

# Cognitive load



# Cognitive Load – what is it and how can I use it?

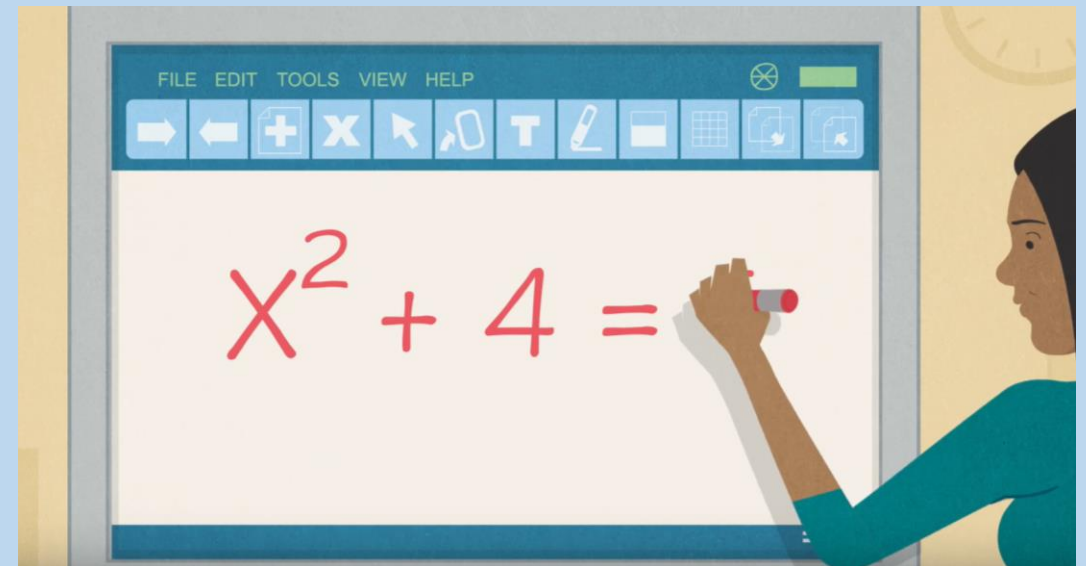


# A scenario you can recognise...

Outside the classroom...



Inside the classroom...

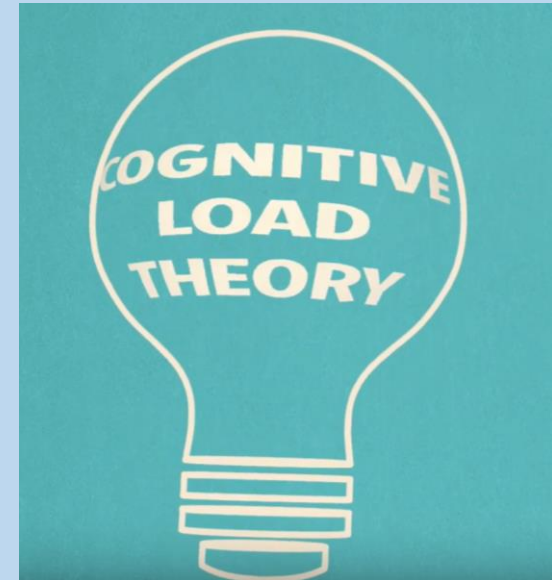


# Dr John Sweller - Cognitive Load Theory

Prominent professor Dr John Sweller demonstrated that the **Working Memory** - dedicated to the rapid processing of what's around us, has a limited capacity.

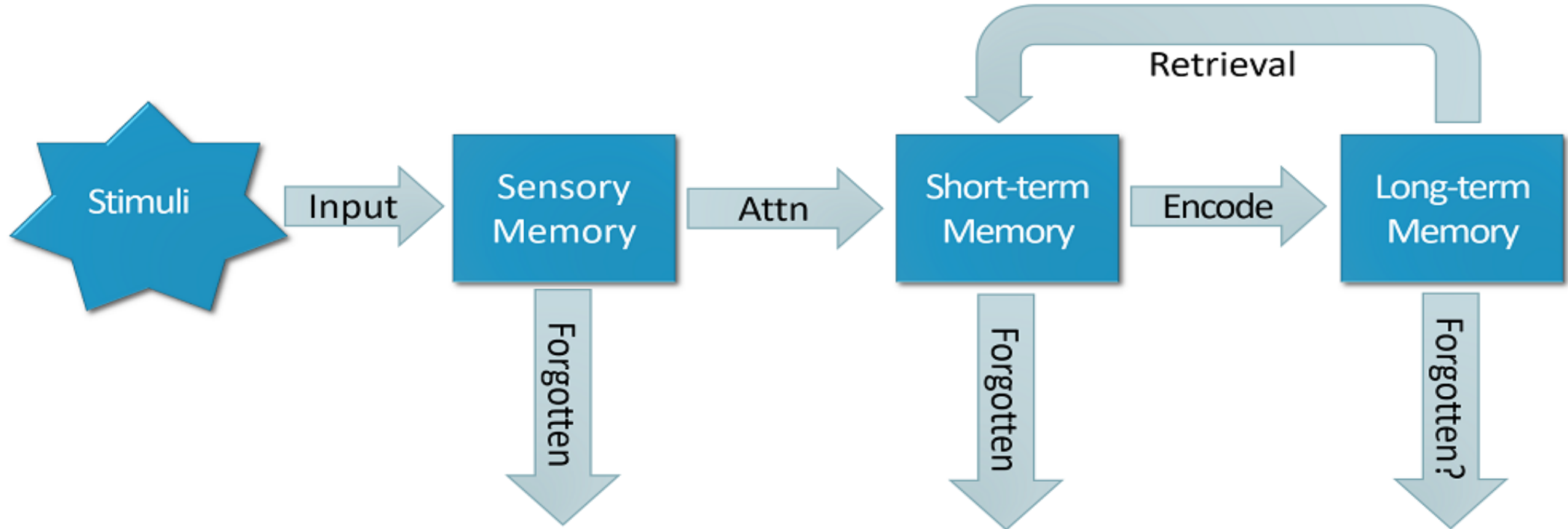
After firstly processing all incoming information, some is discarded or it begins its journey to long term memory.

