



# TRY FIVE



# About TUD...



## Technological University Dublin



## What you can study here...



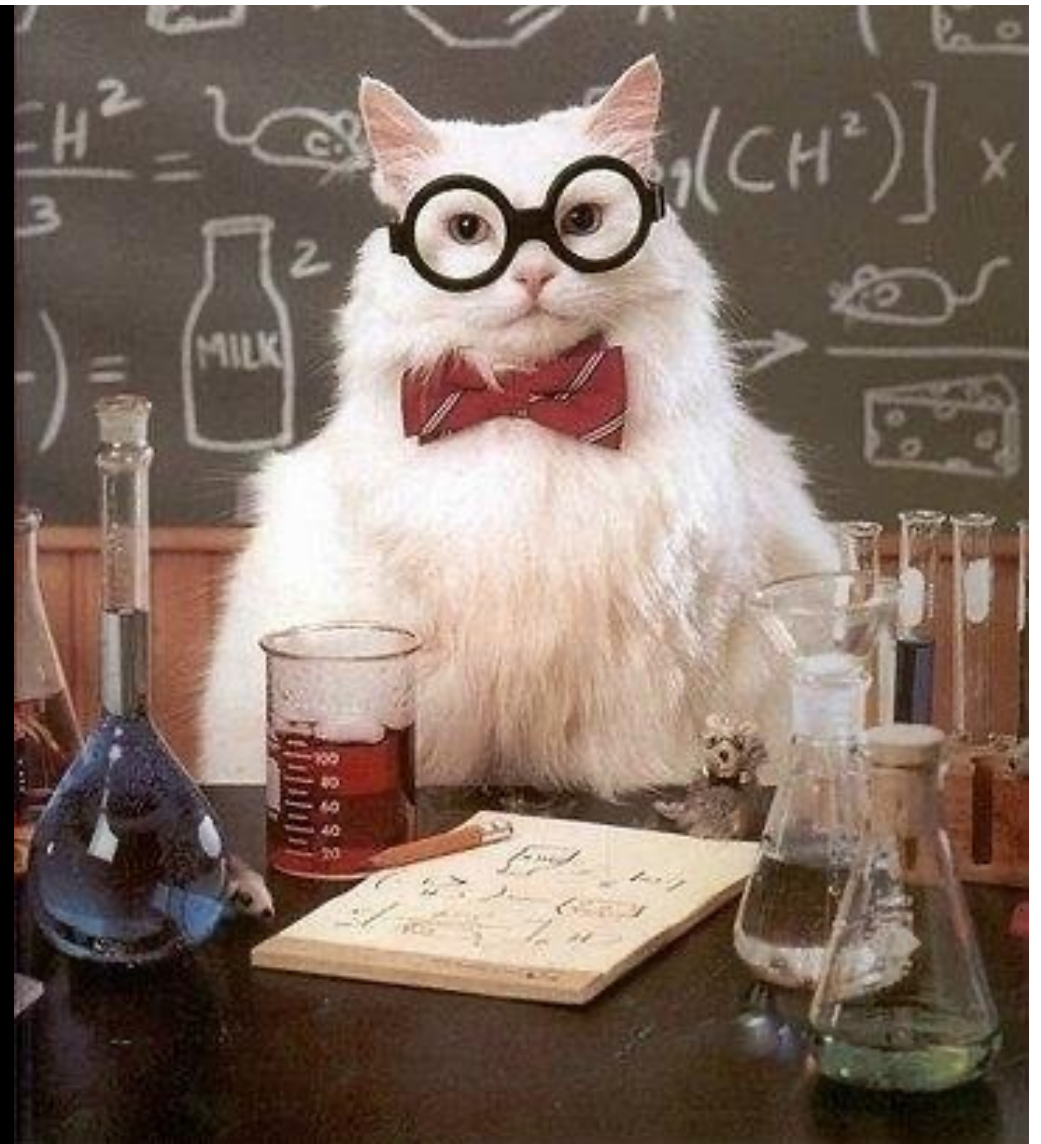


# MISSION 1

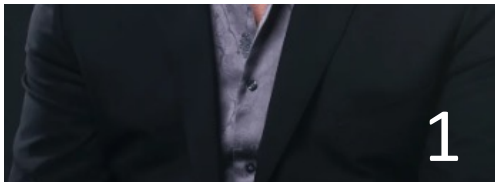
THINK LIKE  
A  
SCIENTIST!



