

Subject	Year 13 Core Knowledge – Autumn/Spring/Summer term	How to support students' learning
<b>Science - Forensic</b>	<p><b>Autumn Term</b></p> <p><b>Unit 10 learning aim A –</b></p> <ol style="list-style-type: none"> <li>1. Carry out investigations into the chemistry of combustion, extinction and heat transfer, drawing conclusions and using scientific terminology.</li> <li>2. Discuss the chemistry of combustion, extinction and methods of heat transfer, from practical observations and using scientific terminology.</li> <li>3. Evaluate the use of different methods of fire extinction in different scenarios and draw valid conclusions, using scientific terminology.</li> </ol> <p><b>Unit 11 Learning aim A –</b></p> <ol style="list-style-type: none"> <li>4. Explain the factors that cause road traffic collisions and injury.</li> <li>5. Assess the interrelationship between the factors that cause road traffic collisions and injury.</li> <li>6. Evaluate the significance of the different factors that cause of road traffic collisions and injury.</li> </ol> <p><b>Unit 4 Learning aim A -</b></p> <ol style="list-style-type: none"> <li>7. Select appropriate procedures to preserve, collect and record forensic evidence.</li> <li>8. Unit 4 Learning aim A - Describe the procedures used to preserve, collect and record forensic evidence.</li> <li>9. Justify the choice of procedures used to preserve, collect and record forensic evidence.</li> <li>10. Evaluate the importance of using appropriate procedures to preserve, collect and record forensic evidence.</li> </ol> <p><b>Spring Term</b></p>	<ul style="list-style-type: none"> <li>• Pearson BTEC National Applied Science student book (2016). Author – Joanne Hartley.</li> <li>• Seneca: <a href="https://senecallearning.com/en-GB/">https://senecallearning.com/en-GB/</a> Free revision resource.</li> </ul>

**Unit 10 learning aim B -**

11. Describe how fires can be caused, their behaviours and the phases of a fire.
12. Discuss the causes and behaviours of different types of fire, and their phases and the impact of ventilation.
13. Analyse how fire behaviour is influenced by its cause and the surroundings.

**Unit 11 learning aim B -**

14. Explain why science is used in the investigation of the causes of road traffic collisions.
15. Calculate velocity and use the coefficient of friction to determine the speed of vehicles before a collision from collision scenarios.
16. Discuss the scientific factors associated with the investigation of road traffic collisions.
17. Analyse the interrelationship between scientific factors in determining causes and the effect in road traffic collision investigations.

**Unit 11 learning aim D -**

18. Explain the purpose of legislation that applies to road traffic collisions.
19. Discuss the purpose and effectiveness of the legislation that applies to road traffic collisions.
20. Evaluate the purpose and effectiveness of the legislation that applies to road traffic collisions and the criminal justice system, making suggestions for improvements.

**Unit 4 learning aim B -**

21. Select appropriate analytical techniques to examine biological, chemical and physical forensic evidence.
22. Describe the analytical techniques used to examine biological,
23. chemical and physical forensic evidence. "

24. Justify the choice of the analytical techniques used to examine biological, chemical and physical forensic evidence.

**Unit 10 learning aim C -**

- 25. Evaluate the analytical techniques used in forensic science to examine biological, chemical and physical forensic evidence.
- 26. Describe the roles of agencies involved in a fire investigation.
- 27. Explain the methods involved in processing a fire scene.
- 28. Explain the importance of each agency involved in a fire investigation.
- 29. Compare the methods involved in processing a fire scene.
- 30. Evaluate the methods used to process a fire scene and the roles of liaising agencies involved in order to preserve integrity of evidence.

**Unit 11 Learning aim C -**

- 31. Follow procedures to carry out an investigation of a road traffic collision.
- 32. Analyse evidence from a simulated collision investigation.
- 33. Justify the procedures and the choice of equipment used to investigate a collision.

**Unit 10 learning aim C -**

- 34. Evaluate the procedures and equipment used for evidence collection and analysis from a simulated collision investigation.
- 35. Produce a correctly structured forensic expert witness statement/report, with findings from the analysis of evidence.
- 36. Produce a coherent forensic expert witness statement/report, with interpretation of the findings from the analysis of evidence. "
- 37. Produce a detailed and coherent forensic expert witness statement/report, showing clear scientific

	reasoning to draw valid conclusions.	
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