MQF/EQF Level 3

Diploma in Light Vehicle Servicing

MV3-A2-21

Course Description

This course is for students who would like to start developing a strong grounding in the field of motor vehicle engineering and maintenance. Through the various aspects of training that this course provides, students should be able to gain a good understanding of the basic systems found in light vehicles and safe handling of tools. Students will also develop essential skills of the trade, including the carrying out of basic routine checks, the replacement of parts as required in the periodic servicing of vehicles, and maintaining appropriate service records. In this programme, students will also follow studies in key skills subjects, such as English, Maltese, Mathematics, Information Technology and Individual and Social Responsibility.

Programme Learning Outcomes

At the end of the programme the students are able to

1. *Carry out checks and maintenance according to safety and road worthiness regulations;*
2. *Identify fault location and service needs;*
3. *Maintain appropriate service and repair records;*
4. *Carry out repairs by replacement faulty basic parts and components.*

Entry Requirements

MCAST Foundation Certificate
or
2 SEC/O-Level passes/SSC&P (Level 3) passes
Compulsory: Mathematics or Physics;

As from 2023 the Mathematics SEC/O-level/SSC&P (Level3) pass will become compulsory; Medical test, Physical Aptitude Test and Interview.

Key Information

Awarding Body – MCAST

Accreditation Status – Accredited via MCAST's Self Accreditation Process (MCAST holds Self-Accrediting Status as per 1st schedule of Legal Notice 296/2012)

Type of Programe: Qualification

MQF Level	Examples of Qualifications	'Qualification' Minimum Credits Required	'Award' Credits Required
Level 8	Doctoral Degree Third Cycle Bologna Process	NA	NA
Level 7	Masters Second Cycle Bologna Process	90-120	Less than 30
	Post-Graduate Diploma	60	
	Post-Graduate Certificate	30	
Level 6	Bachelor[23]/Bachelor (Hons.)[24] First Cycle Bologna Process	180-240	Less than 180
Level 5	Short Cycle Qualification	120	Less than 60
	Undergraduate Higher Diploma	90	
	Undergraduate Diploma	60	
	Undergraduate Certificate	30	
	VET Level 5 Programme[25]	60-120	
Level 4	Pre-Tertiary Certificate	30	Less than 120
	VET Level 4 Programme[26]	120	
	MATSEC Certificate	NA	
Level 3	VET Level 3 Programme[27]	60	Less than 60
	General and Subject Certificate	NA	
Level 2	VET Level 2 Programme[28]	60	Less than 60
	General and Subject Certificate	NA	
Level 1	VET Level 1 Programme[29]	40	Less than 40
	General and Subject Certificate	NA	
Introductory Level A	Preparatory Programme	30	Less than 30
Introductory Level B	Pre-entry Basic Skills Course	30	Less than 30

Table 1: Minimum number of credits for 'Qualifications' and parameters for 'Awards'

Fig.1: p56, Ministry for Education and Employment & National Commission for Further and Higher Education Malta (2016). *Referencing Report, 4th Edition*. NCFHE.

Total number of Hours: 1500 hours

Mode of attendance: Fully Face-to-Face Learning

Duration: 1 Year

Target audience for MCAST full-time courses is 16 to 65+

Target group: Learners who have completed compulsory education.

The official language of instruction at MCAST is English. All notes and textbooks are in English (except for language courses, which will be in the respective language being instructed). International candidates will be requested to meet English language certification requirements for access to the course.

This course will be offered at

MCAST has four campuses as follows:

MCAST Main Campus
Triq Kordin, Paola, Malta

All courses except for the Institute for the Creative Arts, Centre of Agriculture, Aquatics and Animal Sciences are offered here.

Institute for the Creative Arts
Mosta Campus
Misraħ Għonoq Tarġa Gap,
Mosta

Institute of Applied Sciences,
Centre of Agriculture, Aquatics and Animal Sciences,
Luqa Road, Qormi

Gozo Campus
J.F. De Chambray Street
MCAST, Għajnsielem
Gozo

Teaching, Learning and Assessment

The programmes offered are vocational in nature and entail both theoretical lectures delivered in classes as well as practical elements that are delivered in laboratories, workshops, salons, simulators as the module requirements dictate.

