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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  |