Working Memory is like a **memory buffer**, we use it to manipulate information for the task at hand.



# Information Processing Model

## Information Processing Model

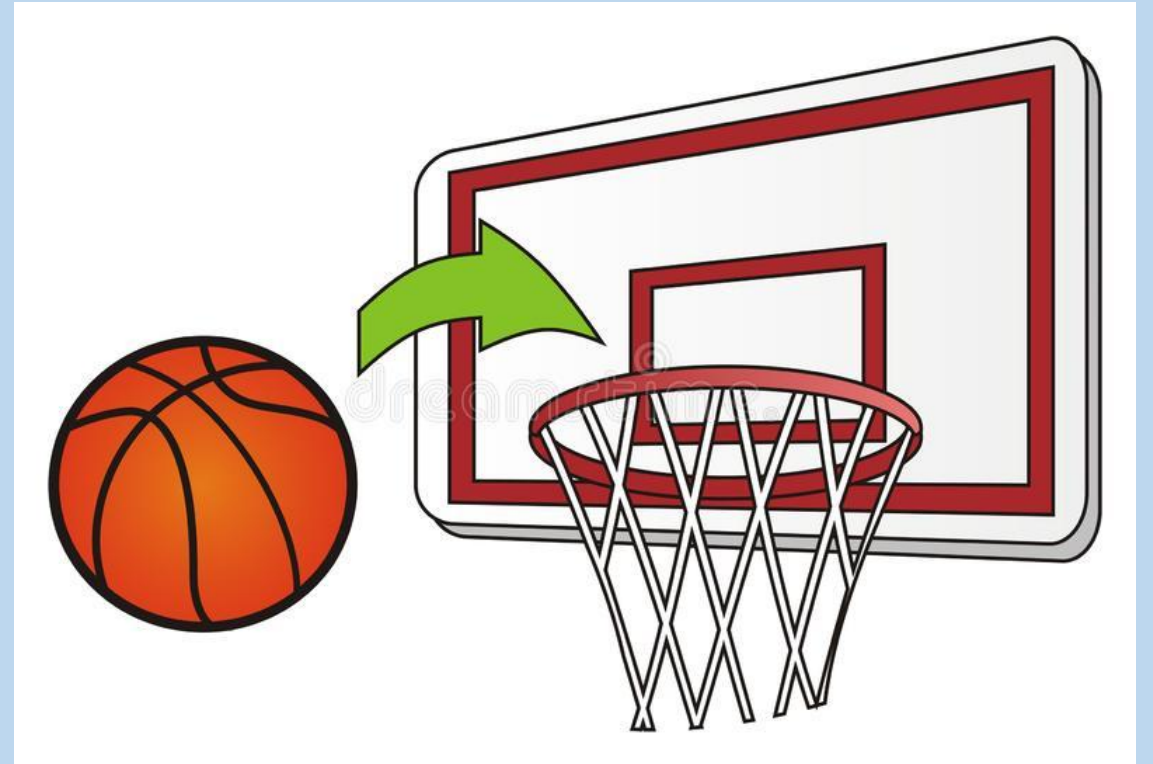




An example would be to remember and use the rules of a game, while we are playing it.

We also use it to manipulate new information as we are learning something new.

It's important we don't overload our brains with information.



# CLT gives us an insight to improving learning results

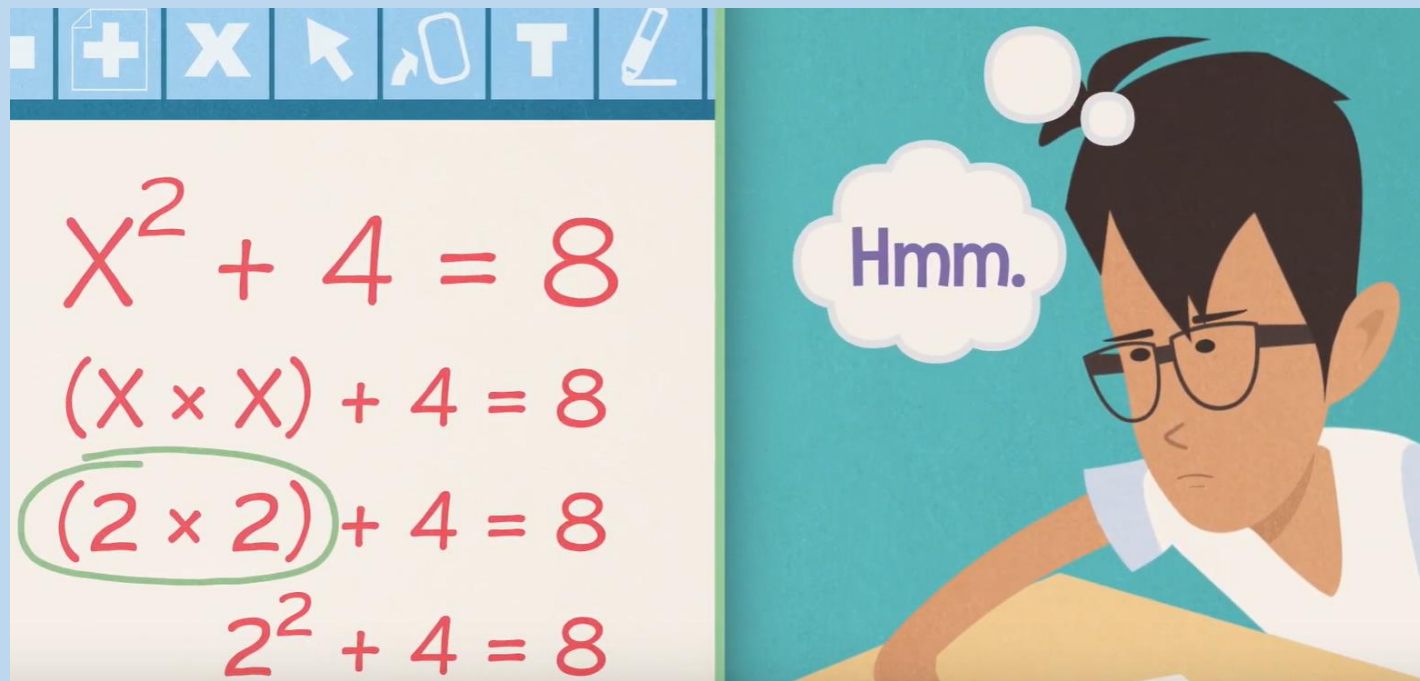
When you were sitting in class, your working memory was bombarded by this new information along with millions of bits of distracting stimuli through your senses. It can be very easy for working memory to be overwhelmed.

