

Curriculum. Science

Topics for Year 8

Michaelmas Term

Electricity

- construction of series and parallel circuits including LEDs, fuses, resistors and reed switches
- measuring current in series and parallel circuits

Magnetism

- lines of force
- construction of electromagnets and the effect of changing current

Sound

- amplitude and frequency
- measuring the speed

Light

- appreciation of light traveling in waves
- use of pinhole cameras

Chemical indicators

- making of indicators
- colour range expected from universal indicator

Neutralisation

- salt formation
- practical application of neutralization

Acids and Carbonates

- prediction of the products of such reactions

Periodic Table

- a brief overview of its arrangement and meaning of the word element
- understanding that there are metals and non-metals and likely properties of these

Compounds and mixtures

- understanding of what is meant by a mixture and a compound

Reproduction

- reproductive organs in plants
- difference between pollination and fertilisation
- reproductive organs in humans
- fertilisation in humans
- growth of the embryo/foetus
- stages of birth

Photosynthesis

- investigation into the need for light, chlorophyll and carbon dioxide
- testing a leaf for starch
- production of oxygen

Curriculum. Science

Topics for Year 8 (cont.)

Lent term

Light

- measurement of the angle of reflection
- refraction of light through denser matter
- the spectrum

Electronics

- problem solving: circuits involving the use of LDRs, relays, SPDT switches
- truth tables

Reactivity

- investigations into the reactivity of magnesium, zinc, iron and copper
- problem solving using reactivity knowledge

Extraction of metals

- methods of extraction
- use of carbon
- uses of common metals

Limestone

- extraction and use
- investigation into the reactions of limestone

Photosynthesis

- factors affecting the rate

Plants

- basic structure
- the carbon cycle

Respiration

- investigation into the respiration of germinating seeds
- word equation

Summer Term

The Earth and space

- knowledge of the solar system in terms of planets orbiting the sun
- understanding of the moon's orbit
- knowledge of terms such as galaxy
- understanding of day and night, years and seasons

Respiration

- role of the lungs
- the circulatory system

Health

- effects of smoking and drugs

Revision in preparation for CE exam

Small group investigations and research projects