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| **What will we be learning?****GCSE Unit: Cell Biology** | **Why this? Why now?****GCSE Course:**AQA TrilogyAQA Separate Biology**What other GCSE Science units does this unit relate to?****Organisation** – 4.2.1 principles of organisation, 4.2.2 animal tissues, organs and organ systems including; digestive system, heart, blood, lungs, cancer 4.2.3 Plant tissue organs and systems**Infection and Response** – 4.3.1.6 white blood cells**Bioenergetics** – 4.4.1 photosynthesis, 4.4.2 Respiration**Inheritance, Variation & Evolution** – 4.6.1 meiosis, chromosomes, DNA, genetic inheritance**Homeostasis and Response** -4.5.2 nerve cells | **Key Words:**eukaryoteprokaryotenucleuscytoplasmmitochondriaribosomesvacuolecell membranechloroplastcell wallplasmidspecialisationdifferentiationstem cellmicroscopeobjective lenseye piece lensfocusmagnificationresolutionfield of viewmitosischromosomesdiffusionosmosisactive transportpartially permeableconcentration gradient |
| **What will we learn?****Useful equations/formulae/maths skills for this unit:**Orders of magnitudeConverting millimetres to micrometres (x 1000)Standard form, significant figures and decimal placesInterpret graphsPlot graphs**Magnification = size of image** **size of real object****Misconceptions in this topic**The nucleus is the brain of the cell – no, a brain is an organ too big to fit in a cell, it is made of cells! The nucleus controls the cell and contains genetic informationAnimal cells have cell walls – no, plant cells and bacteria have cell walls. Both animal cells and plant cells have cell membranesCell specialisation and differentiation are the same thing – no, cells are adapted to carry out their functions, this is specialisation. Stem cells will differentiate to form different types of cells in the body/plant |
| **What opportunities are there for wider study?****If you are interested in this unit, what careers does it relate to?**Research scientist, cell biologist, geneticist, microbiologist, medical careers**Collins Revision guide relevant pages for this unit:**Higher and Foundation Trilogy books P.16-23, 34-35, 56-57Separate Biology books P.8-15, 26-29, 56-59 |
| **How will I be assessed?****Deep Marking Task Title for this unit:** Required Practical on Osmosis write up |