Your brain has a clever strategy to address this, it sorts new information into 'schemas' or categories into what you already know. When the data doesn't fit into pre-existing categories, your brain quickly adapts those schemas or develops new ones.



# Using the right tools for success

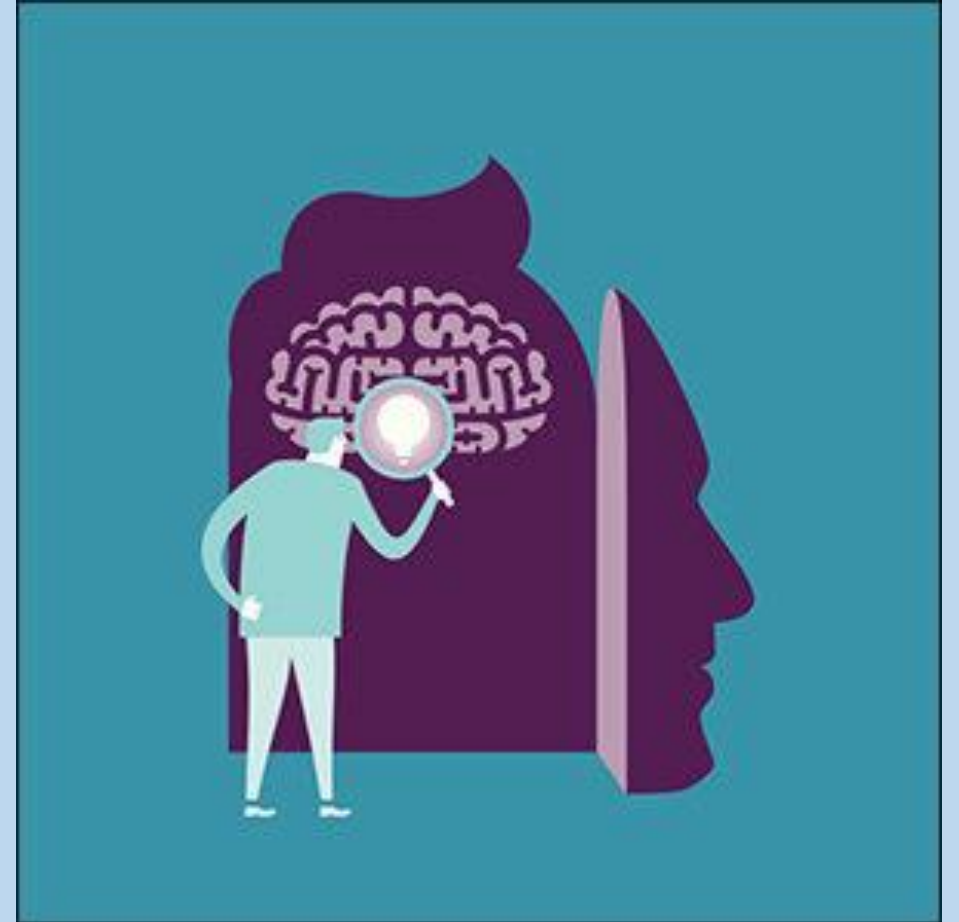
According to CLT, this process is fluid and can be enhanced with the right supports. Make connections to other kinds of knowledge can help what we are currently learning.



# The Science of Learning

The more we understand the 'science' of learning, the more we help ourselves to learn to the best of our abilities.

We can help our brains work **smarter, not harder**, and empower yourselves to reach your full learning potential!



