

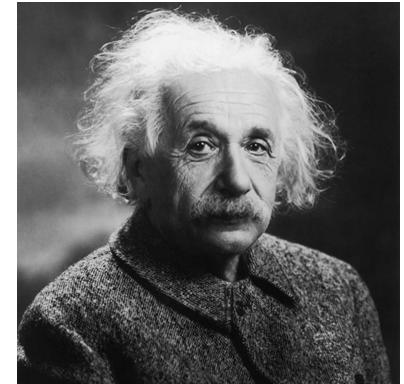
19th January 2023

# Science: Parent Information Session

**Aim of this session:**

- Understand the Scientific Method and how we use it at TBS
- An overview of the different routes in Science
- A chance to ask questions

How do you think this quote is incorporated into the Science Curriculum at TBS?

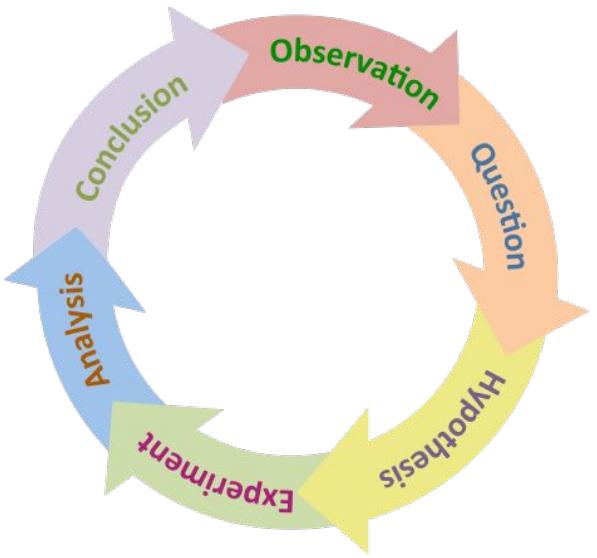
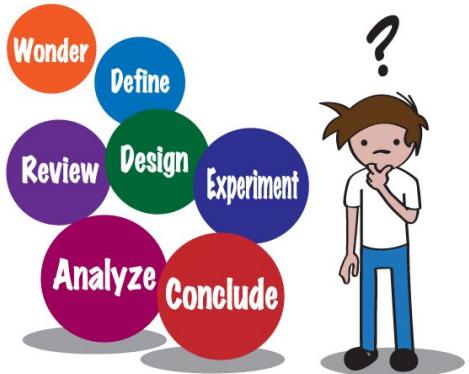


***“If we knew what it is we were doing, it wouldn’t be called research, would it?”***



The Science faculty aims to develop an **inquisitive nature** in all students and promote **investigative skills**, allowing students to **learn by making mistakes** and developing their resilience in an international context. We encourage students to **challenge** the accepted way of thinking, asking deep and meaningful questions which change the way people can look at the world depending on the context of their starting point. Students should look at contemporary and historical scientific discoveries and understand how **collaboration**, **evaluation of evidence**, and improvements based on the scientific method have led to the current accepted models. It is vital that they understand that Science is a constantly evolving discipline and that **we do not have all the answers**.

# The Scientific Method



- Students should be taught **more than content and theories**
- Increasing focus on **problem solving**:
  - extracting key information
  - learning new skills
  - evaluating and improving
  - real life contexts
- Developing **cross-curricular links**
- Making Science **relevant and fun**



## Your turn!

- On your table there is a range of equipment and a method sheet.
- Try to work through the sheet to complete your investigation and understand how we aim to teach Science at TBS.

Investigation.		
Background Information	Hypothesis (What do you think will happen? Why?)	Name _____
Independent / Dependent / Control Variables	Method	Diagram
Equipment (What will each be used for?)	Risk Assessment (What are the dangers? How do you stay safe?)	Results Table

### INDEPENDENT VARIABLE

This is the ONE factor you **change** in your investigation.