Each module or unit entails a number of in person and/or online contact learning hours that are delivered by the lecturer or tutor directly (See also section 'Total Learning Hours).

Access to all resources is provided to all registered students. These include study resources in paper or electronic format through the Library and Resource Centre as well as tools, software, equipment and machinery that are provided by the respective institutes depending on the requirements of the course or module.

Students may however be required to provide consumable material for use during practical sessions and projects unless these are explicitly provided by the College.

All Units of study are assessed throughout the academic year through continuous assessment using a variety of assessment tools. Coursework tasks are exclusively based on the Learning Outcomes and Grading Criteria as prescribed in the course specification. The Learning Outcomes and Grading Criteria are communicated to the Student via the coursework documentation.

The method of assessment shall reflect the Level, credit points (ECTS) and the schedule of time-tabled/non-timetabled hours of learning of each study unit. A variety of assessment instruments, not solely Time Constrained Assignments/Exams, are used to gather and interpret evidence of Student competence toward pre-established grading criteria that are aligned to the learning outcomes of each unit of the programme of study.

Grading criteria are assessed through a number of tasks, each task being assigned a number of marks. The number of grading criteria is included in the respective Programme Specification.

The distribution of marks and assessment mode depends on the nature and objectives of the unit in question.

Coursework shall normally be completed during the semester in which the Unit is delivered.

Time-constrained assignments may be held between 8 am and 8 pm during the delivery period of a Unit, or at the end of the semester in which the Unit is completed. The dates are notified and published on the Institute notice boards or through other means of communication.

Certain circumstances (such as but not limited to the Covid 19 pandemic) may lead Institutes and Centres to hold teaching and assessment remotely (online) as per MCAST QA Policy and Standard for Online Teaching, Learning and Assessment (Doc 020) available via link https://www.mcast.edu.mt/college-documents/

The Programme Regulations referenced below apply. (DOC 003 available at: link https://www.mcast.edu.mt/college-documents/)

Total Learning Hours

The total learning hours required for each unit or module are determined as follows:

Credits (ECTS)	Indicative contact hours	Total Student workload (hrs)	Self-Learning and Assessment Hours
1	5 – 10 hrs	25 hrs	20-15 hrs*
2	10 – 20 hrs	50 hrs	40-30 hrs*
3	15 – 30 hrs	75 hrs	60-45 hrs*
4	20 – 40 hrs	100 hrs	80-60 hrs*
6	30 – 60 hrs	150 Hrs	120-90 hrs*
9	45 – 90 hrs	225 hrs	180-135 hrs*
12	60 – 120 hrs	300 hrs	240-180 hrs*

* The 'Self-Learning and Assessment Hours' amount to the difference between the contact hours and total student workload.

Grading system

All MCAST programmes adopt a learner centred approach through the focus on Learning Outcomes. The assessment of MCAST programmes is criterion-referenced and thus assessors are required to assess learners' evidence against a pre-determined set of Learning Outcomes and assessment criteria.

For a student to be deemed to have successfully passed a unit, a minimum of 50% (grade D) must be achieved. In case of part time programmes, the student must achieve a minimum of 45% to successfully pass the unit.

All units are individually graded as follows:

A* (90-100)

A (80-89)

B (70-79)

C (60-69)

D (50-59)

Unsatisfactory work is graded as 'U'.

Work-based learning units are graded on a Pass/Fail basis only.

Detailed information regarding the grading system may be found in the following document: DOC 003 available at: link https://www.mcast.edu.mt/college-documents/

Intake Dates

•MCAST opens calls for application once a year between July and August of each year for prospective applicants residing in MALTA.

•Applications to full-time courses from international students not residing in MALTA are accepted between April and Mid-August.

•For exact dates re calls for applications please follow this link https://www.mcast.edu.mt/online-applications-2/

Course Fees

MCAST course are free for Maltese and EU candidates. International candidates coming from outside the EU need to pay fees for the respective course. Course fees are set on a per-level and course duration basis. For access to course fee structure and payment methods please visit https://www.mcast.edu.mt/fee-payments-for-non-eu-candidates/.

Method of Application

Applications to full-time courses are received online via the College Management Information System. Candidates can log in using Maltese Electronic ID (eID) or European eIDAS (electronic identification and trust services) to access the system directly and create an account as the identity is verified electronically via these secure services.