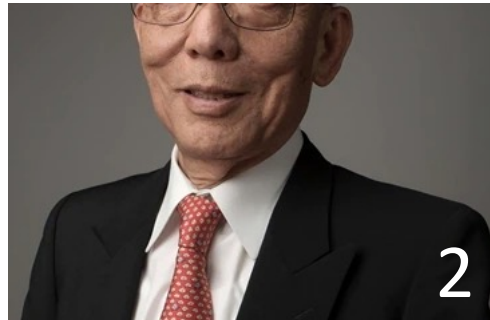
**Do you know  
any famous  
scientists?**



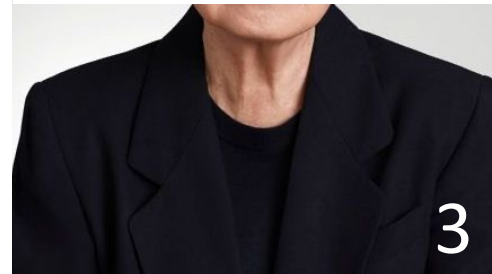
Neil deGrasse Tyson: a famous American astrophysicist and science communicator who helps explain complicated space and science topics in ways that are fun and easy to understand.



Syukuro Manabe: a Japanese-American meteorologist who won the Nobel Prize in Physics in 2021 for his work in climate science.



Zhang Miman: a famous Chinese scientist who studies ancient fish fossils, helping us understand how animals with backbones evolved over millions of years.



Donna Strickland: a Canadian physicist who won the Nobel Prize in Physics in 2018 for her work with lasers.



Klauss Hasselmann: a German climate scientist who won the Nobel Prize in Physics in 2021 for his computer models for climate change predictions.



Annie Easley: an African American computer scientist and mathematician who worked at NASA for over 30 years.



# GUESS WHO!



# GUESS WHO??



1

Rosalind Franklin (work on DNA)



2

Heidi Lamarr (Hollywood actress and inventor – build foundation for GPS, bluetooth and WiFi!)



3

Marie Curie (Discovery of radioactive compounds and Xray!)



4

Katherine Johnson (famous physicist and mathematician)





