

# The Knowledge

Supporting the National Curriculum



Knowing More

Remembering More

Learning More

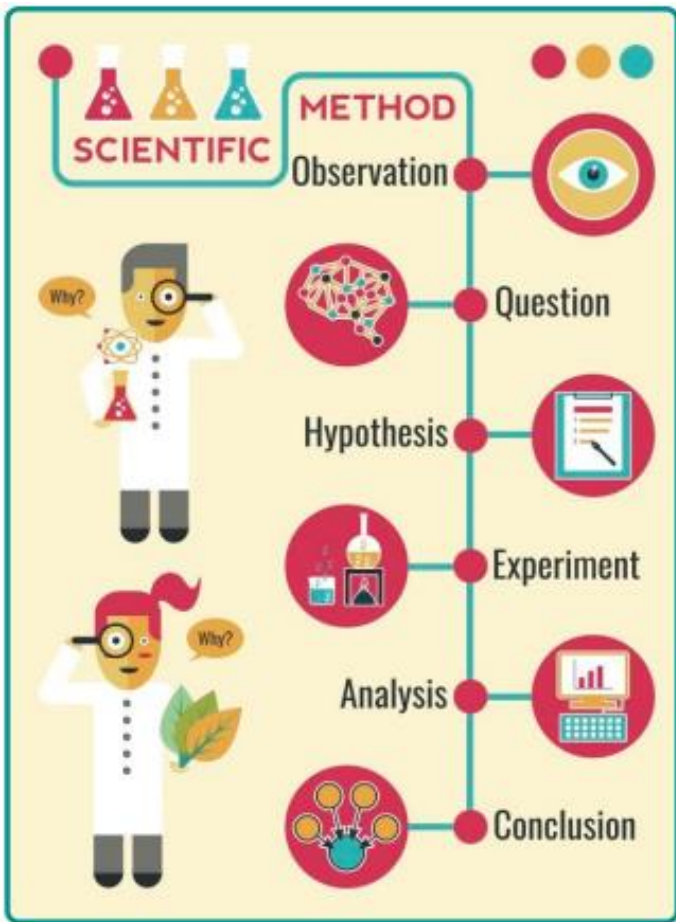
# Scientific Enquiry



**ARDLEIGH GREEN**  
JUNIOR SCHOOL

Year 3  
Science

# Scientific Enquiry



## The Scientific Method

### Comparative / fair testing

Changing one variable to see the effect on another, whilst keeping all others the same.

### Research

Using secondary sources of information to answer scientific questions.

### Observation over time

Observing changes that occur over a period of time, ranging from minutes to months.

### Pattern-seeking

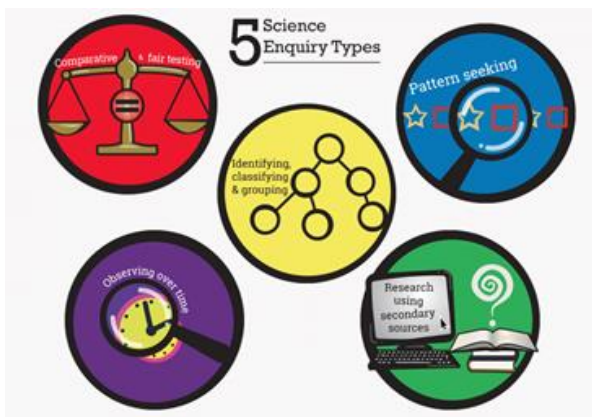
Identifying patterns and looking for relationships in enquiries where variables are difficult to control.

### Identifying, grouping and classifying

Identifying observations to name, sort and organise items.

### Problem-solving

Applying prior scientific knowledge to find answers to problems.



## Fair – testing

where one variable is changed, and all other elements are kept the same

## Variable

something that is changed

## Control Experiment

an experiment that is used to compare other experiments where there are variables

# Key Vocabulary

**Scientific investigation:** finding answers to questions using research methods

**Prediction:** explaining what you think might happen  
**plausible:** having a reason

**Record:** writing the measurement of something

**Data:** a set of facts or numbers used to learn about something

**Method:** instructions for carrying out an experiment

**Control experiment:** an experiment that is used to compare other experiments where there are variables

**Equipment:** tools or items that are needed

**Enquiry:** a question to find something out

**Practical:** the performing of a scientific experiment

**Conclusion:** the end result or outcome

**Fair test:** where one variable is changed and all other elements are kept the same

# Working Scientifically Skills

<b>Asking questions</b> Asking questions that can be answered using a scientific enquiry.	
<b>Making predictions</b> Using prior knowledge to suggest what will happen in an enquiry.	
<b>Setting up tests</b> Deciding on the method and equipment to use to carry out an enquiry.	
<b>Observing and measuring</b> Using senses and measuring equipment to make observations about the enquiry.	
<b>Recording data</b> Using tables, drawings and other means to note observations and measurements.	
<b>Interpreting and communicating results</b> Using information from the data to say what you found out.	
<b>Evaluating</b> Reflecting on the success of the enquiry approach and identifying further questions for enquiry.	

## Test Yourself

- Why is it important that scientists make predictions?
- What does it mean to ‘record data’ and why is this an important part of scientific enquiry?
- What is a ‘method’ in scientific enquiry and what must it include?
- What is a variable in an enquiry?
- What should a conclusion contain at the end of a scientific enquiry?