Non-EU candidates need to request account creation though an online form by providing proof of identification and basic data. Once the identity is verified and the account is created the candidate may proceed with the online application according to the same instructions applicable to all other candidates.

Non-EU candidates require a study visa in order to travel to Malta and joint the course applied for. For further information re study-visa please access https://www.identitymalta.com/unit/central-visa-unit/.

For access to instructions on how to apply online please visit https://www.mcast.edu.mt/online-applications-2/

Contact details for requesting further information about future learning opportunities:

MCAST Career Guidance

Tel: 2398 7135/6

Email: career.guidance@mcast.edu.mt

Current Approved Programme Structure

Unit Code	Unit Title	ECTS	Semester
ETAUT-303-1802	Body and Interiors of Light Vehicles	3	YEAR
ETH&S-303-1803	Health and Safety and Working Relationships in the Automotive Environment	3	YEAR
ETAUT-306-1803	Basic Brake, Steering and Suspension units of Light Vehicles	6	YEAR
ETAUT-306-1804	Basic Electrical and Electronics Units of Light vehicles	6	YEAR
ETAUT-306-1805	Basic Transmission and Drive Line Units of Light Vehicles	6	YEAR
ETAUT-306-1806	Cooling, Lubrication and Fuel Systems	6	YEAR
ETAUT-306-1807	Power Systems - Diesel, Petrol, LPG, Electrical and Hybrid Power	6	YEAR
CDKSK-304-1921	Mathematics	4	YEAR
CDKSK-304-1922	English	4	YEAR
CDKSK-304-1923	Malti	4	YEAR
CDKSK-304-2108	Information Technology	4	YEAR
CDKSK-304-2103	Community Social Responsibility	4	YEAR
CDKSK-304-1925	Science	4	YEAR
Total ECTS		60	

ETAUT-303-1802: Body and Interiors of Light Vehicles

Unit level (MQF): 3

Credits: 3

Delivery Mode: Face to Face

Total Learning Hours: 75

Unit Description

The aim of this unit is to introduce the learners to the vehicle's body and the systems that can be found in the interior of a vehicle.

Today's vehicles have accessories and system attached under body parts or behind vehicle trims. During this unit the learners will become familiar with these parts and the typical removal procedures to access various systems that different manufacturers place under body parts.

Together with the parts and interiors the unit will cover typical fastening methods used in body and interiors. Also, the importance of removal procedures and further actions required after assembly like alignment and water guarding requirements.

This unit will also introduce the learners to the vehicle lights and lamps. This should only be limited to the physical components not the electrical circuitry.

Learning Outcomes

On completion of this unit the student will be able to:

1. *Identify the construction technology of different light vehicles;*
2. *Recognise the fastening systems used in light vehicle bodies and interiors;*
3. *Understand the dangers and risks associated with safety systems found in today's light vehicle technology;*
4. *Assemble and replace body parts and interiors of a light vehicle in a safe manner and according to existing regulations.*

ETH&S-303-1803: Health and Safety and Working Relationships in the Automotive Environment

Unit level (MQF): 3

Credits: 3

Delivery Mode: Face to Face

Total Learning Hours: 75

Unit Description

The aim of this unit is to provide the learner with the soft skills necessary to work in an automotive environment and introduce the learner to the common practices carried out to keep a safe working environment.

Learners will familiarise themselves with the basics in Health and Safety legislations. This will provide a good background of common symbols and regulations used worldwide. As well as the importance of vehicle protection together with existing methods of vehicle protection.

The importance of good housekeeping is also introduced so that the learners will appreciate how good housekeeping can affect the working environment.

Learners will also have the opportunity to become familiar with Some communication practices that are necessary within an automotive environment. This will enable the learner to convey messages clearly and keep records in an appropriate manner for later referencing.

The learner will also be introduced to working relationship. This will include working etiquette and the hierarchy at the place of work.