# WHO CAN STUDY STEM?

Science

Technology

Engineering

Math

# WHAT DO THEY HAVE IN COMMON?

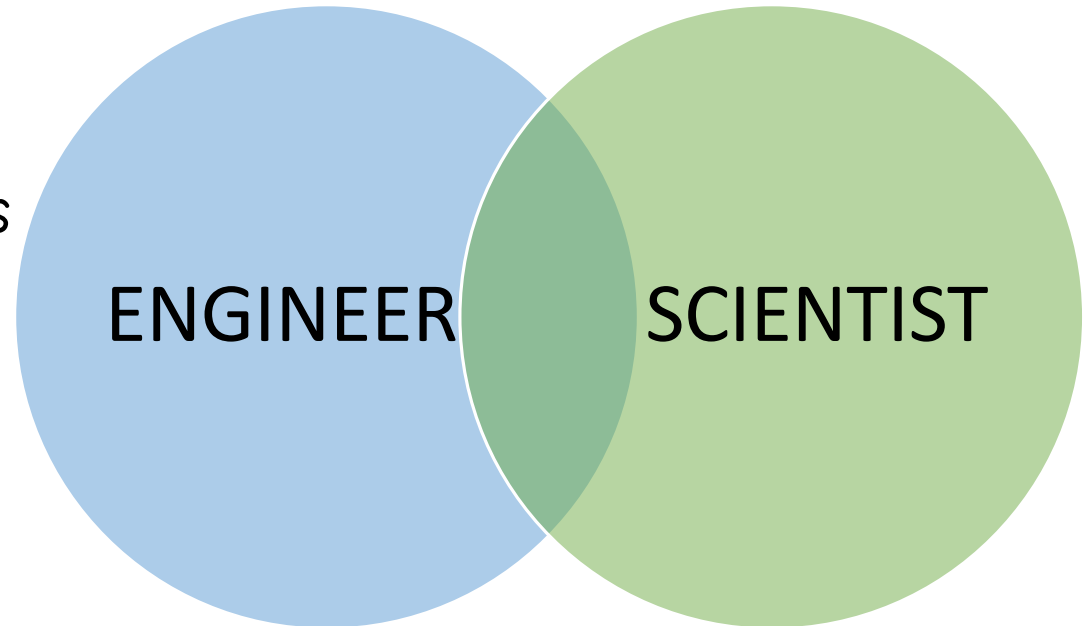
THEY OBSERVE THE WORLD

THEY ASK THEMSELVES QUESTIONS

THEY THINK

THEY EXPERIMENT

THEY SOLVE PROBLEMS





WHO THINKS THEY  
CAN BE A  
SCIENTIST/ENGINEER?





# LEGO CHALLENGE!

- LET'S MAKE A BRIDGE!



