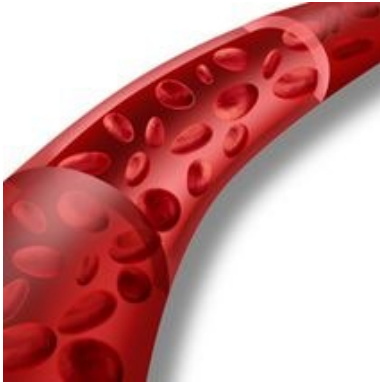
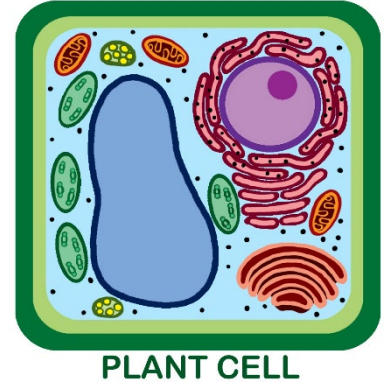


Preliminary Biology Course – Year 11

Module 1: Cells as the Basis of Life

- Cell structure
- Fluid mosaic model of the cell membrane
- Diffusion, osmosis and active transport
- Enzymes



Module 2: Organisation of Living Things

- Organisation of cells
- Nutrient and gas requirements of cells
- Photosynthesis
- Digestion
- Transport systems in plants and animals

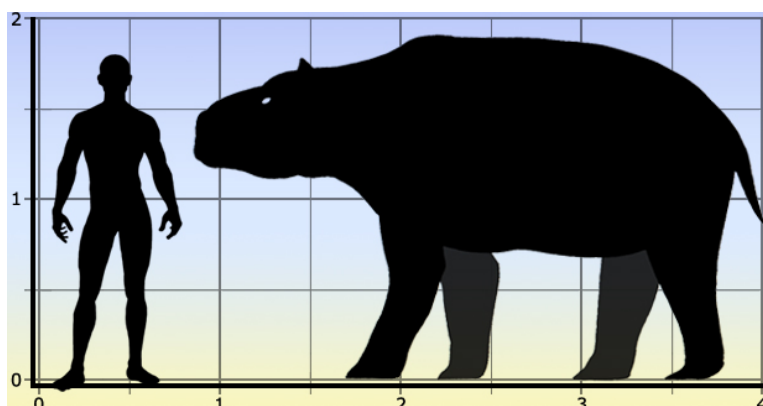
Module 3: Biological Diversity

- Effects of the environment on organisms
- Adaptations
- Theory of Evolution by Natural Selection
- Types of evolution
- Evidence supporting evolution



Module 4: Ecosystem Dynamics

- Impact of abiotic and biotic factors on ecosystems
- Sampling techniques eg. transects and quadrats
- Evidence for past changes in ecosystems
- Evolution of flora and fauna in Australia
- Human impacts on ecosystems



HSC Biology Course – Year 12

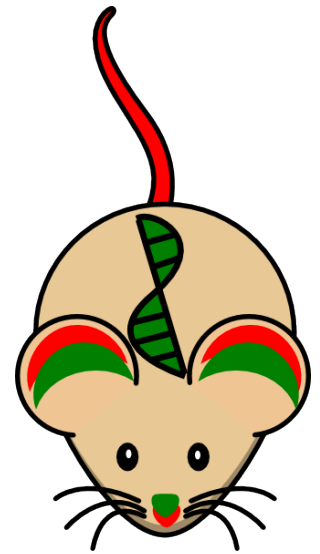
Module 5: Heredity

- *Reproduction in organisms*
- *Mitosis and meiosis*
- *DNA replication*
- *Polypeptide synthesis*
- *Types of inheritance*
- *Pedigrees and Punnett squares*
- *Inheritance patterns in populations*



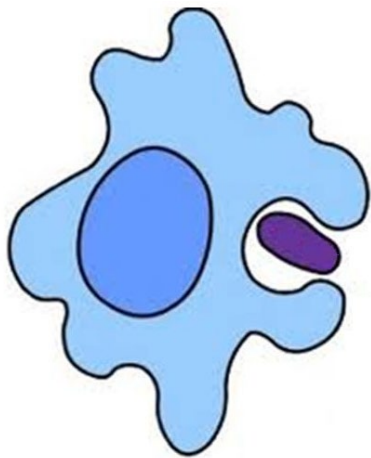
Module 6: Genetic Change

- *Cause of mutations*
- *Types of mutations*
- *Applications of biotechnology*
- *Genetic engineering eg. transgenic species and cloning*



Module 7: Infectious Disease

- *Causes of infectious disease*
- *Responses to pathogens*
- *Innate and adaptive immune system*
- *Prevention, treatment and control of infectious disease eg. vaccination, quarantine and public health campaigns*



Module 8: Non-Infectious Disease and Disorders

- *Homeostasis*
- *Causes and effects of non-infectious disease*
- *Epidemiology*
- *Prevention of non-infectious disease*
- *Technologies that assist people with hearing loss, visual disorders and loss of kidney function*