# What does this mean for you?

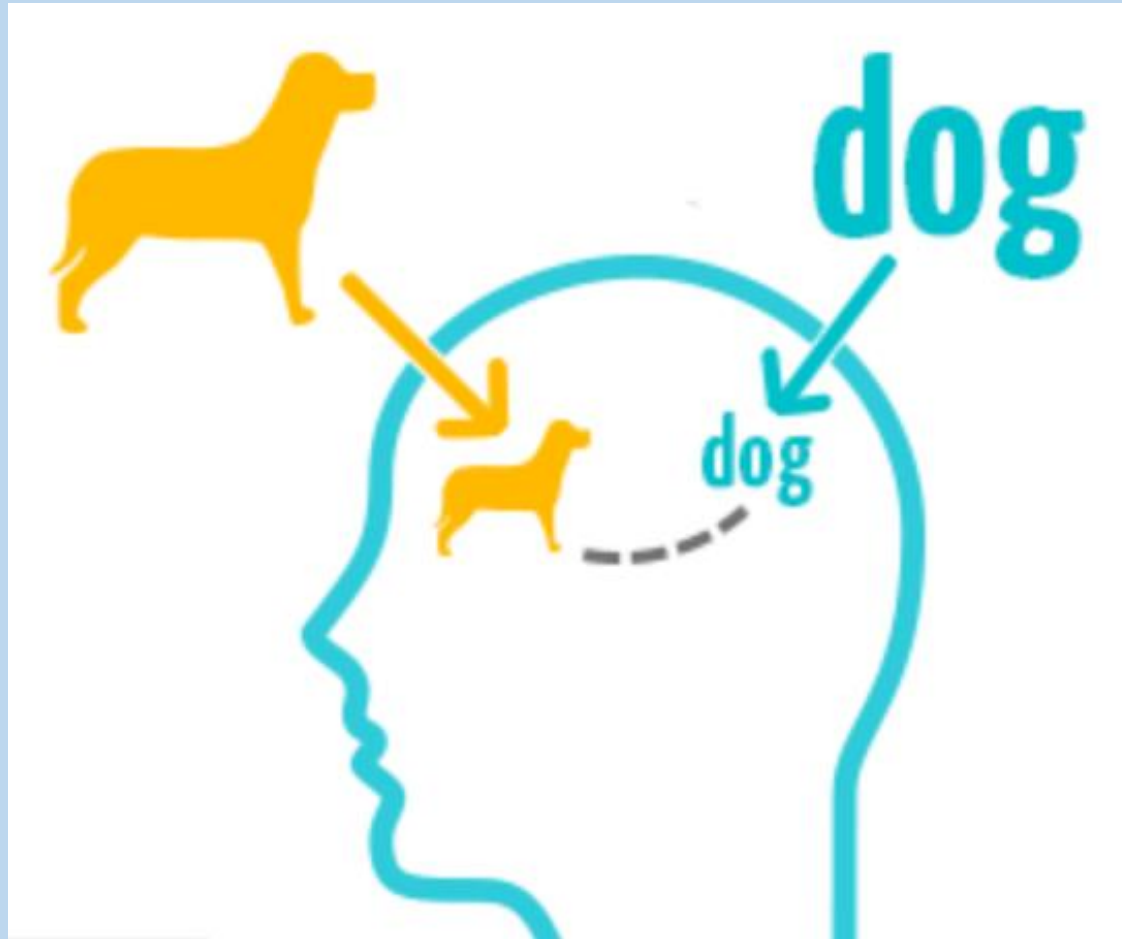
How to reduce cognitive load

Breaking down the learning into manageable chunks.

Take regular breaks when revising.

Presenting information to minimise overloading our brains.

# Dual Coding



# Dual Coding (the benefit of pictures!)

Dual coding is a really fun revision technique

You use pictures to represent pieces of information

For example, I might want to remember that motte and bailey castles were cheap to build (made out of wood), but could easily be set on fire. I might draw something like this:



# Dual Coding- A chunk of text vs. 1 picture

There are severe housing problems in LIDC's. In Kibera, Kenya, slums are built illegally and are made from scrap materials like tin and cardboard. Diseases spread very easily because slums are often overcrowded and there are open sewers in the middle of streets. Rubbish is also thrown everywhere. As a result, the water supply can get contaminated and cause further illness. Houses are not very stable, so can fall down easily, and they are not secure, which means that crime is very high in slum areas.

Try this:

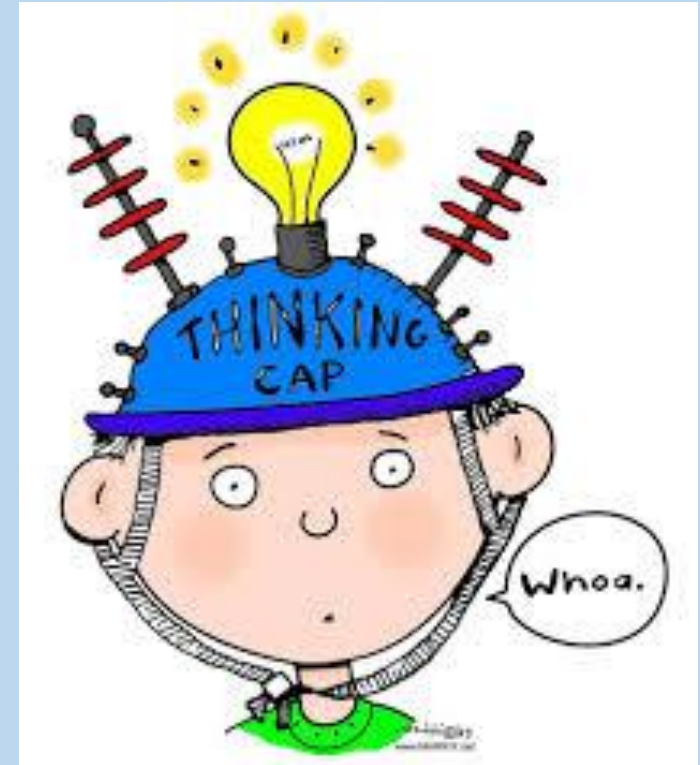
You have 1 minute to draw a picture to represent all that information



# Dual Coding- A chunk of text vs. 1 picture

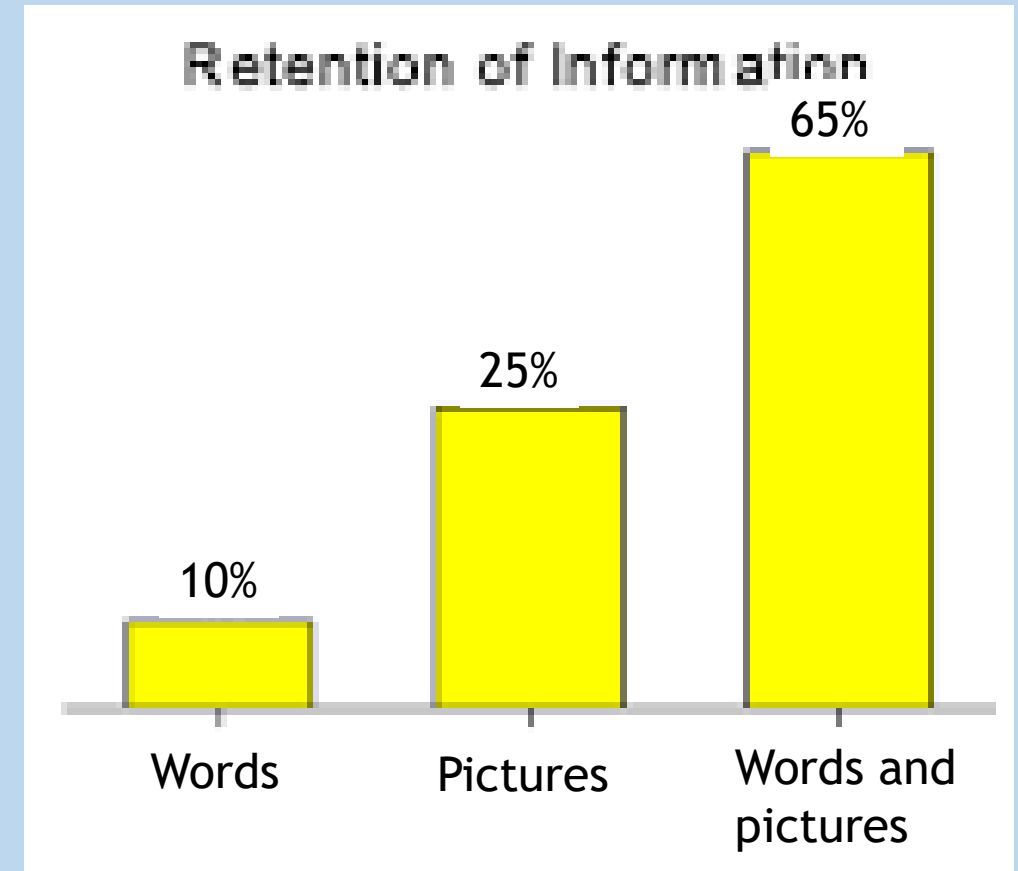
Now, try to recall the information that you have put into pictures!