**DID  
WE...?**

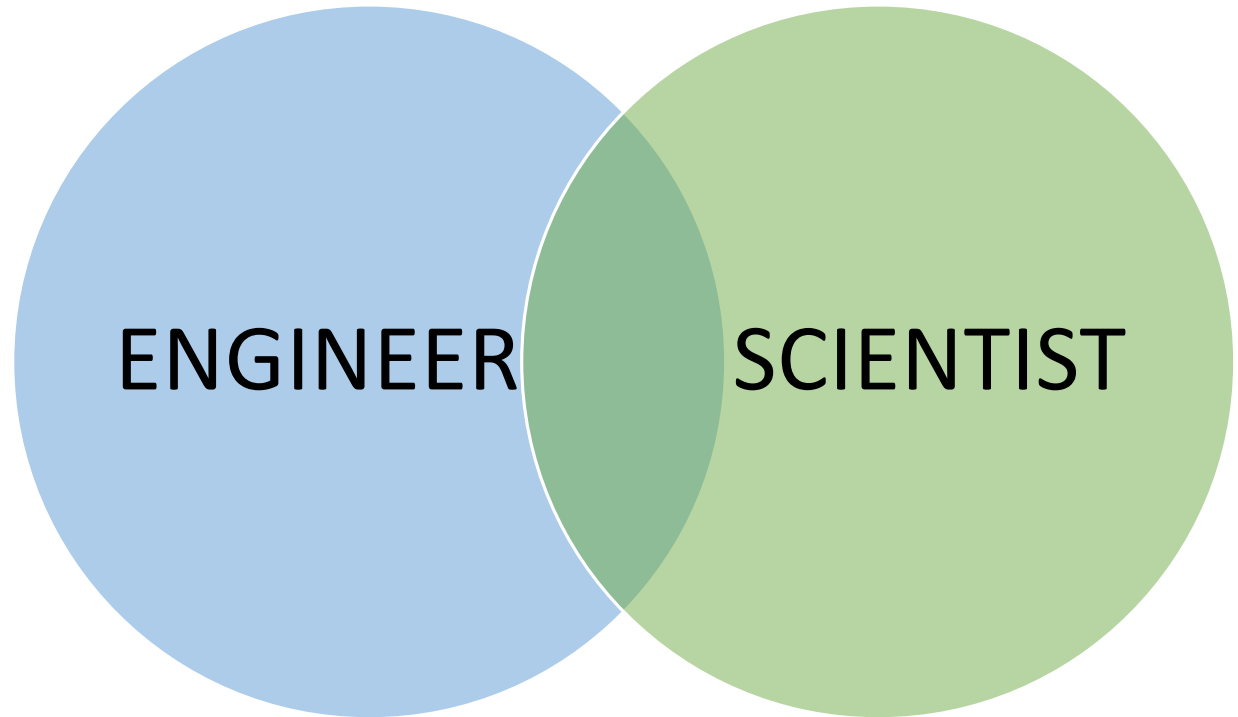
OBSERVE

ASK OURSELVES QUESTIONS

THINK

EXPERIMENT

