

11+ and 13+ Practical Science Skills Guidelines

The skills required in candidates for the 11+ and 13+ Scholarship Science Practical exams are not limited to, but may include those listed below.

Organising Practical Work

- *Draw a table with informative headings and appropriate units.*
- Add data to a table (*in a consistent fashion, taking the number of significant figures into account*).
- *Identify an anomalous result and repeat it to check its validity.*

Completing Practical Work

- *Correctly identify the following pieces of glassware:*
 - ✓ *test tube,*
 - ✓ *boiling tube,*
 - ✓ *conical flask,*
 - ✓ *beaker,*
 - ✓ *round-bottomed flask,*
 - ✓ *weighing boat,*
 - ✓ *spatula,*
- *Use a Bunsen burner safely and correctly.*
- Accurately use a measuring cylinder.
- Accurately use a balance.
- Accurately use a syringe.
- Accurately use a pipette.
- Accurately use a ruler.
- Complete all work safely.
- Follow practical instructions carefully and accurately.

Graphing, Manipulating, and Interpreting Data

- Calculate the mean of data.
- *Select a graph appropriate to the data they have collected.*
- Draw a fully labelled graph.
- Accurately plot data points on a graph.
- Select and draw an appropriate straight line, or curve, of best fit for their data.
- Describe the graph that their data produces.
- Explain the pattern shown in their graph using scientific knowledge.
- Use their graph to predict results not tested in the practical.

Statements in *purple italics* will be required at 13+ Scholarship entry, but not 11+