



Sacred Heart High School

Key Stage 3 Curriculum

BIOLOGY

INTENT

The study of biology involves collecting and interpreting information about the natural world to identify patterns and relate possible cause and effect. Biological information is used to help humans improve their own lives and strive to create a sustainable world for future generations. Students should be helped to understand how, through the ideas of biology, the complex and diverse phenomena of the natural world can be described in terms of a small number of key ideas which are of universal application. (Ofqual 2015)

THEMES (KNOWLEDGE & UNDERSTANDING)

Cell biology

- Prokaryotic and eukaryotic cells
- Growth and development of cells
- Cell metabolism
- Use of mathematics

Transport systems

- Transport in cells
- Transport systems in multicellular organisms
- Human circulatory system
- Transport systems in plants
- Use of mathematics

Photosynthesis

- Importance of photosynthesis
- Use of mathematics

SKILLS

Understand how scientific methods and theories develop over time.

Use a variety of models such as representational, spatial, descriptive, computational and mathematical to solve problems, make predictions and to develop scientific explanations and understanding of familiar and unfamiliar facts.

Appreciate the power and limitations of science and consider any ethical issues which may arise.

Explain every-day and technological applications of science; evaluate associated personal, social, economic and environmental implications; and make decisions based on the evaluation of evidence and arguments.

Evaluate risks both in practical science and the wider societal context, including perception of risk in relation to data and consequences.

Recognise the importance of peer review of results and of communicating results to a range of audiences.

YEAR 7

[See separate 'Science' curriculum]

YEAR 8

[See separate 'Science' curriculum]

YEAR 9

1. Cell structure and transport
2. Cell division
3. Organisation & the digestive system
4. Organising animals & plants
5. Respiration
6. Photosynthesis

ASSESSMENT

1. Cell structure and transport (November)
2. Cell structure and transport, cell division and organisation & the digestive system (March)
3. Cell structure and transport, cell division, organisation & the digestive system, organising animals & plants and respiration (June)

STRETCH & CHALLENGE

Extension questions, exam questions from the start of the course, almost every lesson.

ENRICHMENT OPPORTUNITIES

The biology challenge, Nancy Rothwell award, launch of the CREST award this academic year.