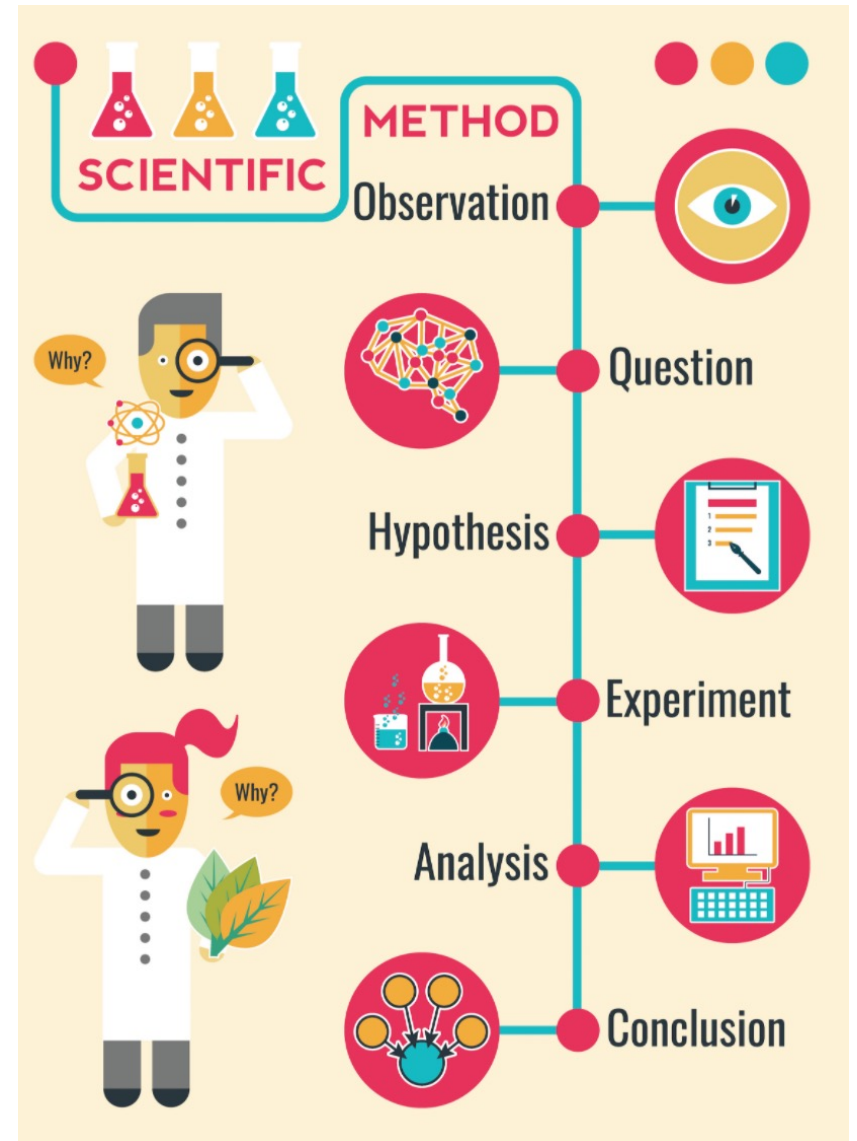
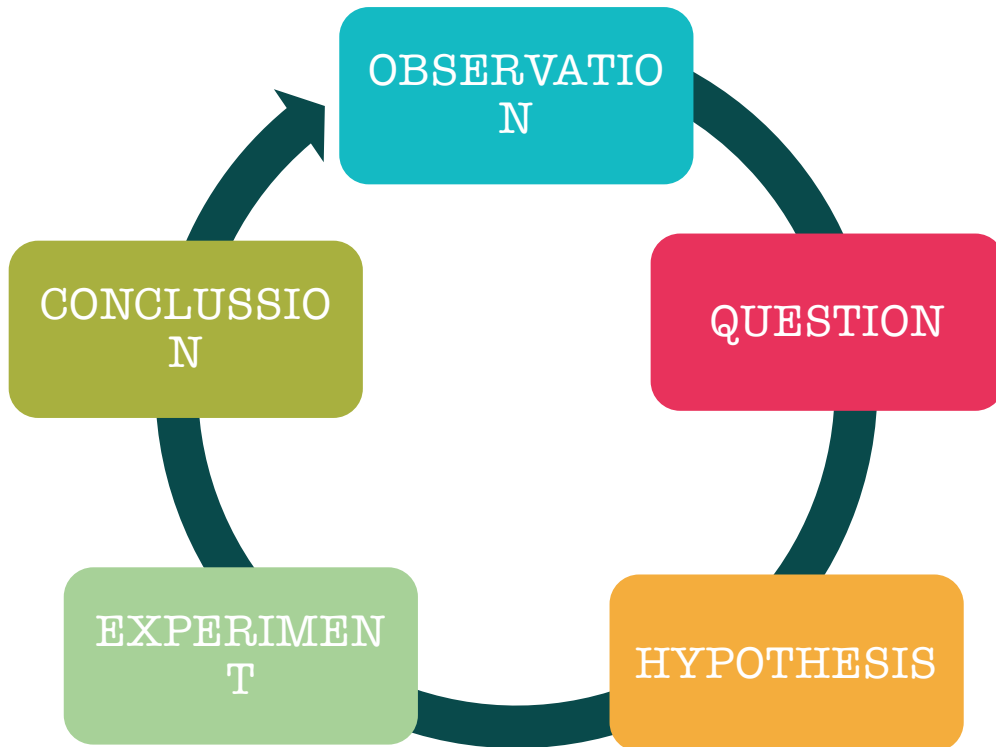
SOLVE THE PROBLEM



