

National 3 – Cell Biology Learning outcomes

- Identify different cell types from diagrams
- Name and identify the structures found in animal cells.
- Name and identify the structures found in plant cells.
- Name and identify the structures found in fungal cells.
- Name and identify the structures found in bacterial cells.
- Explain that growth in microorganisms can be controlled in a fermenter
- Growth in microorganisms is when the number of cells increases.
- Growth can be affected by changing conditions.
- These include – change in pH, the addition of harmful chemicals, lack of food or oxygen.
- The optimum conditions are those that result in the greatest growth in microorganisms.
- State that genes are located on chromosomes found in the nucleus.
- State that genes (genetic information) are made of DNA.
- State that genes are passed on from parents to offspring and each individual's DNA is unique.
- Explain that DNA gives instructions for the production of proteins.
- Understand that DNA profiling can be used in the solving of crimes (forensics)
- Understand that DNA profiling can be used to identify child's parent (paternity testing)
- Understand that DNA profiling can be used to assess health risks
- Understand that DNA profiling can have disadvantages as well as advantages
- Photosynthesis is the process where green plants use carbon dioxide and water to produce sugar and oxygen
- Give a word equation for photosynthesis.
- State that light, carbon dioxide, water and chlorophyll are needed for photosynthesis
- Describe what happens to the sugar made during photosynthesis, including use in respiration, or conversion into starch, cellulose, proteins or fats.