

Science and Psychology

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In science at All Saints Academy Dunstable, we offer opportunities for children to develop knowledge and understanding of important scientific ideas, processes and skills and relate these to everyday experiences. Science encourages pupils to learn about ways of thinking, exploring and communicating. During Science, pupils are encouraged to be curious about things they observe and experience and explore the world about them with all their senses. They use this experience to develop their understanding of key scientific ideas and make links between different phenomena and experiences. Through Science teaching, children acquire and refine the practical skills needed to investigate questions safely and develop skills of predicting, asking questions, making inferences, concluding and evaluating based on evidence and understanding and use these skills in investigative work. During Science lessons pupils are encouraged to think creatively and work collaboratively with others and develop a respect for the environment and living things.

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Some of the many careers using Science : Environmental scientists • Hydrologists • Geoscientists • Medical scientists • Biochemists • Atmospheric scientists • Material scientists • Physicists • Astronomers • Biological scientists • Medicine • Engineering

Key Stage 3

We follow the Exploring Science course which allows progression onto GCSEs.

In year 7 students study:

- Cells, tissues and organs
- Reproduction in Plants and Animals
- The ecosystem
- Food and Nutrition
- Muscles and bones
- The particle model
- Mixtures and separation techniques
- Atoms, elements and compounds
- Acids & alkalis
- Energy
- Current and electricity
- Forces
- Sound
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In year 8 students study:

- Plant adaptations
- Classification & biodiversity
- Microorganisms
- Genes & natural selection
- Gas exchange
- Rocks & weathering
- The periodic table
- Combustion
- Metals & their uses
- Energy transfers
- Light
- The Earth and our Universe
- Speed
- Electricity

Key Stage 5

We offer A Levels in OCR Biology, OCR Chemistry, OCR Physics and AQA Psychology. From 2018, we will also be offering BTEC diploma in Forensic Science and A level Geology

Key Stage 4

Students study the new Edexcel GCSE Biology, Chemistry and Physics. At the end of year 11, students will either take GCSE Combined Science; 2 GCSEs or the separate sciences for 3 GCSEs. Our aim is to provide the opportunity for all students to access the triple science GCSEs. All students have access to ActiveLearn for homework and independent study.

Biology

Key concepts in biology

Cells and control

Genetics

Natural selection and genetic modification

Health, disease and the development of medicines

Plant structures and their functions

Animal coordination, control and homeostasis

Exchange and transport in animals

Ecosystems and material cycles

Chemistry

Key concepts in Chemistry

States of matter and mixtures

Chemical Changes

Extracting metals and equilibria

Separate chemistry

Groups in the periodic table

Rates of Reaction and energy changes

Fuels and Earth Science

Physics

Key concepts in physics

Motion and Forces

Conservation of Energy

Waves

Light and the electromagnetic spectrum

Radioactivity

Astronomy

Energy, Forces and their effects

Electricity & circuits

Static electricity

Magnetism & the motor effect

Electromagnetic induction

Particle model

Forces & matter