**ENGINEER**

**SCIENTIST**

# THE SCIENTIFIC METHOD



I wonder if...



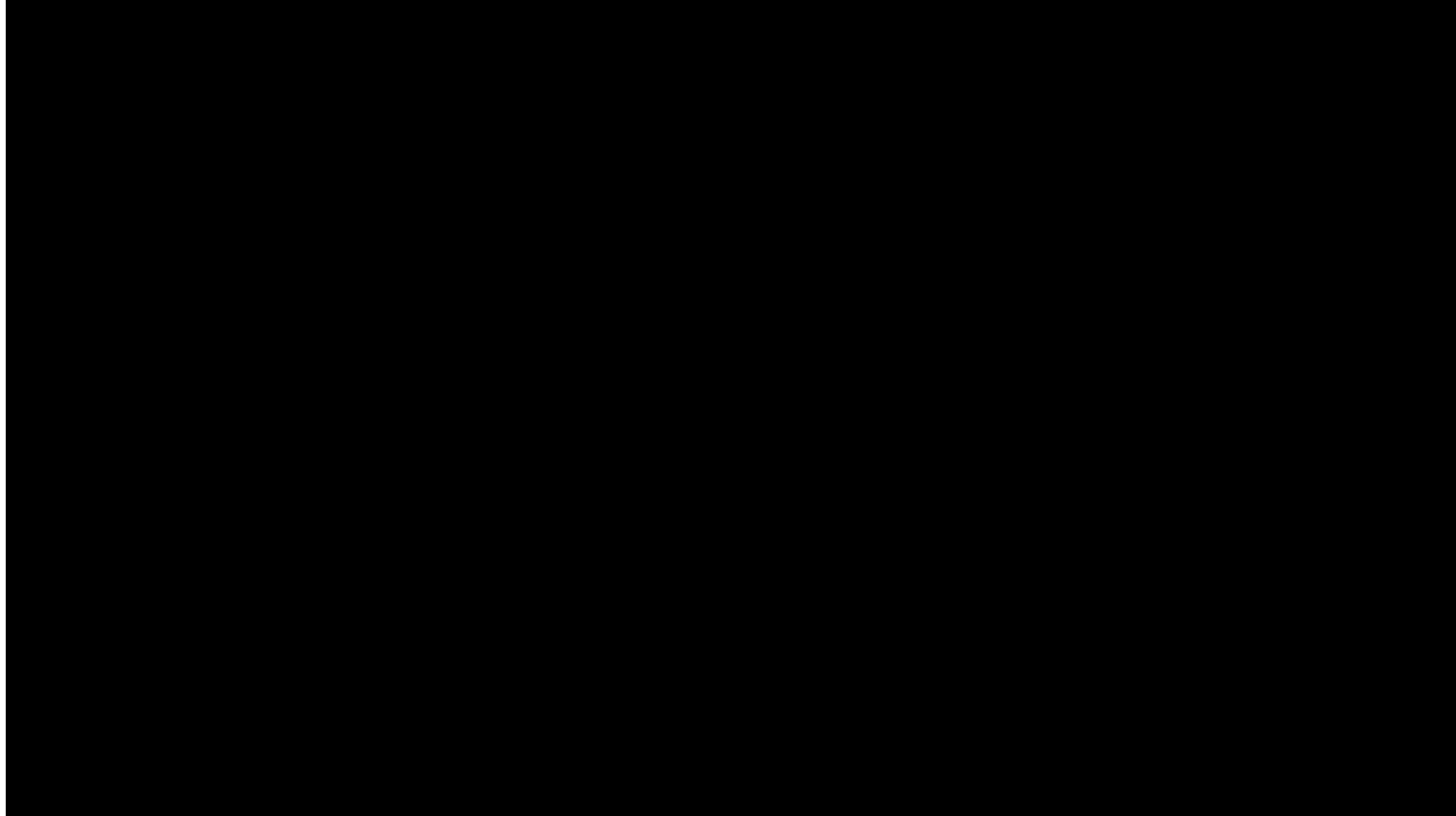
© Ponpandi Perumal



BREAK TIME!



SPACE EXPLORATION?





## What is a Microscope?

- A microscope is a piece of laboratory equipment that can be used **to see very small objects, even cells**. The image of an object is made bigger and bigger through at least one lens in the microscope. This lens bends the light toward your eye and **makes an object appear larger than it actually is**.
- There are lots of different types of microscopes. We're using **light microscopes** today. They work like giant magnifying glasses. They use curved pieces of glass or plastic like lenses that bend the light that reach them. The sample sits under a lens and the light passes from the object through the lens and then the lens makes the object look bigger.

Let's take a look at some brilliant images from microscopes!





Our Microscopes

## Ok Are we ready to look under our Microscopes!

1. **Step 1:** Hold your sample directly to the bottom of the microscope and look to see what you can see!!
2. **Step 2:** Press on the LED light to make it bright and move the zoom bar to increase the zoom;
3. **Step 3:** Ok now we are ready for our slides!
4. **Step 4:** Put your sample on your slide and push your slide underneath your microscope;
5. **Step 5:** Let's repeat and turn on our LED light and zoom!



## Is there around the classroom you wish to try first?



Can you see the woven fibres of your uniform?



How about the details of our hair fibres?




How about the writing on your papers?

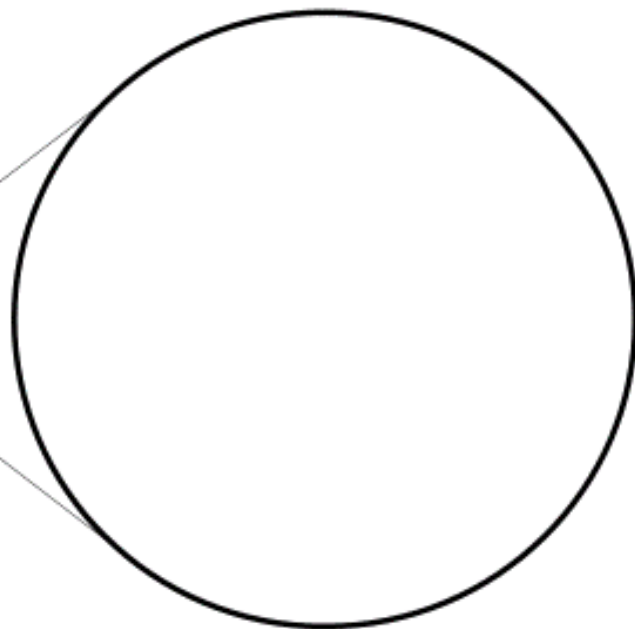


# What do you see?

Name:

Date:

Select a sample and sketch it 



With your eyes

I saw a .....

This is what it looked like.



With the microscope

Observations:



# What is Observational Drawing?

Scientists draw and sketch in their notebooks in order to record and communicate their observations. Sketching like a scientist does not require you to be good at drawing.

All you need to do is take time, observe your surroundings and draw what you see in front of you.

Like other skills, observational drawing improves with practice. The level of detail and the quality of your drawings and observations will grow as you practice and learn more about the object.

**LET'S TRY!**

# OBSERVATIONAL DRAWING

