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| **YEAR \_\_\_\_ 2023-2024\_\_\_\_\_ TERM: Spring 1 (Y11)**  **‘An ambitious curriculum that meets the needs of all’**  **Medium Term Planning - Topic: Hormones and Homeostasis** | |
| **Curriculum Intent** | **In addition to working further on objectives from KS3 Human reproduction and KS4 Topic , pupils will be taught, following National Curriculum guidelines, the following in this topic:**   * principles of hormonal coordination and control in humans * hormones in human reproduction, hormonal and non-hormonal methods of contraception * homeostasis |
| **Skills/National Curriculum Links** |
| **Spiritual, moral, social, and cultural development** | **SMSC:** Hormones in reproduction, puberty  **PSHE/British Values:** Hormones in reproduction, puberty, diabetes,  **Skills Builder:** |
| **Numeracy** | Graphical skills developed through the plotting of blood glucose concentrations, interpretation of graphs |
| **Literacy** | **Vocabulary Tier 2:** diabetes, period, menstrual cycle, hormone  **Vocabulary Tier 3:** Homeostasis, receptor, gland, pancreas, insulin, glucagon, thyroid, thyroxine, adrenaline, oestrogen, progesterone, ovulation, FSH, LH, testosterone  **Reading:** Students are given opportunity to develop their skills in specified tasks that develop disciplinary literacy. Throughout the GCSE Biology and Combined Science course they develop their understanding of the requirements of exam questions and the key terminology in questions. In addition, they read practical methodology and translate this to actions in laboratory tasks.  **Writing:** Students construct answers independently and through class teaching. Their answers range from single word answers to the planning and writing of 6-mark “extended writing” tasks that require linking of multiple concepts from a topic. These often develop students’ ability to construct written evaluations of contrasting situations, where the use of comparative connectives are required.  **Oracy:** Students are regularly given the opportunity to practice their scientific vocabulary in class discussion, through choral response and in giving instruction to others during practical activities. |
| **Becoming future ready** | **Careers/Employability:** Opportunity for development of communication, teamwork, and manual dexterity in the completion of practical activities |
| **Adaptation** | Throughout this topic, quality first teaching will provide differentiation:  **By product:** Assessments have opportunities for students to achieve all grades, with structured questions and opportunities for development of extended writing for all abilities.  **By resource:** Booklets are differentiated as appropriate, with ‘Core’ booklets produced in conjunction with class teachers for students who would benefit from additional scaffolding of resources in order to achieve their potential.  **By Intervention**: by providing different levels of supervision and support, including the specific deployment of teaching assistants within lessons.  **By Progressive Questioning:** exploring pupils’ understanding through interactive dialogue.  **By Grouping:** according to prior attainment, gender, social preference.  **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** | To be able to:  5.1.1.a I can describe what homeostasis is and why it is important, and I can give examples of conditions controlled by homeostasis  5.1.1.b I can describe the common features of all control systems  5.3.1.a I can describe the principles of hormonal coordination and control by the human endocrine system  5.3.2.a I can state that blood glucose concentration is monitored and controlled by the pancreas, and describe the body's response when blood glucose is too high  5.3.2.b I can explain what type 1 and type 2 diabetes are and how they are treated  5.3.2.c (Higher) I can describe the body's response when blood glucose concentration is too low  5.3.2.d (Higher) I can explain how glucagon interacts with insulin to control blood glucose levels in the body  5.3.4.a I can describe what happens at puberty in males and females, including knowledge of male and female reproductive hormones  5.3.4.b I can name and describe the roles of the hormones involved in the menstrual cycle  5.3.4.c (Higher) I can explain how different hormones interact to control the menstrual cycle and ovulation  5.3.5.a I can describe how fertility can be controlled by hormonal and nonhormonal methods of contraception  5.3.6.a (Higher) I can explain how hormones are used to treat infertility, including the steps involved in In Vitro Fertilisation (IVF) treatment  5.3.6.b (Higher) I can evaluate the risks and benefits of fertility treatments  5.3.7.a (Higher) I can explain the roles of thyroxine and adrenaline in the body  5.3.7.b (Higher) I can explain the control of thyroxine as a negative feedback system  *5.3.3.a I can describe how water, ions and urea are lost from the body, and the consequences of losing or gaining too much water for body cells*  *5.3.3.b (Higher) I know that protein digestion leads to excess amino acids inside the body, and I can describe what happens to these*  *5.3.3.c I can describe how the kidneys produce urine*  *5.3.3.d I can explain how the water level in the body is controlled by ADH*  *5.3.3.e I can describe how kidney failure can be treated*  Red denotes interleaving; aspects of knowledge covered previously. |
| **Learning Outcomes (Knowledge)** |
| **Current learning to be developed in the future within:** | Topic 14 (Health Issues) |
| **Assessment** | Refer to assessment maps for formative and summative assessment opportunities. |
| **Impact** | Attainment and Progress – Refer to assessment results / data review documentation. |