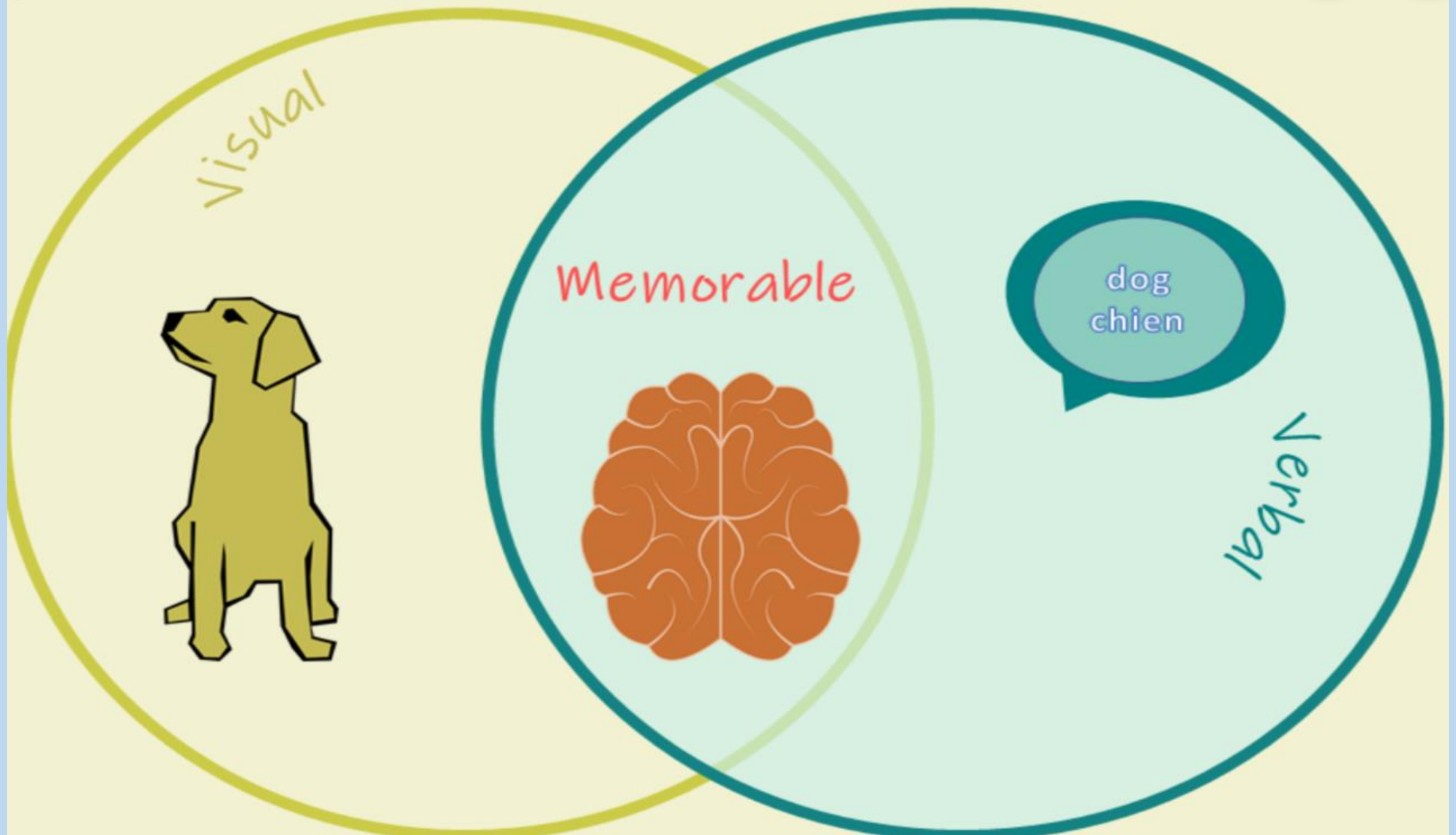
Was this easy, or hard?



# How does Dual Coding help?

- Research shows that the formation of mental images aids in learning
- Words can be forgotten over time, but if you see a picture again after weeks of not seeing it, that picture will trigger your brain to remember any information you associated with that picture!





# Dual Coding- Try this!

If I showed you this image from Geography, what could you tell me about solutions to traffic problems in AC's?



See, you didn't just remember information about bus lanes, but about the other solutions to traffic problems too! That's because this picture triggered your brain to remember them!

# Dual Coding- Try this!

What about if I showed you this image from RE? What do you associate with this image?

See, you didn't just remember that this was the kirpan, but you remembered the other elements of the 5K's of Sikhism!



