P8 SPACE -TRIPLE ONLY

Prior Learning		Students have knowledge of gravity from KS3. They have learned about the orbits of planets, moons and artificial satellites (P5a) and redshift, evidence for the expanding Universe (P6), and practiced using standard form in Math and Science at KS4.		
Lesson Number	**AQA Spec**	**Title**	**Content**	**Assessment**
Entire unit is TRIPLE ONLY	4.8.1.1 4.8.1.3	The Solar System	• Describe the orbits of planets and moons in the Solar System. • Distinguish between planets, dwarf planets and moons.	**Moved to P5a**
	4.8.1.3	Orbits of planets, moons and artificial satellites	• Compare the orbital motion of moons, artificial satellites and planets in the Solar System. • Describe what keeps bodies in orbit around planets and stars. • Explain how for circular orbits, an object can have a changing velocity but unchanged speed. • Explain why bodies must move at a particular speed to stay in orbit at a particular distance.	
1	4.8.1.1	The Sun and other stars	• Describe how the Sun and other stars formed. • Describe the nuclear fusion reactions in the Sun.	
2	4.8.1.1 4.8.1.2	Main sequence of a star	• Describe the main sequence stage of a star's life cycle. • Identify the forces that are in equilibrium in a stable star.	**Assessment 1:** Written assessment 15 Marks Feedback: Teacher

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3	4.8.1.2	Life cycles of stars	• Describe the life cycles of a star like the Sun and a massive star.	
4	4.8.1.2	How the elements are formed	• Understand how new elements are produced by nuclear fusion inside a star. • Recognise that the heavier elements are made in a supernova.	**Assessment 2:** Multiple choice Quiz 25 Marks Feedback: Auto/Self-assessed
7	4.8.2	Red-shift	• Describe red-shift. • Describe evidence for the expanding Universe.	**Moved to P6**
8	4.8.1.3 4.5.1.3	Key concept: Gravity: the force that binds the Universe	• Understand that gravity provides the force that keeps planets and satellites in orbits. • Understand that gravity is necessary at the start of a star's life cycle and to maintain equilibrium in a stable star. • Describe how the weight of an object depends on the gravitational field strength. • Recognise that that there is still much about the universe that is not understood, for example dark mass and dark energy.	
9	4.8	Maths skills: Using scale and standard form	• Understand the scale of objects in the Universe. • Use standard form.	
End of Unit test Assessment: Teacher				
Where we will use these ideas again	In the summer GCSE exams: Paper 1 & 2 – Application of Math skills Paper 2 – P5 Forces, P6 Waves and P8 Space			