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| A picture containing clipart  Description automatically generated**YEAR 12 Medical Science AUTUMN TERM**  **‘An ambitious curriculum that meets the needs of all’**  **Medium Term Planning - Topic: Unit 1** | |
| **Curriculum Intent** | **In addition to working further on objectives from Year 12, pupils will be taught, following National Curriculum guidelines, the following this term:**  This unit develops knowledge and understanding of human anatomy and physiology.  The unit will develop an understanding of the function of organ systems and some  problems that can occur in these systems.  The unit will enable learners to understand the normal functioning of the body at a  cellular and physiological system level. They will learn how these systems react in  different situations, and how these systems can go wrong in order to report on health of individuals.  What systems are fundamental to maintenance of human life? How do these systems work normally? How do systems influence each other? How do these systems compensate when our activities change? Why do these systems sometimes go wrong?  Healthcare professionals and scientists working in the healthcare sector need to understand the anatomy and physiology of the human body. An understanding of how physiological systems work under normal circumstances is fundamental to maintain good health. This understanding is also crucial to enable treatment of individuals when injury or disease occurs. There are a huge number of healthcare professionals that deliver care and treatment to a diverse range of patients. Scientists also work in the healthcare sector, as well as in universities, government agencies and in the pharmaceutical and bioscience industries.  Some of the features and characteristics of healthcare professionals and medical scientists such as meeting deadlines, attention to detail, methodical approach and analytical thinking are important transferable skills, applicable in all aspects of life and work. They must have good communication skills as liaison with patients, other scientists and healthcare workers, and other agencies is often necessary.  This unit is designed to help you understand the ways that healthcare professionals and scientists involved within the medical sector work so that you will be able to tackle problems and answer questions in a medical context. This will involve you examining the key principles that underlie the functioning of our body systems, how they are maintained and how problems can arise. |
| **Skills/National Curriculum Links** |
| **Cross Curricular Links** | **SMSC/PSHE:** The specification provides a framework and includes specific content through which individual courses may address spiritual, moral, ethical, social and cultural issues. It aims to show how science can be used to assist in understanding the underlying  causes of disease. Learners should consider how conditions are treated, and  balance the need for new treatments with cost to society.  Examples of issues which can be addressed through the specification are listed  below.  • How lifestyle may affect health (unit 1)  • How ethical issues affect research (unit 3)  • How factors are considered when prescribing medicines (unit 4)  **Literacy:** key words and terms linked to topics, command words when answering exam questions.  **Numeracy:** ability to read graphs, tables, plot data, values etc  **Skills Builder:** leadership, teamwork, listening to others, collaborating |
| **Becoming future ready** | The applications and implications of science are dealt with in meaningful medical  contexts, and encourage the development of a responsible attitude to citizenship. An  understanding that individuals have a collective responsibility is fostered in relation to  various ethical issues included in the specifications such as treatment regimens, side  effects of medicines, cost of medicines to society. The consequences of lifestyle on  health are also examined throughout the qualification in a number of different  contexts.  **Health and Safety Consideration**  Under UK law, health and safety is the responsibility of the employer. There are a  number of regulations (notably Management of Health and Safety at Work  Regulations 1999 and COSHH Regulations 2002 (as amended)) that require the  completion of a risk assessment before commencing a procedure or activity that uses  microorganisms or chemicals.  There are opportunities for learners to develop their own risk assessments when  carrying out laboratory work in almost all units. Throughout the qualification there are  also many opportunities to underscore the requirement to work in compliance with  risk assessments in order to safe guard the health and safety of workers and  members of the public.  **The European Dimension**  Medical issues can be rarely confined to a particular place since human actions in one  country can also impact another. Challenges faced by medicine also need to be dealt  with at national, European and global levels. This specification should make learners  aware that medical scientists need to cooperate with scientists from other countries.  The context led nature of the units will give centres the opportunity of examining  medical issues at a European level. Examples where a European dimension can be  underscored include international protocols and European legislation relating to  adverse drug reactions and licencing of medicinal products for human use. |
| **Adaptation** | Throughout this topic, quality first teaching will provide differentiation:  **By product:** written information on learning mats, some through practical setting.  **By resource:** textbooks, videos, learning mats, handouts to read through, graphs, tables and charts.  **By Intervention**: by providing different levels of supervision and support  **By Progressive Questioning:** exploring pupils’ understanding through interactive dialogue.  **By Grouping:** according to prior attainment, gender, social preference, preferred learning style.  **By Task:**Pupils should be involved in the identification of targets which are meaningful to them and in the selection of an appropriate task from the given range.  **By Offering Optional Activities:** In class or as homework, to extend learning.  This QFT/SEND provision will be explicit within the lesson-by-lesson schemes of work. |
| **QFT/SEND Provision** |
| **Implementation**  **Curriculum Delivery** | **AC1.1** describe the function of main classes of biological molecules in humans  **AC1.2** describe structure of human cells  **AC1.3** explain transport systems in cells  **AC1.4** explain how cells process information  **AC2.1** describe structure of human physiological systems  **AC2.2** explain function of human physiological systems  **AC 3.1** explain how lifestyle may affect major body systems  **AC3.2** assess how lifestyle may impact health  **AC3.3** explain how pathogens can affect body systems  **AC3.4** explain how noninfectious diseases affect body systems  **AC4.1** analyse data  **AC4.2** process data  **AC4.3** make evidence based conclusions  **AC4.4** report on health |
| **Learning Outcomes (Knowledge)** |
| **Current learning to be developed in the future within:** |  |
| **Assessment** | Refer to assessment maps for formative and summative assessment opportunities. |
| **Impact** | Attainment and Progress – Refer to assessment results / data review documentation. |