



Triple
Science,
Higher
Tier

P8 Space Physics Revision Checklist



Topic	Content	✓
The Solar System	Describe the structure of the solar system, including the Sun, planets, dwarf planets, and natural satellites such as moons. Explain how the Sun formed from a nebula, where dust and gas were pulled together by gravity. Describe how fusion reactions in a star create an equilibrium between gravitational collapse and expansion.	
Life Cycle of a Star	Describe the stages in the life cycle of a star, including nebula, main sequence, red giant or supergiant, and final stages such as white dwarf, neutron star, or black hole. Explain how fusion reactions in stars produce naturally occurring elements, and how elements heavier than iron are formed in supernovae and distributed throughout the universe.	
Orbital Motion, Natural and Artificial Satellites	Explain how gravity provides the force needed for planets and satellites (both natural and artificial) to maintain circular orbits. Describe the differences and similarities between planets, moons, and artificial satellites. Explain how, for circular orbits, gravity changes velocity but not speed, and describe how the radius of an orbit must change if orbital speed changes to maintain stability.	
Red Shift	Explain how red-shift provides evidence that the universe is expanding, based on the observation that light from distant galaxies is shifted toward longer wavelengths. Describe how the speed of a galaxy's movement increases with distance, supporting the Big Bang theory. Explain how observations of supernovae since 1998 suggest that distant galaxies are receding faster over time. Describe how scientific observations help develop theories about the origin and future of the universe. Recognise that dark matter and dark energy remain unexplained phenomena in astrophysics.	



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