Learning Outcomes

On completion of this unit the student will be able to:

1. *Apply basic health and safety and vehicle protection procedures within a light vehicle workshop;*
2. *Understand the local Health and Safety legislations and standards related to light vehicles engineering;*

3. *Apply good Housekeeping practices within a light vehicle workshop;*
4. *Identify the methods of communication and working relationships in an automotive environment.*

ETAUT-306-1803: Basic Brake, Steering and Suspension Units of Light Vehicles

Unit level (MQF): 3

Credits: 6

Delivery Mode: Face to Face

Total Learning Hours: 150

Unit Description

In this unit learners will familiarise themselves with the Brake, Steering and Suspension systems of light vehicle. Learners will gain the ability to identify and locate the various parts of the brake, steering and suspension units and will have the opportunity to carry out basic inspections and servicing tasks on light vehicles.

In addition to this, learners will have the opportunity to use tools and equipment safely to conduct basic tasks related to such systems. They will also use data sheets and servicing manuals during the inspection and servicing tasks.

Learning Outcomes

On completion of this unit the student will be able to:

1. *Identify and locate parts and components of Brake, Steering and Suspension systems in light vehicles;*
2. *Understand the basic operation and function of the brake, steering and suspension components in light vehicles;*
3. *Use tools, equipment, data sheets and manuals during servicing and when inspecting the brake, steering and suspension systems in light vehicles in a safe manner;*
4. *Replace basic brake, steering and suspension components according to maker's specifications under supervision.*

ETAUT-306-1804: Basic Electrical and Electronics Units of Light Vehicles

Unit level (MQF): 3

Credits: 6

Delivery Mode: Face to Face

Total Learning Hours: 150

Unit Description

The aim of this unit is to help learners familiarise with the components forming part of the Electrical and Electronic systems of light vehicle. Learners will learn to identify the parts and location of each system and will have the opportunity to carry out basic inspections and servicing tasks.

Learners will also learn how to use tools and equipment safely to conduct basic servicing tasks. They will also learn how to use data sheets and servicing manuals to inspect and service these electrical units.

Learning Outcomes

On completion of this unit the student will be able to:

1. *Identify electrical systems and components and their location in a light vehicle;*
2. *Understand the basic operation and function of electrical components;*
3. *Use tools, equipment, data sheets and manuals to carry out basic servicing tasks under supervision;*
4. *Understand basic operation of electronic components and work out formulas to find circuit operation values.*

ETAUT-306-1805: Basic Transmission and Drive Line Units of Light Vehicles

Unit level (MQF): 3

Credits: 6

Delivery Mode: Face to Face

Total Learning Hours: 150

Unit Description

In this unit learners will familiarise themselves with the transmission and drive line systems of light vehicle. Learners will gain the ability to identify and locate the various parts of the transmission and drive line units and will have the opportunity to carry out basic inspections and servicing tasks on light vehicles.

In addition to this, learners will have the opportunity to use tools and equipment safely to conduct basic tasks related to such systems. They will also use data sheets and servicing manuals during the inspection and servicing task.

Learning Outcomes

On completion of this unit the student will be able to:

1. *Identify and locate parts and components of a transmission and drive line system in light vehicles;*
2. *Understand the basic operation and function of transmission and drive line components in light vehicles;*
3. *Use tools, equipment, data sheets and manuals during servicing and inspecting systems in light vehicles in a safe manner;*
4. *Replace basic transmission and drive line components according to maker's specifications under supervision.*

ETAUT-306-1806: Cooling, Lubrication and Fuel Systems

Unit level (MQF): 3

Credits: 6

Delivery Mode: Face to Face

Total Learning Hours: 150

Unit Description

In this unit, learners will learn about the components/features and basic operational principles of the light vehicle's cooling, lubrication and fuel systems.

Learners will develop the necessary knowledge and skills to perform basic servicing tasks on cooling systems, lubrication systems, fuel systems including petrol and diesel. Learners will also be performing repairs by replacement of major systems components on light vehicles.

Learners will also have the possibility to familiarise themselves with technical workshop manuals and thus be able to follow such manuals whilst doing work on different systems. Learners will also have the opportunity to make use of workshop tools and equipment while performing a number of servicing tasks under supervision. Since learners will be working with tools and equipment they will also become familiar with how to use such tools and equipment in a safe and appropriate manner.