# Dual Coding- A chunk of text vs. 1 picture

Remember that drawing you did for the Slum information?

Who thinks they use their picture to recall some of that information?

Hands up!



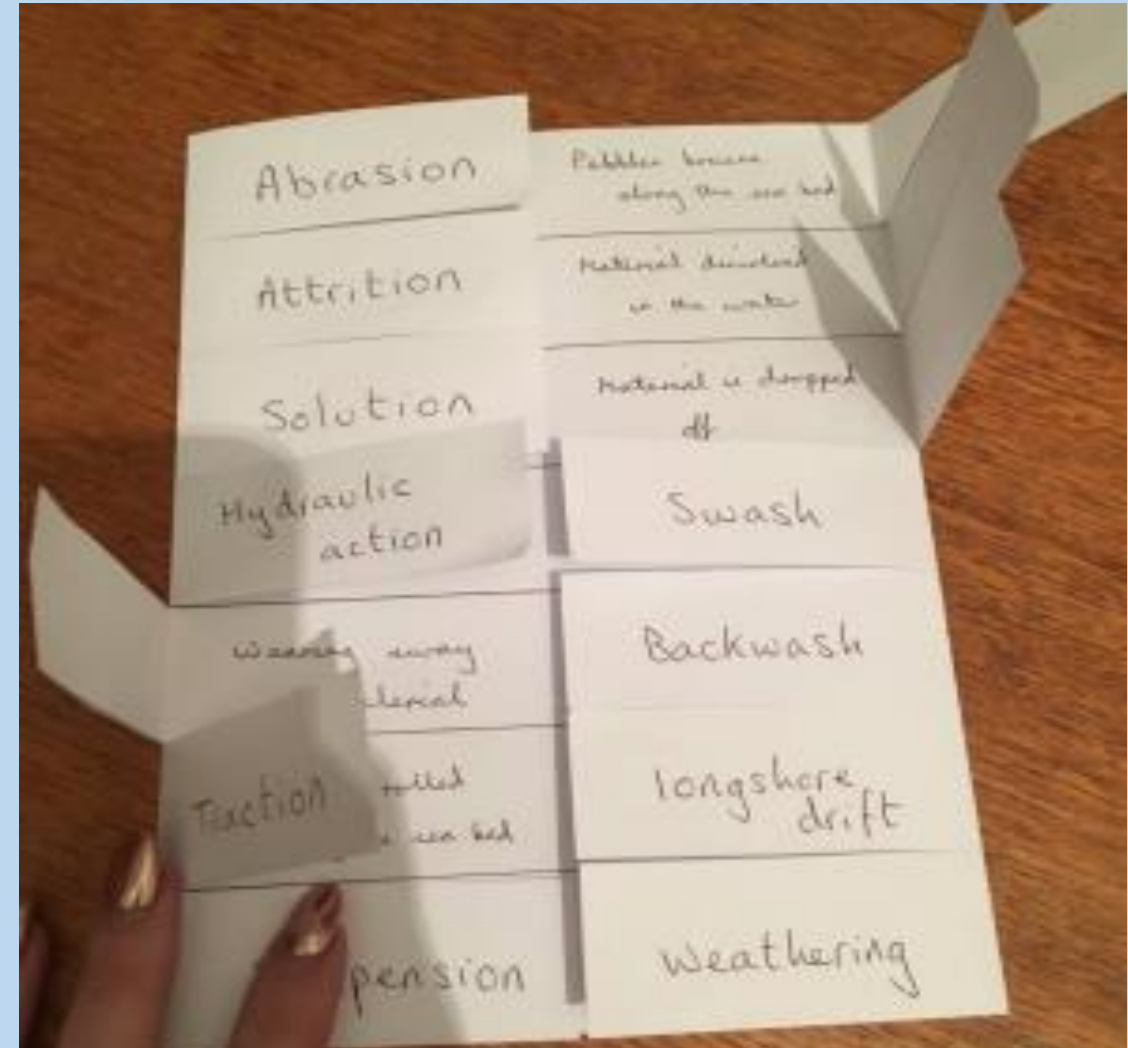
# Dual coding and revision



# Foldable revision

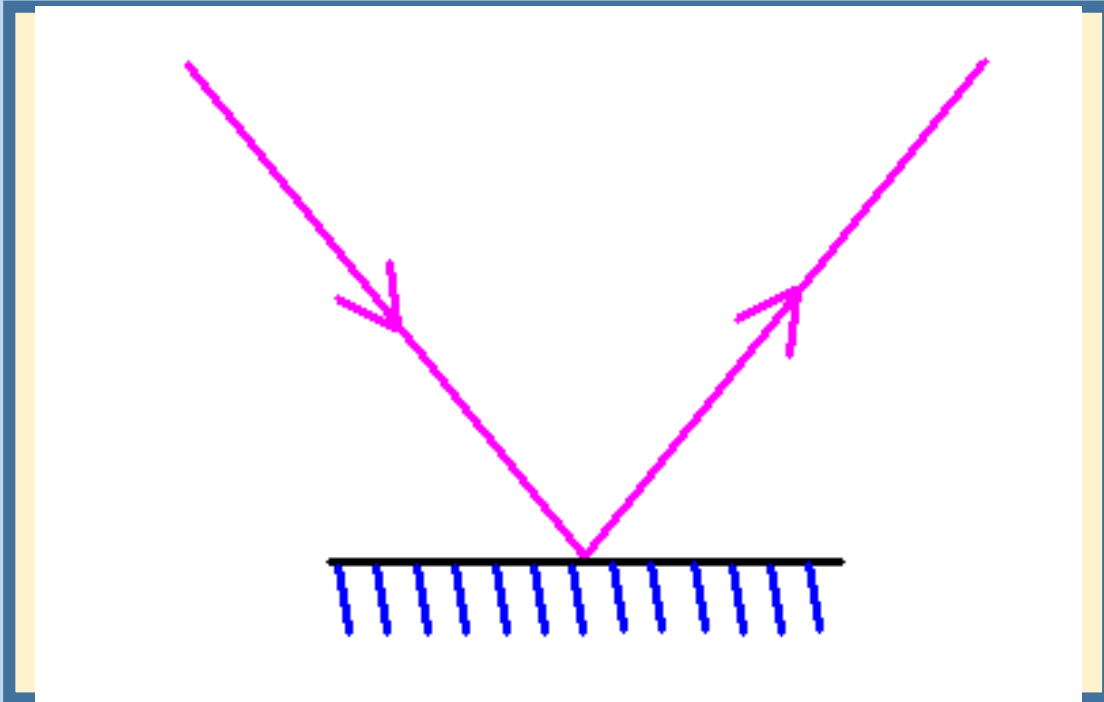
## How to create your own

- Key words and picture go on the outside.
- Definitions are written underneath.





