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| **Year:** | **8** | **Unit:**  | **CELLS AND REPRODUCTION** |
| **Subject:** | **SCIENCE** | **Assessment:**  | **EXAM – WEEK 9 and 10** |
| **LG** | **LEARNING GOALS and SUCCESS CRITERIA** |
| **1**5 Lessons | **SC1** | I can **define** the scientific meaning of the terms cell, unicellular organism and multicellular organism, and **identify** at least 3 examples of each. |
| **SC2** | I can **describe** the basic functions of cells - respiration, protein synthesis and fat storage |
| **SC3** | I can **describe** and **compare** the basic differences between plant, animal and fungal cells. |
| **SC4** | I can **identify** the following organelles on a diagram and **explain** the basic function of each - *nucleus, cell membrane, cell wall, mitochondria, endoplasmic reticulum, ribosomes, vacuoles, chloroplasts, lysosomes, Golgi body* and *cytoplasm*. |
| **LG1** | ***Students will understand that cells are the basic units of all living things and will be able to explain the function and characteristics of their specialised structures.*** |
| **2**2 Lessons | **SC5** | I can **prepare** a wet mount slide, **examine** plant and animal cells under a light microscope, and **draw** accurate diagrams of them |
| **LG2** | ***Students will be able to safely and accurately use a light microscope to examine a variety of cells*** |
| **3**2 Lessons | **SC6** | I can **recognise** that cells replicate via cell division (mitosis) and **explain** the importance of mitosis to multicellular organisms for growth and repair. |
| **LG3** | ***Students will be able to describe the process of mitosis.*** |
| **4**5 Lessons | **SC7** | I can **describe** the process of photosynthesis (including a word chemical equation and the role of chlorophyll), and **explain** its role within plants and the global ecosystem |
| **SC8** | I can **define** the term transpiration, and **identify** and **explain** the function ofthe structures (xylem and phloem) that make up the transport system processes within plants |
| **SC9** | I can **observe** the stomata of leaves in a leaf cross-section under a light microscope, **explain** their function and **predict** the area of a leaf that should have the most stomata. |
| **LG4** | ***Students will understand that plants are multicellular organisms that contain a system of organs to carry out specialised functions, and be able to explain how plants manufacture and transport essential nutrients*** |
| **5**2 Lessons | **SC10** | I can **compare** asexual and sexual reproduction, and **explain** at least twoadvantages and disadvantages of each type of reproduction |
| **SC11** | I can **describe** the innate nature of reproduction and identify organisms which sexually reproduce versus those who asexually reproduce. |
| **SC12** | I can **calculate** population growth for unicellular organisms and **construct** a graph to display this |
| **LG5** | ***Students will understand the importance of reproduction for organisms*** |
| **6**4 Lessons | **SC13** | I can **draw** and **label** the reproductive organs within a typical flower |
| **SC14** | I can **describe** the function of the organs within flowers and **explain** how each contribute to pollination and fertilisation |
| **SC15** | I can **describe** the role insects and birds play in pollination, and the role seed dispersal plays in successful reproduction. |
| **SC16** | I can **collect** and **analyse** data related to simulated seed dispersion and **draw a conclusion** related to successful reproductive strategies. |
| **LG6** | ***Students will be able to describe and explain the function of specialist organs responsible for sexual reproduction in plants*** |
| **7**5 Lessons | **SC17** | I can **label** a diagram of the female and male human reproductive systems and **state** the functions of the parts |
| **SC18** | I can **label** a timeline of the menstrual cycle and **explain** the key stages of the cycle. |
| **SC19** | I can **compare** the reproductive structures in humans, plants, and other organisms |
| **SC20** | I can **discuss** the advantages and ethics of reproductive technology including cloning, IUI, IVF, and genetic screening of embryos |
| **LG7** | ***Students will be able to describe and explain the function of specialist organs responsible for sexual reproduction in humans*** |