CiE iGCSE Physics 0625 Learning Plan

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| **Section 29: Electric Circuits** | | |
| Specification | Resources | Assessment |
| **Core**   * Draw and interpret circuit diagrams containing sources, switches, resistors (fixed and variable), heaters, thermistors, light-dependent resistors, lamps, ammeters, voltmeters, galvanometers, magnetising coils, transformers, bells, fuses and relays * Understand that the current at every point in a series circuit is the same * Give the combined resistance of two or more resistors in series * State that, for a parallel circuit, the current from the source is larger than the current in each branch * State that the combined resistance of two resistors in parallel is less than that of either resistor by itself * State the advantages of connecting lamps in parallel in a lighting circuit * Describe the action of a variable potential divider (potentiometer) * Describe the action of thermistors and light- dependent resistors and show understanding of their use as input transducers * Describe the action of a relay and show understanding of its use in switching circuits   **Supplement**   * Draw and interpret circuit diagrams containing diodes * Calculate the combined e.m.f. of several sources in series * Recall and use the fact that the sum of the p.d.s across the components in a series circuit is equal to the total p.d. across the supply * Recall and use the fact that the current from the source is the sum of the currents in the separate branches of a parallel circuit * Calculate the effective resistance of two resistors in parallel * Describe the action of a diode and show understanding of its use as a rectifier * Recognise and show understanding of circuits operating as light-sensitive switches and temperature-operated alarms (to include the use of a relay) | Video: Section 5 – Lesson 5 – Electric Circuits  Powerpoint: Physics 29 – Electric Circuits  Textbook  Pages 186-187 Series and parallel circuits (1)  Pages 188-189 Series and parallel circuits (2)  Pages 180-181 Resistance (1)  Pages 208-209 Electromagnets  Pages 232-233 More on components  Pages 234-235 Transistors (1)  Pages 236-237 Transistors (2)  Section 29 checklist.doc | Textbook  Page 187; Questions (1) to (4)  Page 189; Questions (1) to (3)  Page 181; Questions (1) to (3)  Page 209; Questions (1) to (4)  Page 233; Questions (1) to (5)  Page 235; Questions (1) to (2)  Page 237; Questions (1) to (4)  Textbook answers: Page 330 - 331  Talking Paper video – Section 29 – Electric Circuits  Section 29 Exam Question - pdf  Section 29 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.