CiE iGCSE Physics 0625 Learning Plan

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| **Section 28: Electrical quantities 2** | | |
| Specification | Resources | Assessment |
| **Core**  • State that the e.m.f. of an electrical source of energy is measured in volts   * State that the potential difference (p.d.) across a circuit component is measured in volts * Use and describe the use of a voltmeter, both analogue and digital * State that resistance = p.d. / current and understand qualitatively how changes in p.d. or resistance affect current * • Recall and use the equation R = V / I * • Describe an experiment to determine resistance using a voltmeter and an ammeter * Relate (without calculation) the resistance of a wire to its length and to its diameter * Understand that electric circuits transfer energy from the battery or power source to the circuit components then into the surroundings   **Supplement**   * Show understanding that e.m.f. is defined in terms of energy supplied by a source in driving charge round a complete circuit * Recall that 1 V is equivalent to 1 J / C * Sketch and explain the current-voltage characteristic of an ohmic resistor and a filament lamp * • Recall and use quantitatively the proportionality between resistance and length, and the inverse proportionality between resistance and cross-sectional area of a wire * Recall and use the equations P = IV and E = IVt | Video: Section 5 – Lesson 4 – Electrical quantities (Part 2)  Powerpoint: Physics 28 – Electrical quantities 2.  Textbook  Pages 178-179 Potential Difference  Pages 180-181 Resistance (1)  Pages 182-183 Resistance (2)  Pages 184-185 More about resistance factors  Section 28 checklist.doc | Textbook  Page 179; Questions (1) to (2)  Page 181; Questions (1) to (3)  Page 183; Question (1) to (4)  Page 185; Questions (1) to (2)  Textbook answers: Page 330  Talking Paper video – Section 28 – Electrical quantities 2  Section 28 Exam Question - pdf  Section 28 Exam Question mark scheme - pdf |

Videos – www.igcsesciencecourses.com

Textbook Ref: Complete Physics for Cambridge iGCSE (Stephen Pople) - OUP

DVD Assessments – see resource DVD in textbook.