

Curriculum. Science

Topics for Year 7

Michaelmas Term

Forces

- examples of forces additional to those in Y6
- recognizing when forces are balanced or unbalanced
- investigation into length of spring against load
- the law of the lever and calculations into turning moments
- differences between mass and weight

Gases

- the make up of the air
- uses of gases

The Bunsen burner

- safe use of the Bunsen burner

Heating substances

- reactions involving oxidation and thermal decomposition

Ecosystems

- Physical and biological factors using woods at Vinehall as an example
- Food chains and food webs
- Classification of vertebrates and invertebrates
- variation in populations

The microscope

- safe use of the microscope

Cells

- Preparation of slides involving animal and plant cells
- parts of the cell
- cell adaptations

Lent Term

Pressure

- in solids, liquids and gases
- measurement of pressure through investigation

Kinetic Theory

- arrangement of particles
- melting points
- Brownian motion through use of a smoke cell
- Diffusion in liquids and gases

Heating substances

- further examples of decomposition and the heating of metal oxides
- the difference between boiling and evaporation

Separation of substances

- practical application of filtering, evaporation and simple distillation

Cells, tissues, organs and systems

- examples of these in the human body

Curriculum. Science

Topics for Year 7 (cont.)

Lent Term (cont.)

Human nutrition

- outline of the digestive system
- investigation into amylase

Summer Term

Kinetic Theory

- diffusion of liquids and iodine

Energy

- forms of energy
- energy changes
- measurement of energy

Heat

- transfer of heat energy through conduction, convection and radiation

Separating Substances

- practical application of fractional distillation
- practical application of chromatography

Density

- techniques of measurement in solids, liquids and gases

Human Nutrition

- food test for starch
- diet analysis

Pollution and Climate change

- investigation into the condition of Vinehall School pond
- Causes of climate change
- effects of climate change
- technical solutions to climate change

Populations

- field study into techniques of counting populations