



SCIENCE

YEAR 8 Core Curriculum Programme (CCP)

LEARNING AND ASSESSMENT PROGRAMME

GOVERNMENT OF MALTA
MINISTRY FOR EDUCATION, SPORT, YOUTH, RESEARCH AND INNOVATION
DIRECTORATE FOR STEM AND VET PROGRAMMES

Year 8

Unit Code: SCI CCP LOF 8.1

Unit 8.1 Healthy Living

This study unit explores the importance of healthy living and informed lifestyle choices. Learners will investigate balanced diets, nutrients, digestion, exercise, and the harmful effects of smoking, vaping, and cannabis use. The unit also introduces microbes, disease transmission, hygiene practices, and methods used to prevent and treat infections, helping students understand how science supports personal and community health.

LEARNING OUTCOMES

Nutrition & Digestion

1. I can identify examples of basic nutrients, their functions and their sources.
2. I can choose a balanced diet from a range of different diets.
3. I can interpret food labels to make healthy choices related to my diet.
4. I can identify the main organs of the digestive system.
5. I can distinguish between foods that contribute to healthy and unhealthy diets.

Lifestyle & Health

6. I can identify lack of exercise, smoking cigarettes, using e-cigarettes (vaping) and the use of cannabis as unhealthy habits.
7. I can describe the effects of smoking on the heart and lungs.
8. I can investigate the effect of exercise on the pulse and breathing rates.

KEY WORDS

nutrients, carbohydrates, proteins, fats, vitamins, minerals, fibre, water, balanced diet, energy, calories, growth, repair, food label, ingredients, sugar, salt, digestion, digestive system, mouth, gullet, stomach, small intestine, large intestine

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exercise, unhealthy habits, smoking, cigarettes, vaping, e-cigarettes, cannabis, addiction, lungs, heart, breathing, pulse rate, breathing rate, oxygen, heartbeat, circulation, fitness

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Microbes & The Immune System	**9.** I can name examples of useful and harmful microbes. **10.** I can describe how some common diseases are spread. **11.** I can identify basic hygiene practices that help prevent the spread of microbes. **12.** I can link the use of antiseptics, disinfectants, antibiotics and vaccines to the prevention and treatment of infections and diseases.	decomposition, organic waste, fermentation, bread, disease, infection, microbes, germs, bacteria, viruses, spread, transmission, air, contact, body fluids, sexual, contamination, food poisoning, hygiene, handwashing, prevention, antiseptic, disinfectant, antibiotic, vaccine, immunity, symptoms

*Where appropriate, educators may also supplement instruction with additional learning outcomes from '**Unit 8.1 Healthy Living**' in the mainstream syllabus.*

Year 8

Unit Code: SCI CCP LOF 8.2

Unit 8.2 Investigating Chemicals

In this unit, learners explore fundamental ideas in chemistry by identifying common chemicals and their properties. They investigate the composition of air and carry out simple chemical tests and reactions to observe evidence of chemical change. Students also study mixtures and solubility, using practical techniques such as filtration, evaporation, sieving, magnetic separation and chromatography to separate substances and build essential laboratory skills.

LEARNING OUTCOMES

Elements, Compounds & Mixtures

1. I can name some examples of chemicals.
2. I can identify one property of some common elements.
3. I can identify nitrogen, oxygen and carbon dioxide as the main components of air.
4. I can perform a chemical test to identify the presence of oxygen.
5. I can link some changes such as production of a gas or change in colour as an indicator of a chemical change.
6. I can conduct simple chemical reactions to form compounds.

Separating Techniques

7. I can show that some substances dissolve in water (soluble) and others do not (insoluble)
8. I can perform filtration to separate insoluble substances from water.
9. I can use a sieve to separate larger solid particles from smaller ones.
10. I can carry out chromatography as a way of separating a mixture of chemicals.
11. I can obtain a soluble substance from a solution through evaporation.
12. I can use a magnet to separate magnetic from non-magnetic objects.

KEY WORDS

element, compound, mixture, substance, properties, air, oxygen, nitrogen, carbon dioxide, water vapour, sea water, glowing splint, colourless, odourless, tasteless, chemical change, products, effervescence, bubbling.

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solution, soluble, insoluble, dissolving, separation techniques, hand sorting, magnet, sieve, chromatography, filtration, filter paper, funnel, evaporation

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*Where appropriate, educators may also supplement instruction with additional learning outcomes from '**Unit 8.2 Elements, Compounds, and Mixtures**' and '**Unit 8.3 Separating Mixtures**' in the mainstream syllabus.*

Year 8

Unit Code: SCI CCP LOF 8.3

Unit 8.3 Energy Around Us

In this unit, students explore energy use in everyday life through hands-on and **project-based activities**. They learn about different forms of energy, energy changes, food as a source of energy, and simple electrical circuits. Students work collaboratively, use digital tools responsibly, and communicate ideas while developing practical scientific skills, safe working practices, and confidence in real-life contexts.