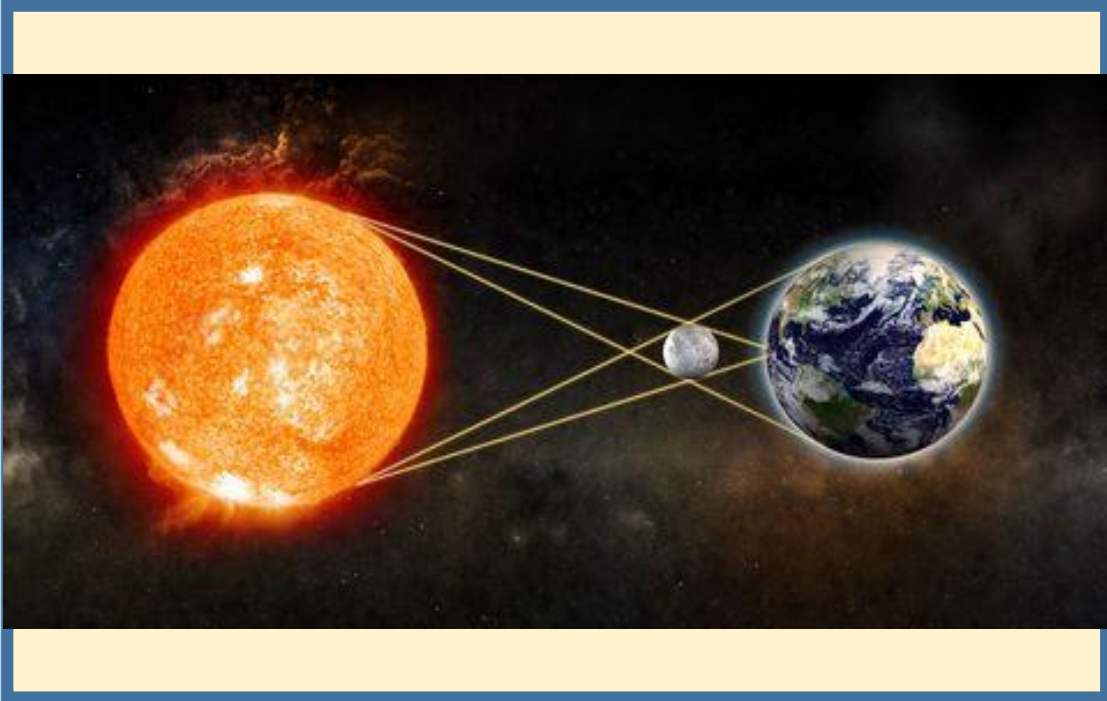
# Outside



# Inside

Reflection

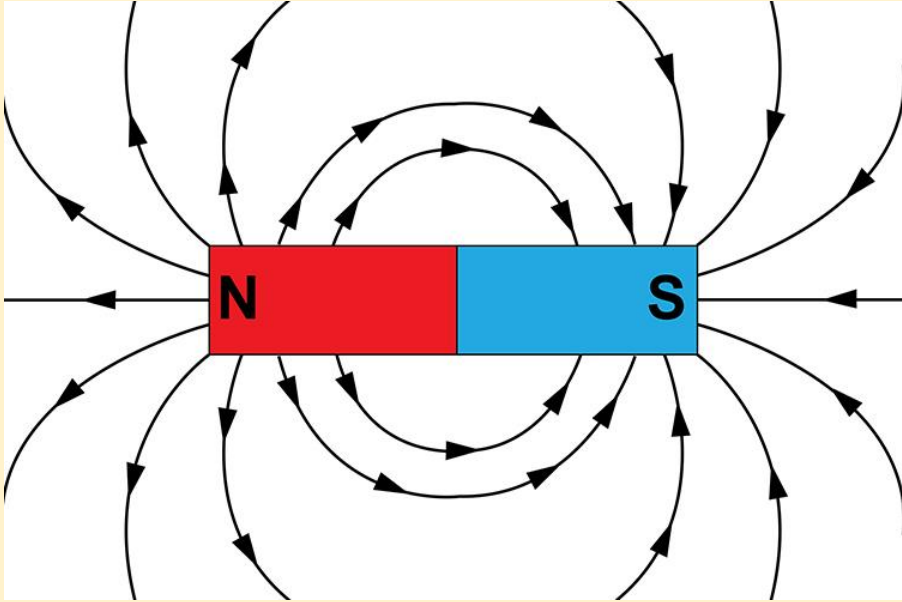
# Outside



# Inside

## Solar eclipse

# Outside



# Inside

Magnetic field  
lines

# Outside

Henry VIII reasons  
for the reformation

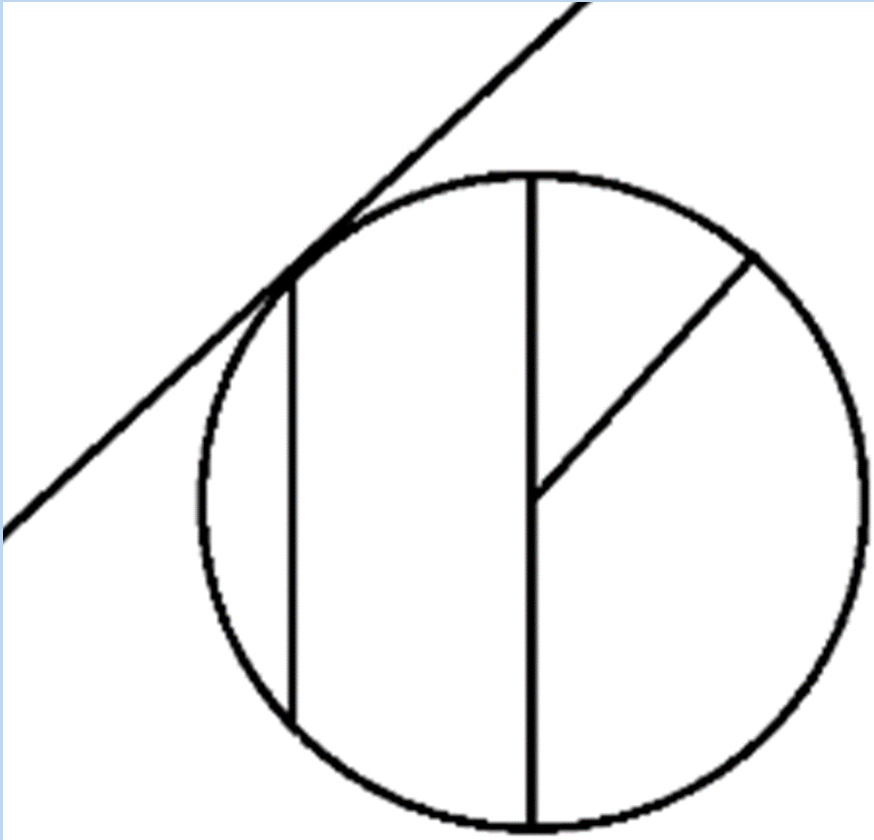
