Edexcel International GCSE Physics 4PH1 Learning Plan

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| **Unit: 8 Astrophysics** | **Chapter: 26. Motion in the Universe** | **Hours: 4** |
| Content coverage | Learning outcomes | Resources | Assessment |
| Section 8; Astrophysicsa) Unitsb) Motion in the Universe | 8.1 use the following units: kilogram (kg), metre (m), metre/second (m/s), metre/second2 (m/s2), newton (N), second (s), newton/kilogram (N/kg) 8.4 explain that gravitational force: * causes moons to orbit planets
* causes the planets to orbit the Sun
* causes artificial satellites to orbit the Earth
* causes comets to orbit the Sun.

8.3 understand why gravitational field strength, *g*, varies and know that it is different on other planets and the Moon from that on the Earth 8.5 describe the differences in the orbits of comets, moons and planets 8.6 use the relationship between orbital speed, orbital radius and time period: orbital speed = 2 × π × orbital radius /time period *v* = 2 ×π × *r / T*  | Video and Powerpoint:Section 6 Lesson 1 – Motion in the Universe Textbook pages:Page 259 – The Solar SystemPage 261 – Satellites and MoonsPage 262 – CometsPage 262 – Gravitational field strengthPage 263 – Orbital speeds of planets and satellites | Page 264Questions (1) to (4)Chapter 26 Textbook Answers (PDF)Chapter 26 - exam question - pdfChapter 26 - exam question mark scheme – pdfChapter 26 - Talking paper video  |

Videos – [www.igcsesciencecourses.com](http://www.igcsesciencecourses.com)

Textbook Ref: Edexcel International GCSE (9-1) Physics Student Book - Pearson (Arnold, Johnson, Woolley))