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| **YEAR \_\_\_\_ 2023-2024\_\_\_\_\_ TERM: Autumn 2 (Y11)**  **‘An ambitious curriculum that meets the needs of all’**  **Medium Term Planning - Topic: Nervous System** | |
| **Curriculum Intent** | **In addition to working further on objectives from KS3 Movement and KS4 Topic 1 Cell Structure & Transport, pupils will be taught, following National Curriculum guidelines, the following in this topic:**   * principles of nervous coordination and control in humans * the relationship between the structure and function of the human nervous system * the relationship between structure and function in a reflex arc |
| **Skills/National Curriculum Links** |
| **Spiritual, moral, social, and cultural development** | **SMSC:**  **PSHE/British Values:**  Effect of caffeine on reaction times  **Skills Builder:** |
| **Numeracy** | Calculations required in the topic include reaction times, mean from given data |
| **Literacy** | **Vocabulary Tier 2:** Stimulus, reflex, muscle, gland  **Vocabulary Tier 3:** Neurone, receptor, effector, central nervous system, spinal cord, sensory, relay, motor, coordination centre. *Bio only: cerebral cortex, cerebellum, medulla, MRI, ciliary muscle, optic nerve, myopia, hyperopia*  **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 (Required Practical on reaction times) |
| **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:  RP 7 I can investigate the effect of a factor on human reaction time  5.2.1.a I can state the function of the nervous system and name its important components  5.2.1.b I can describe how information passes through the nervous system  5.2.1.c I can describe what happens in a reflex action and why reflex actions are important  5.2.1.d I can explain how features of the nervous system are adapted to their function, including a reflex arc  *5.2.2.a (Biology only) I can state the function of the brain and how it is structured, including naming specific regions and identifying these on a diagram*  *5.2.2.b (Biology only) I can describe the functions of different regions of the brain*  *5.2.2.c (Biology only) I can explain some of the difficulties of investigating brain function and treating brain damage and disease*  *5.2.2.d (Biology only) I can explain how neuroscientists have been able to map regions of the brain to particular functions*  *5.2.3.a (Biology only) I can state the function of the eye and how it is structured, including names of specific parts*  *5.2.3.b (Biology only) I can describe the functions of different parts of the eye, including relating structure to function*  *5.2.3.c (Biology only) I can describe what accommodation is, and how it is carried out*  *5.2.3.d (Biology only) I can explain what myopia and hyperopia are and how they are treated, including interpreting ray diagrams*  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. |