LEARNING OUTCOMES

Project Skills

1. I can use digital tools responsibly while working on a scientific project.
2. I can work in a group to carry out a simple scientific project safely.
3. I can communicate scientific ideas using my preferred method, such as speaking, writing, drawings, diagrams, models, or digital tools.

Energy

4. I can identify different energy forms such as stored, movement, heat, electrical, light and sound.
5. I can identify the energy input, output, and energy change in a familiar device.
6. I can identify food as a source of energy input for living things.
7. I can conduct a simple experiment to compare the amount of energy in different foods.

Electricity

8. I can identify and name basic electrical components from their symbols.
9. I can build a simple electrical circuit using basic electrical components.
10. I can compare series and parallel circuits and describe their main characteristics.
11. I can use a simple circuit to classify materials as conductors and insulators.
12. I can follow safety procedures when working with electricity.

KEY WORDS

project, digital tools, research, prediction, method, observe, results, conclusion, fair test, safety

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stored energy, movement energy, heat energy, light energy, sound energy, electrical energy, energy change, input, output, food, temperature, burning

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electrical circuit, component, battery, bulb, switch, wire, symbol, series circuit, parallel circuit, conductor, insulator, electric shock, mains electricity

*Where appropriate, educators may also supplement instruction with additional learning outcomes from '**Unit 8.4 Exploring Energy & Electricity**' in the mainstream syllabus.*

Year 8

Unit Code: SCI CCP LOF 8.4

Unit 8.4 Forensic Science

In this unit, students use science to investigate simple forensic cases through practical activities and experiments. They examine evidence such as fingerprints, teeth, chemicals, and forces, while learning to use scientific equipment safely. Students identify patterns, compare results, and explain their findings. Learners understand how science is used to solve problems and investigate situations in everyday life.

LEARNING OUTCOMES

Forensic Inquiry

1. I can use science in simple forensic investigations to examine evidence such as fingerprints.
2. I can look at results from investigations, identify simple patterns, and explain what I found out.

Cross-Disciplinary Outcomes

3. I can identify types of human teeth.
4. I can link the function of the different human teeth with the correct type of tooth.
5. I can use chromatography to separate a mixture of chemicals.
6. I can carry out flame tests to identify an unknown chemical by comparing results to given data.
7. I can investigate the effect of friction on different surfaces and its application in everyday life.
8. I can investigate the effect of air resistance on different shapes and its application in everyday life.

KEY WORDS

forensic science, crime scene, investigation, evidence, observation, conclusion, pattern, results, fingerprint, experiment, data, fair test, prediction, scientific equipment, safety

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human teeth, incisors, canines, premolars, molars, bite, tear, chew, chromatography, soluble, insoluble, pigment, separation, flame test, chemical, metals, flame colour, friction, surface, force, Newton, Newton meter, push, pull, measurement

*Where appropriate, educators may also supplement instruction with additional learning outcomes from '**Unit 8.5 Forensic Science**' in the mainstream syllabus.*

Year 8

Unit Code: SCI CCP LOF 8.5

Unit 8.5 Light and Sound

This unit introduces how light and sound behave and how we perceive them. Students explore luminous and non-luminous objects, how light travels in straight lines, reflection, shadows, and transparency. They investigate how sound is produced by vibrations and travels through solids, liquids, and gases. The unit also covers the structure and function of the eye and ear and their protection. It also compares the speeds of light and sound.

LEARNING OUTCOMES

Light & Vision

1. I can distinguish between luminous and non-luminous objects.
2. I can show that light travels in straight lines.
3. I can describe how different surfaces reflect light.
4. I can use opaque objects to form shadows.
5. I can identify and label the main parts of the eye.
6. I can describe how to protect the eyes from damage.

Sound & Hearing

7. I can describe how sound is produced by vibrations.
8. I can describe how sound travels in solids, liquids and gases.
9. I can identify and label the main parts of the ear.
10. I can describe how to protect the ears from damage.
11. I can compare the speeds of light and sound using everyday examples.

KEY WORDS

light, luminous, non-luminous, source of light, reflection, mirror, opaque, shadow, eye, pupil, iris, lens, retina, nerve, brain, sunglasses, safety goggles, welding mask

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sound, sound wave, particles, vibration, solid, liquid, gas, particles, ear, ear drum, three small bones, cochlea, nerve, brain, volume, loudness, noise pollution, ear plugs, safety earmuffs, noise-cancelling headphones

*Where appropriate, educators may also supplement instruction with additional learning outcomes from '**Unit 8.6 Light and Sound**' in the mainstream syllabus.*