# The Knowledge

Supporting the National Curriculum

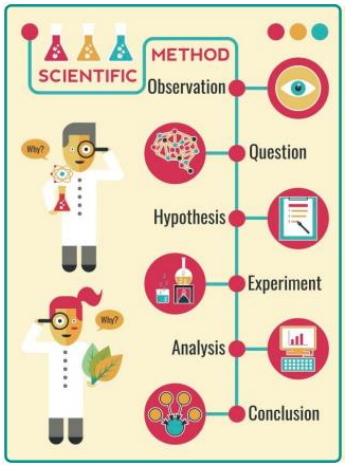
Knowing More | Remembering More | Learning More

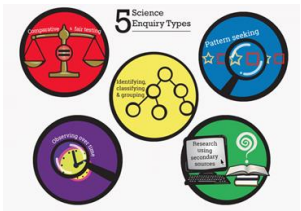
# Scientific Enquiry

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 | Variable | Control Experiment |
|---|---|---|
| where one variable is changed, and all other elements are kept the same | something that is changed | 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


# 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?