### DEPENDENT VARIABLE

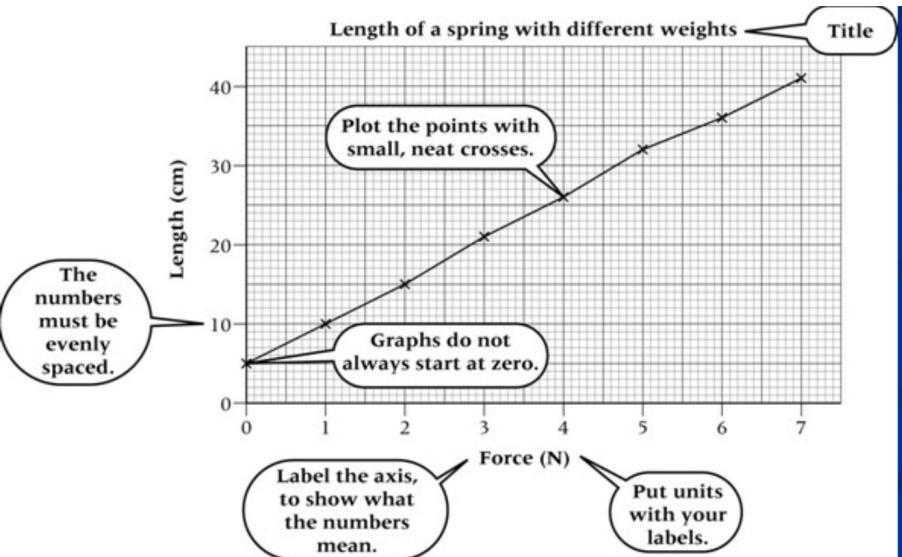
This is the ONE factor you **measure** or observe in your investigation

### CONTROL VARIABLES

These are the MULTIPLE factors you **keep the same** in your investigation to ensure it is a fair test.

## Graph Drawing Skills

- This is one of the skills students struggle with most
- It is a vital aspect of all Sciences





# Curriculum Structure



# Science Structure KS3

<b>Year 7</b>	Internal assessments grades 1U - 9A* Based on UK NC	<ul style="list-style-type: none"><li>- <i>Cells</i></li><li>- <i>Forces</i></li><li>- <i>Reproduction</i></li><li>- <i>Acids and Alkalies</i></li><li>- <i>Space</i></li></ul>
<b>Year 8</b>	Internal assessments grades 1U - 9A* Based on UK NC	<ul style="list-style-type: none"><li>- <i>Body systems</i></li><li>- <i>Chemical Reactions</i></li><li>- <i>Energy and Waves</i></li><li>- <i>Earth Chemistry</i></li></ul>
<b>Year 9</b>	Internal assessments grades 1U - 9A* Based on UK NC Biology taught separately. Some IGCSE content	<ul style="list-style-type: none"><li>- <i>Microorganisms and Disease</i></li><li>- <i>Genetics</i></li><li>- <i>The atmosphere</i></li><li>- <i>Making Salts</i></li><li>- <i>Energy and Electricity</i></li></ul>

# Science Structure KS4

<b>Double Award IGCSE</b>	Externally Assessed Edexcel 3 exams 2 GCSE grades 1-9	<ul style="list-style-type: none"> <li>- <i>Biology</i></li> <li>- <i>Chemistry</i></li> <li>- <i>Physics</i></li> </ul>
<b>Separate Sciences IGCSE</b>	Externally Assessed Edexcel 6 exams 3 GCSE grades 1-9	<ul style="list-style-type: none"> <li>- <i>Biology</i></li> <li>- <i>Chemistry</i></li> <li>- <i>Physics</i></li> </ul> <p><i>The same content as double with extension content</i></p>
<b>Psychology GCSE</b>	Externally Assessed Edexcel 2 exams 1 GCSE grade 1-9	<ul style="list-style-type: none"> <li>- <i>Development</i></li> <li>- <i>Memory</i></li> <li>- <i>Psychological problems</i></li> <li>- <i>The brain</i></li> <li>- <i>Social Influence</i></li> </ul>

# Science Structure KS5

Biology	Externally Assessed Edexcel 6 exams over 2 years	<b>AS</b> - Molecules, Transport, Proteins, Genes, Cells, Reproduction, Plant Biology, Conservation <b>A2</b> - Ecosystems, Microbiology, Respiration and Homeostasis, Coordination
Chemistry	Externally Assessed Edexcel 6 exams over 2 years	<b>AS</b> - Structure, Bonding, Organic Chemistry, Energetics, Group Chemistry, Practical skills <b>A2</b> - Rates, Equilibria, Organic Chemistry cont, Transition metals, Organic Nitrogen Chemistry
Physics	Externally Assessed Edexcel 6 exams over 2 years	<b>AS</b> - Mechanics and Materials <b>A2</b> - Waves and Electricity
Psychology	Externally Assessed Cambridge	<b>AS</b> - Social, Cognitive, Learning approach, Biological approach <b>A2</b> - Clinical Psychology, Consumer Psychology

# Any Questions?

