

# YEAR 8 – SCIENCE

## Biological Systems

### Know:

- Structure and function of blood cells (specialised cells) linked to the circulatory system.
- Enzymes are made of protein and are biological catalysts.
- Names, positions and functions of organs and systems in the body.
- The names and adaptations of gametes in animals.
- Function of bones including: protection, support, movement, production of blood and stem cells.

### Can:

- Can describe that enzymes act as ‘builders’ and ‘breakers’.
- Explain how surface area: volume ratio affects gas exchange in organisms and link this to the structure and function of gas exchange system.
- Describe the human reproductive system.

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## Particles

### Know:

- The pH scale and how acids and bases react.
- The reactions of acids.
- What a catalyst does.

### Can:

- Compare chemical and physical changes.
- Represent chemical changes using formulae and equations.
- Classify chemical reactions as: combustion, decomposition, oxidation and displacement; endo/exothermic

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## Transferring Energy

### Know:

- Definitions of a wave, frequency and wavelength.
- Similarities and differences between how longitudinal and transverse waves:
  - Move
  - Transfer Energy
- Understand the terms current, potential difference, voltage, resistance, conductor and insulator.
- Understand current and potential difference in series and parallel circuits.

### Can:

- Give examples of transverse and longitudinal waves.
- Be able to draw simple series and parallel circuits with correctly positioned ammeter and voltmeter.