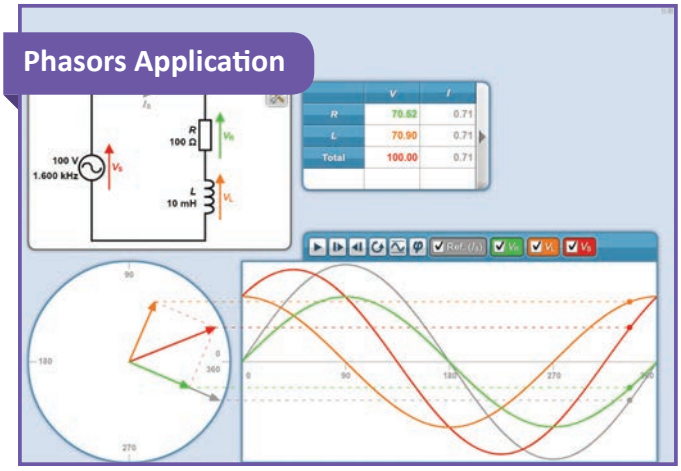
LEARNING WITH OXFORD

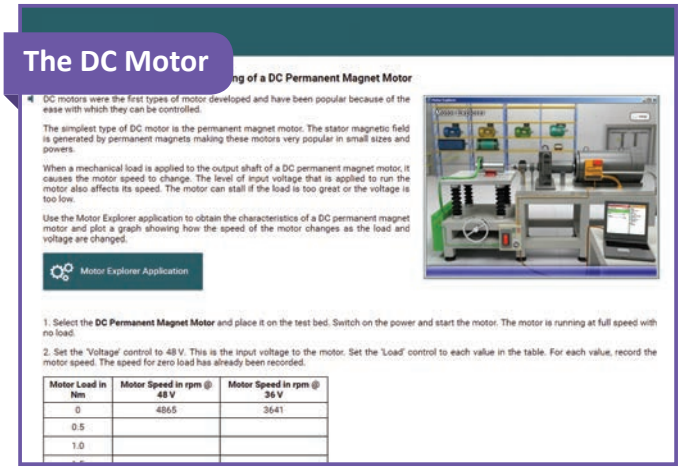
Basic Electronics Pack
Electronics

Learn where you want - when you want...

Online lessons that include that include theory presentations, exciting investigation activities and assessment quizzes.

Basic Electronics Pack - Lesson Examples:





Our tried and tested online learning sequence has been successful around the world:

Lesson presentation (audio and video)

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Interactive investigation and challenge

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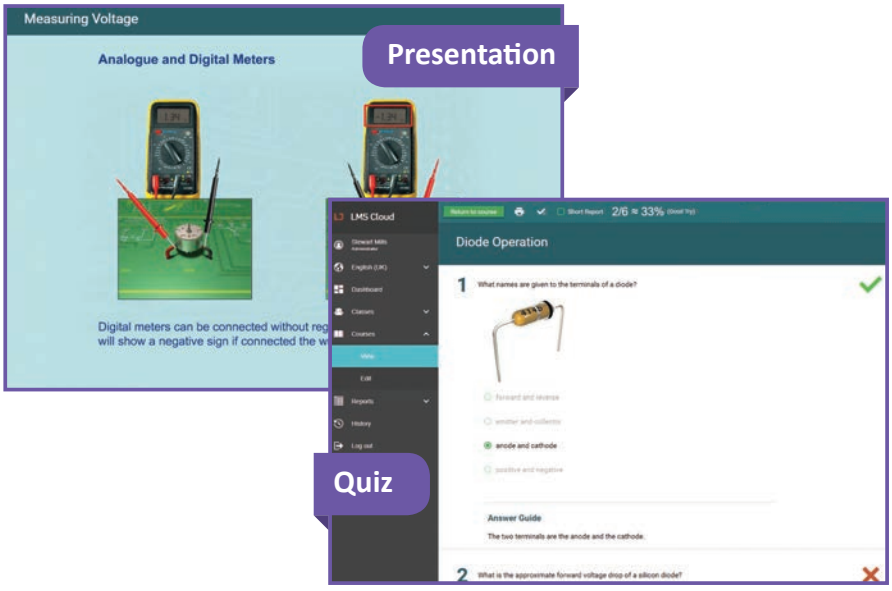
Short quiz and instant feedback



DC Principles

- Electrical Principles
- Measuring Voltage
- Relationship between Voltage, Current and Resistance
- Applications of Ohm's Law
- Electrical Power
- Kirchhoff's First Law
- Resistors
- Color Code and Tolerance
- Resistors in Series
- Parallel Resistor Circuits
- Capacitors
- Charging and Discharging a Capacitor
- Calculating Total Capacitance
- Self Inductance of Inductors
- Handling Measurement Errors
- Extending the Range of a Voltmeter
- Measuring Current and Extending Ammeter Range
- Calculating the Extension of the Range of an Ammeter

AC Principles

- Introduction to Alternating Current
- Alternating Current Equations
- Calculating the Effective Values of Alternating Voltages and Currents
- Measuring with an Oscilloscope
- Amplitude and Timebase Settings of an Oscilloscope
- Capacitors in AC Circuits
- RC Circuits
- Inductors in AC Circuits
- RL Circuits
- RLC Circuits

Electromagnetic Principles

- Magnetic Principles
- Magnetism and Electromagnetism
- Electromagnetism
- Electromagnetic Induction
- Transformers
- The DC Motor
- Characteristics of the DC Motor
- The Induction Motor
- Characteristics of an Induction Motor
- Speed Control of Induction Motors
- The Single-phase AC Motor
- Starting a Single-Phase AC Motor

Three-Phase Electricity

- Generation of Three-phase AC
- Representation of Three-phase AC
- Phase Difference and Power
- Graphical Representation of Phase Difference and Power
- Star Connection
- Star Calculations
- Delta Connection
- Delta Calculations