



	Lessons Sequence					
<b>TOPIC (S)</b>  <b>Space</b>	1. Our Solar System 2. Life cycle of a star		3. Orbital motion, natural and artificial satellites 4. Red shift			
<b>Knowledge &amp; Skills development</b>	<ul style="list-style-type: none"> <li>Explain how fusion reactions are caused at the start of a star's life cycle</li> <li>Knowledge about the equilibrium reached between the gravitational collapse of a star and its expansion due to fusion energy</li> <li>Describe the life cycles of stars of similar size to the sun and also stars which have considerably more mass</li> </ul>			<ul style="list-style-type: none"> <li>Explain qualitatively how the force of gravity can lead to changing velocity but unchanged speed in circular orbit</li> <li>Explain qualitatively how the radius must change if the speed of orbit changes ( in a stable orbit)</li> </ul>		
<b>Assessment / Feedback Opportunities</b>	Targeted questioning throughout topic	Teacher assessment of practical skills during investigation - verbal	Knowledge Recall Quizzes	Deep marking of written task in students books	Topic Test	Targeted exam questions – teacher or self-assessed
<b>Cultural Capital</b>	<ul style="list-style-type: none"> <li>Possible visit to Jodrell Bank observatory</li> <li>Encourage students to visit the Space exhibition in Liverpool World Museum</li> </ul>					
<b>SMSC / Promoting British Values</b> <small>(Democracy, Liberty, Rule of Law, Tolerance &amp; Respect)</small>	<ul style="list-style-type: none"> <li>Working as a team in space research</li> <li>Listening to others during presentations</li> <li>Working in groups during practical work or research tasks</li> </ul>					
<b>Reading opportunities</b>	<ul style="list-style-type: none"> <li>Recommended Read: The planets (Professor Brian Cox)</li> <li>Recommended Read: An introduction to the solar system (David A Rothery et al)</li> </ul>					
<b>Key Vocabulary</b>	Independent Variable, Dependent Variable, Control Variables, Method, Conclusion, Precaution, Evaluation, Reliable, Precision, Valid, Anomaly, Describe, Explain, Compare, Analyse, Calculate, Suggest  Universe, Galaxy, Nebula, Planet, Protostar, Main Sequence, Supernova, Orbit, Asteroid, Comet, Satellite, Equilibrium, Fusion, Neutron Star					
<b>Digital Literacy</b>	SharePoint resources including topic quizzes, Possible use of excel to plot graphs and analyse data, powerpoint, word, etc to present information, internet for research					
<b>Cross-Curricular Links</b>	Numeracy/Maths –rearranging equations, using scientific calculators,					
<b>Careers</b>	Telecommunications, Astrophysicist, Careers within NASA or ESA (Technicians, Analysists, Engineers, Astronauts)					