

YEAR 8 CURRICULUM INFORMATION – KS3 Science

Autumn 1

Autumn 2

What will students be learning?

Biology:

Breathing, circulation and drugs

- Gas exchange
- Breathing
- The circulatory system and blood vessels
- Drugs
- Alcohol
- Smoking

Chemistry:

Elements and the periodic table

- Elements
- Atoms
- Compounds
- Chemical formulae
- Polymers
- The Periodic table

Physics:

Work, heating and cooling

- Work and energy
- Machines (levers and pulleys)
- Energy and temperature
- Energy transfer: particles
- Energy transfer: radiation and insulation

Science Skills:

Enquiry processes

- Planning how to answer a question
- Analysing and evaluating
- Communication
- Evidence and sources
- Critique claims and justify opinions
- Risks and benefits

Biology:

Complete **Breathing, circulation and drugs** unit

Move on to the unit of **Digestion**

- Nutrients
- Food tests
- Unhealthy diets
- Digestive system
- Bacteria and enzymes in digestion

Chemistry:

Continue with the unit of **Elements and the periodic table:**

- The elements of Group 1
- The elements of Group 7
- The elements of Group 0

Physics:

Pressure

- Contact forces
- Pressure in gases
- Pressure in liquids
- Stress on solids

Science Skills:

Continue and complete **Enquiry processes** unit from Autumn 1

	<ul style="list-style-type: none"> • Reviewing theories 	
How will students be assessed?	<p>Milestone assessments In lesson interim knowledge checks Independent homework tasks</p>	<p>Milestone assessments In lesson interim knowledge checks Independent homework tasks</p>
Literacy – What keywords will be taught?	<p>Biology: gas exchange, lungs, ribs, respiratory system, trachea, bronchus, bronchiole, alveolus, breathing, inhale, respiration, exhale, condense, contract, diaphragm, lung volume, asthma, drug, medicinal drug, recreational drug, addiction, withdrawal symptoms, ethanol, depressant, alcoholic, unit of alcohol, passive smoking, stimulant, Chemistry: physical properties, Periodic Table, group, period, trend, Group 1, alkali metals, chemical properties, Group 7, halogen, Group 0, noble gases, unreactive Physics: work, deform, displacement, simple machine, lever, output force, input force, temperature, thermometer, thermal energy store, thermal conductor, conduction, convection, radiation, thermal insulator, convection current, infrared radiation. radiation, thermal imaging camera</p>	<p>Biology: nutrient, carbohydrate, lipid, protein, vitamin, mineral, dietary fibre, balanced diet, food test, hypothesis, malnourishment, starvation, obese, deficiency, digestive system. digestion, gullet, stomach, small intestine, large intestine, rectum, anus. villi, gut bacteria, enzyme, catalyst, carbohydrase, protease, lipase, bile Chemistry: physical properties, Periodic Table, group, period, trend, Group 1, alkali metals, chemical properties, Group 7, halogen, Group 0, noble gases, unreactive Physics: fluid, pressure, gas pressure, atmospheric pressure, liquid pressure, incompressible, upthrust, stress, newtons per metre squared</p>
What employability skills are being developed?	<p>Interpersonal skills Group work Logical and lateral thinking Developing links between topics and ideas Investigative skills Analytical skills</p>	<p>Interpersonal skills Group work Logical and lateral thinking Developing links between topics and ideas Investigative skills Analytical skills</p>
Wider Curriculum Links?	<p>Maths: measuring angles Food/gardening/horticulture Links with other STEM subjects</p>	<p>Maths: measuring angles Food/gardening/horticulture Links with other STEM subjects</p>
What useful websites are there for this topic?	<p>BBC Bitesize KS3 Science KS3 Science - BBC Bitesize</p>	<p>BBC Bitesize KS3 Science KS3 Science - BBC Bitesize</p>
What wider reading could be done for this topic?	<p>There are a selection of KS3 revision guides available online such as: CGP KS3 Science CGP Books</p>	<p>There are a selection of KS3 revision guides available online such as: CGP KS3 Science CGP Books</p>

	Oxford University Press: Activate KS3 Science	Oxford University Press: Activate KS3 Science
What else can students be doing independently to develop their understanding of this topic?	Regularly reviewing work and topics completed in lessons Completing further reading around the topics covered Revise for milestone assessments Practice mathematical skills such as range, mean, percentages and graph skills etc	Regularly reviewing work and topics completed in lessons Completing further reading around the topics covered Revise for milestone assessments Practice mathematical skills such as range, mean, percentages and graph skills etc