CiE iGCSE Physics 0625 Learning Plan

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| **Section 2: Speed, velocity and acceleration**  |
| Specification | Resources | Assessment |
| **Core** • Define speed and calculate average speed from total time / total distance • Plot and interpret a speed-time graph or a distance- time graph • Recognise from the shape of a speed-time graph when a body is – at rest – moving with constant speed – moving with changing speed • Calculate the area under a speed-time graph to work out the distance travelled for motion with constant acceleration • Demonstrate understanding that acceleration and deceleration are related to changing speed including qualitative analysis of the gradient of a speed-time graph* State that the acceleration of free fall for a body near to the Earth is constant

**Supplement**• Distinguish between speed and velocity • Define and calculate acceleration using time taken change of velocity • Calculate speed from the gradient of a distance-time graph • Calculate acceleration from the gradient of a speed-time graph • Recognise linear motion for which the acceleration is constant • Recognise motion for which the acceleration is not constant • Understand deceleration as a negative acceleration• Describe qualitatively the motion of bodies falling in a uniform gravitational field with and without air resistance (including reference to terminal velocity) | Video: Section 1 – General Physics – Lesson 2- Speed, velocity and accelerationPowerpoint: Physics 2 – Speed velocity and accelerationTextbook Page 26 – Speed, velocity and accelerationPage 28 – Motion graphsPage 30 – Recording motionPage 32 – Free fallPage 34 – More motion graphs | TextbookQuestions Pages 50-51; 1, 2, 3, 4, 7, 8Textbook Answers: Page 327 Talking Paper 2 – Speed, velocity and acceleration.Exam Q2 (PDF) – Speed, velocity and accelerationExam Q2 (PDF) – Mark Scheme |

Videos – www.igcsesciencecourses.com

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

DVD Assessments – see resource DVD in textbook.