

A TOOL FOR DEVELOPING SCIENTIFIC ENQUIRY

Standing on the Shoulders of Giants provides an opportunity to develop an understanding of the different modes of scientific enquiry and the progression of scientific skills. These are identified in the teacher guide and lesson presentations.

The symbols below indicate the modes of enquiry and skills that can be developed (and assessed) through each activity. These symbols could also be displayed in your classroom to help the children identify and recall the skills being used (available in pdf format with the digital resource pack).

ENQUIRY APPROACHES

Comparative / fair testing

Changing one variable to see its 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

Making observations to name, sort and organise items.



Problem-solving

Applying prior scientific knowledge to find answers to problems.



Standing on the Shoulders of GIANTS

ENQUIRY SKILLS

Asking questions

Asking questions that can be answered using a scientific enquiry.



Making predictions

Using prior knowledge to suggest what will happen in an enquiry.



Setting up tests

Deciding on the method and equipment to use to carry out an enquiry.



Observing and measuring

Using senses and measuring equipment to make observations about the enquiry.



Recording data

Using tables, drawings and other means to note observations and measurements.



Interpreting and communicating results

Using information from the data to say what you found out.



Evaluating

Reflecting on the success of the enquiry approach and identifying further questions for enquiry.

