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| **3.1 Biological Molecules** |
| Monomers & Polymers, Carbohydrates & Lipids |  |  |  |  |  |
| Proteins & enzymes |  |  |  |  |  |
| Nucleic acids & DNA Replication |  |  |  |  |  |
| ATP |  |  |  |  |  |
| Water & inorganic ions |  |  |  |  |  |
| **3.2 Cells** |
| Cell structure – eukaryote and prokaryote & Methods of studying cells |  |  |  |  |  |
| Cell division |  |  |  |  |  |
| Transport across cells |  |  |  |  |  |
| Cell recognition & Immunology |  |  |  |  |  |
| **3.3 Organisms exchange substances with their environment** |
| Surface area: volume ratio & gas exchange in plants and animals |  |  |  |  |  |
| Digestion & absorption |  |  |  |  |  |
| Mass transport in animals & plants |  |  |  |  |  |
| **3.4 Genetic information, variation and relationships between organisms** |
| DNA, genes & chromosomes |  |  |  |  |  |
| Protein Synthesis |  |  |  |  |  |
| Genetic diversity |  |  |  |  |  |
| Species & taxonomy and Biodiversity |  |  |  |  |  |
| **3.5 Energy transfers in and between organisms** |
| Photosynthesis |  |  |  |  |  |
| Respiration |  |  |  |  |  |
| Energy & ecosystems |  |  |  |  |  |
| Nutrient cycles |  |  |  |  |  |
| **3.6 Organisms respond to changes in their internal and external environments** |
| Stimuli & response |  |  |  |  |  |
| Nervous coordination |  |  |  |  |  |
| Skeletal muscles |  |  |  |  |  |
| Homeostasis |  |  |  |  |  |
| **3.7 Genetics, populations, evolution and ecosystems** |
| Inheritance |  |  |  |  |  |
| Populations |  |  |  |  |  |
| Evolution & speciation |  |  |  |  |  |
| Populations in ecosytems |  |  |  |  |  |
| **3.8 The control of gene expression** |
| Altering DNA sequences & Gene expression |  |  |  |  |  |
| Using genome projects |  |  |  |  |  |
| Gene technologies |  |  |  |  |  |