



# A Level Physics Online

## OCR B Physics – H557

### Module 1: Development of Practical Skills in Physics

You should be able to demonstrate and show your understanding of:	Progress and understanding:			
	1	2	3	4
<b>1.1 Practical Skills Assessed in the Written Exam:</b>				
Application of content to a practical problem including the correct equipment and techniques for a given experiment.				
Identification of control variables in an experiment				
Evaluation that a certain experiment is suitable to meet the expected outcomes				
How to use the equipment and techniques used during the Practical Endorsement tasks				
Use of units of measurement correctly				
Presentation of experimental data and observations in a suitable format				
Processing, analysing and interpreting qualitative and quantitative experimental results				
Use of appropriate mathematical techniques to analyse quantitative data				
Use of appropriate significant figures (no more than the least precise figure you have used during a calculation)				
Plotting and interpreting graphs from experimental results including labelling axes with quantities and units, choosing appropriate scales, and measuring gradients and intercepts.				
Evaluation of results and drawing conclusions				
Identification of anomalies in experimental measurements				
Limitations in experimental procedures (for example, the resolution of an instrument)				
Precision and accuracy of measurements and data, including error,				



You should be able to demonstrate and show your understanding of:	Progress and understanding:			
	1	2	3	4
percentage error and uncertainties in apparatus				
<b>1.2 Practical Skills Assessed in the Practical Endorsement:</b>				
Application of investigative approaches and methods to practical work, including independent thinking to apply content to a practical context				
Safely using equipment and materials				
Following written instructions				
Making and recording observations/measurements				
Keeping appropriate records of experimental activities (for example, a lab book or folder)				
Presenting information and data in a scientifically clear and concise manner				
Use of appropriate software and tools to process data and carry out research				
Using online and offline sources to research, including websites, textbooks and other printed scientific sources of information				
Correctly referencing sources of information				
Use of a wide range of experimental and practical instruments, equipment and techniques included within the specification				
Use of analogue apparatus to record measurements (including length/distance, temperature, pressure, force, angles and volume) and interpolating between scale and markings				
Use of digital apparatus to record measurements (including time, current, voltage, resistance and mass)				
Use of methods to increase the accuracy of measurement taking, for example, timing over multiple oscillations, using a fiducial marker, set square or plumb line				
Use of a stopwatch or light gates for timing				
Use of micrometres or callipers for small distances, with digital and Vernier scales				
Constructing circuits from diagrams using DC power supplies, cells and a range of components, including those where polarity is important				



You should be able to demonstrate and show your understanding of:	Progress and understanding:			
	1	2	3	4
Use of a signal generator and oscilloscope, including volts/division and time-base				
Generating and measuring waves, using a microphone and loudspeaker, ripple tank, vibration transducer, or microwave/radio wave source				
Use of a laser or light source to investigate characteristics of light, including interference and diffraction				
Use of computer modelling, or data logging with a variety of sensors or software to process data				
Use of ionising radiation, including detectors				