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# Inside



# Inside

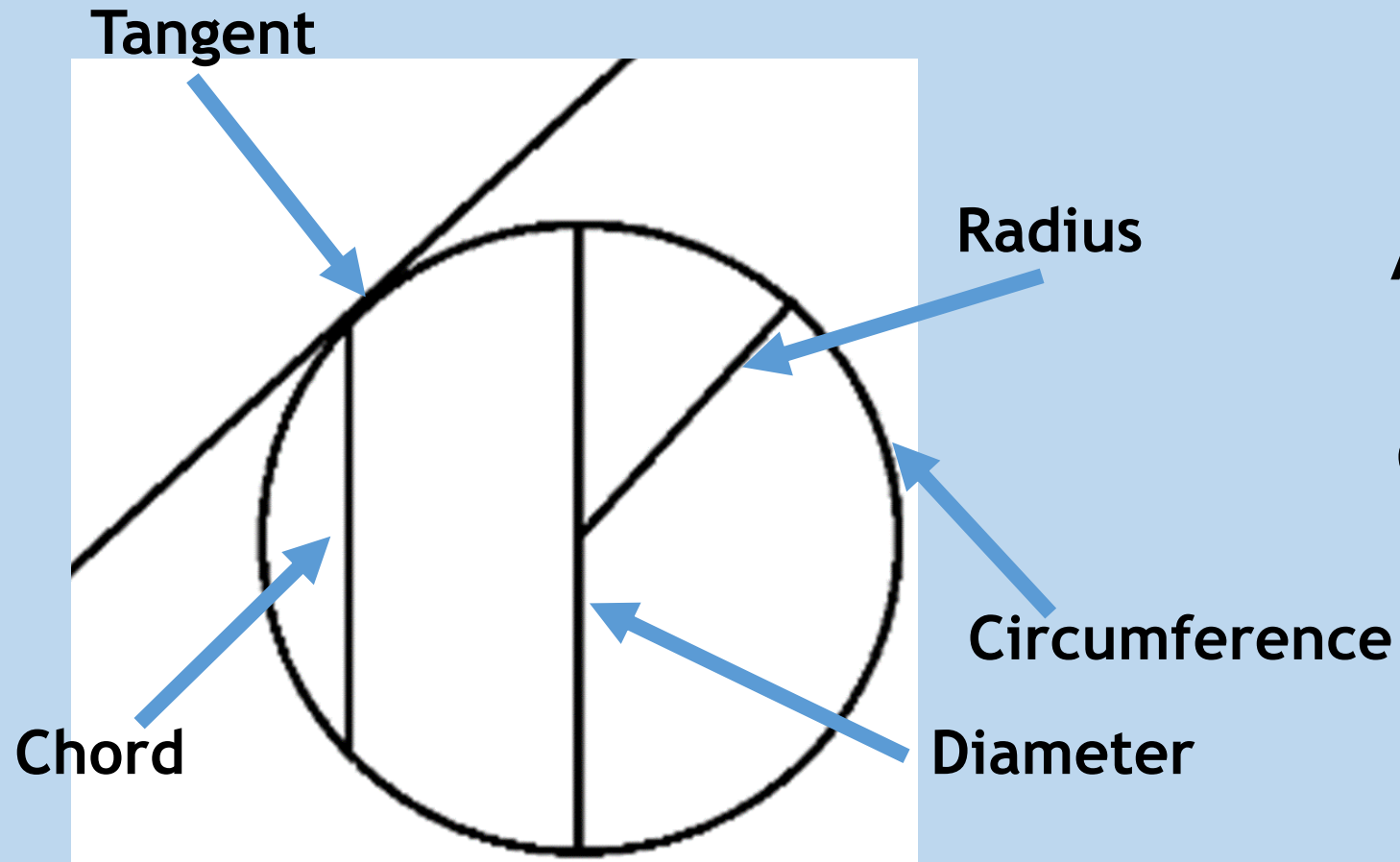
Label the diagram below and complete the formulae.



Area=

Circumference =

# Inside



$$\text{Area} = \pi r^2$$

$$\text{Circumference} = \pi d$$

# SUCCESS

IS THE SUM OF SMALL EFFORTS,  
**REPEATED**

