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| **What will we be learning?**  **GCSE Unit:** **Ecology** | **Why this? Why now?**  **GCSE Course:**  AQA Separate Biology  **What other GCSE Science units does this unit relate to?**  **Bioenergetics** – 4.4.1 photosynthesis, 4.4.2 respiration  **Inheritance, Variation and Evolution** – 4.6.2 natural selection, 4.6.4 classification  **Chemistry of the Atmosphere** – 5.9.1 the earth’s early atmosphere, 5.9.2 carbon dioxide & methane as greenhouse gases, 5.9.2 carbon footprint, 5.9.3 atmospheric pollutants  **Energy** – 6.1.3 national and global energy resources | **Key Words:**  ecosystem  biotic  abiotic  community  niche  predator  prey  trophic level  producer  consumer  biomass  interdependence  species  adaptations  competition  biodiversity  global warming  greenhouse effect  deforestation  conservation  carbon cycle  quadrat  line transect  belt transect  key  kite diagram  decomposition  food security  biotechnology  sustainability |
| **What will we learn?**  **Useful equations/formulae/maths skills for this unit:**  Extract and interpret information from charts, graphs and tables.  Plot data on to graphs.  Produce and interpret kite diagrams, pyramids of numbers, pyramids of biomass and pyramids of energy.  Calculate efficiency in food chains.  **Misconceptions in this topic**  Arrows in a food chain and food web show what eats what – no, they show the direction that the biomass flows.  Pyramids of numbers are always pyramid shaped – not if the producer is a tree or the last trophic level of the food chain is a parasite.  The first trophic level is a primary consumer – no, the first trophic level is a producer and the second trophic level is the primary consumer.  Producers are always green plants – no, no they can be any organism that is able to photosynthesize eg algae & phytoplankton in aquatic ecosystems | |
| **What opportunities are there for wider study?**  **If you are interested in this unit, what careers does it relate to?**  ecologist, conservationist, zoologist, botanist, wildlife photographer, environmental consultant, national park office, wildlife ranger, ornithologist, arboriculturist, renewable energy consultant, climate change research scientist, veterinarian  **Collins Revision guide relevant pages for this unit:**  P. 86-93, 108-111, 116-119 | |
| **How will I be assessed?**  **Deep Marking Task Title for this unit:** Required Practical Field Investigations | |