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|  | **Autumn 1** | **Autumn 1** | **Autumn 2** | **Autumn 2** | **Autumn 2** | **Spring 1** |
| **Y10**  **Curriculum**  **Map** | * Eukaryotic and prokaryotic cells * Animal and plant cells * Microscopy and magnification * RP Microscopy – using light microscopes to observe, draw and label cells * Specialisation in animal and plant cells * Chromosomes and cell differentiation | * Cell division – Mitosis and cell cycle * Stem cells * Diffusion * Exchanging materials * Exchange surfaces | * Osmosis * RP Osmosis * Osmosis – RP exam qs * Active transport | * Organisational Hierarchy * The human digestive system * Human digestive enzymes * RP Food Tests-Sugars, starch, protein lipids * Food tests –RP exam qs | * Catalysts and enzymes * Factors affecting enzymes * RP Enzymes – the effect of pH on the rate of amylase * Enzymes – RP exam qs | * The heart * The blood * The blood vessels * Cardiovascular disease |
| **Assessments** |  |  |  |  |  |  |
| **Book to read** | [The Biology of Humans at Our Best and Worst](https://www.shortform.com/best-books/book/behave-book-reviews-robert-m-sapolsky)  Robert M. Sapolsky |  | [**The Gene**](https://www.shortform.com/best-books/book/the-gene-book-reviews-siddhartha-mukherjee)  [An Intimate History](https://www.shortform.com/best-books/book/the-gene-book-reviews-siddhartha-mukherjee)  Siddhartha Mukherjee |  |  | [The Lives of a Cell](https://www.shortform.com/best-books/book/the-lives-of-a-cell-book-reviews-lewis-thomas) [Notes of a Biology Watcher](https://www.shortform.com/best-books/book/the-lives-of-a-cell-book-reviews-lewis-thomas)  Lewis Thomas |

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|  | **Spring 1** | **Spring 2** | **Spring 2** | **Summer 1** | **Summer 1** | **Summer 2** |
| **Y10 - 11**  **Curriculum**  **Map** | * The heart * The blood * The blood vessels * Cardiovascular disease * Breathing and gas exchange * Tissues and organs in plants * Transport systems in plants(Translocation) * Evaporation and transpiration * Factors affecting transpiration * Health and disease * Pathogens and disease- Communicable diseases * Spread of pathogens, preventing the spread * Diseases caused by viruses and bacteria * Diseases caused by fungi and protists | * Preventing bacterial growth & * Human defence responses * Vaccination * Antibiotics and painkillers * Discovering drugs & Developing drugs * Non-communicable diseases * Cancer * Smoking , Alcohol and other carcinogens and the risk of disease * Diet, Exercise and health * Growing bacteria in the lab * RP Microbiology – the effect of antiseptics/antibiotics on bacterial growth using agar plates | * Making monoclonal antibodies * Uses of monoclonal antibodies * Plant diseases and Plant defence response * Photosynthesis * The rate of photosynthesis * RP Photosynthesis – the effect of light intensity on rate of photosynthesis * RP Photosynthesis exam qs * Uses of glucose and making the most of photosynthesis * Aerobic respiration | * The response to exercise * Anaerobic respiration * Comparing Aerobic and Anaerobic respiration * Metabolism and the liver * Principles of homeostasis * The structure and function of the human nervous system * Reflex actions and synapses * RP Reaction Time – the effect of a factor on human reaction time | * The Brain * The Eye * Correcting vision defects * Principles of hormonal control * Controlling body temperature * The control of blood glucose levels * Treating diabetes * The role of negative feedback-Adrenaline and Thyroxine * Human reproduction and Hormones and the menstrual cycle | * The artificial control of fertility (Contraception) * Infertility treatments * Plant hormones and responses * Using plant hormones * RP Plant Responses – the effect of light/gravity on the growth of germinated seedlings * Removing waste products * The kidneys and urine formation * Dialysis – an artificial kidney * Kidney transplants |
| **Assessments** |  |  |  |  |  |  |
| **Book to Read** |  | [The Diversity of Life](https://www.shortform.com/best-books/book/the-diversity-of-life-book-reviews-edward-o-wilson) Edward O. Wilson |  | [The Story of the Human Body](https://www.shortform.com/best-books/book/the-story-of-the-human-body-book-reviews-daniel-lieberman-sean-runnette-et-al) [Evolution, Health, and Disease](https://www.shortform.com/best-books/book/the-story-of-the-human-body-book-reviews-daniel-lieberman-sean-runnette-et-al)  Daniel Lieberman, Sean Runnette, et al |  | [The Body](https://www.shortform.com/best-books/book/the-body-book-reviews-bill-bryson) [A Guide for Occupants](https://www.shortform.com/best-books/book/the-body-book-reviews-bill-bryson)  Bill Bryson |