Learning Outcomes

On completion of this unit the student will be able to:

1. *Understand the basic principle of operation of different components of light vehicles;*
2. *Perform basic service and repair by replacement under supervision on a vehicle's cooling system;*
3. *Perform basic service and repair by replacement under supervision task on the vehicle's lubrication system;*
4. *Perform basic service and repair by replacement under supervision tasks on the vehicle's fuel system including Petrol and Diesel.*

ETAUT-306-1807: Power Systems - Diesel, Petrol, LPG, Electrical and Hybrid Power

Unit level (MQF): 3

Credits: 6

Delivery Mode: Face to Face

Total Learning Hours: 150

Unit Description

In this unit, learners will learn about the basic operational principles of a Diesel, Petrol, LPG power and electrical/ hybrid power systems used in light vehicles.

Learners will familiarise themselves with the important parts and components of such systems and thus will develop the necessary knowledge and skills to perform basic servicing and repair tasks under supervision and according to the workshop manuals. This will give learners the opportunity to follow workshop safety procedures and use a variety of tools and equipment safely.

With regards to the Diesel, Petrol and LPG learners will have the opportunity for hands on experience on the system by dismantling, identifying the fault with the technician as well as assembling the power system when the fault is fixed.

In relation to the Electrical and Hybrid power systems, learners will be given basic understanding of this vehicles' technology. As well as understand the principles of operation and basic repair of such vehicles.

Learning Outcomes

On completion of this unit the student will be able to:

1. *Understand the basic operating principles of Diesel, Petrol, LPG, electrical and hybrid power systems;*
2. *Locate the different components of a light vehicle's power systems;*
3. *Perform basic maintenance tasks under supervision on the main components and sub systems of Electric and Hybrid vehicles;*

4. *Use the appropriate tools and working procedures to carry out service and repair tasks by replacement in a diesel, petrol and LPG power systems under supervision.*

CDKSK-206-2006 Mathematics

Unit level (MQF): 2

Credits: 6

Delivery Mode: Face to Face

Total Learning Hours: 150

Unit Description

This unit aims to develop basic mathematical knowledge and skills needed in real-life situations. In a supportive environment, the student will be challenged to understand mathematical problems, reflect on different plans that could be used to solve the given problem, attempt an answer and check the validity of an answer to the problem. By the end of this unit, students will be able to describe orally or in writing the reasons behind the mathematical arguments used and to break down complex problems into smaller and simpler problems. These problems will involve:

(a) numerical calculations,

(b) classification of shapes,

(c) understanding and simple application of symbolic notation,

(d) communication in graphical form,

(e) manipulating simple algebra, and

(f) extraction and interpretation of information from statistical tables and charts.

Learning outcomes

On completion of this unit the learner will be able to:

1. *Compute numerical calculations by showing all the necessary working.*
2. *Carry out harder numerical calculations.*
3. *Collect data and represent it graphically.*
4. *Use simple algebraic formulae.*
5. *Draw and work with lines, shapes and objects.*
6. *Read and use measurement scales.*

CDKSK-206-2004 English

Unit level (MQF): 2

Credits: 6

Delivery Mode: Face to Face

Total Learning Hours: 150

Unit Description

In all Foundation Certificate programmes across MCAST, the ability to communicate in our second language becomes both a necessity for life as well as for education and work.

The speaker of English should be aware of the importance and daily use of English as a tool for interacting in the immediate community, whether domestic, public or professional. English is also the main language of instruction in higher education nowadays.

Communicating in English takes into account all the four language skills of listening, speaking, reading and writing according to the prescribed level. Emphasis is placed on knowing how to use a language, rather than just knowing about a language.

This unit is targeted at learners proceeding from Level 1 (therefore taking into account successful completion of Level 1 English) as well as those whose entry level is directly at Level 2.

It is assumed that no entry qualifications such as SEC English (Ordinary Level) are necessary for learners to undertake this unit.

This unit is internally assessed and verified. Assessment is carried out through assignments based on the Learning Outcomes below.

Learning Outcomes

On completion of this unit a learner will be able to:

1. *Listen to connected speech on a range of vocational topics.*
2. *Speak clearly during interactive communication scenarios and deliver a clear message.*

3. *Read to identify and comprehend information presented textually in formal, vocational and familiar contexts.*
4. *Organise and write text in paragraphs of simple, complete and syntactical sentences.*

CDKSK-206-2005 Malti

Unit level (MQF): 2

Credits: 6

Delivery Mode: Face to Face

Total Learning Hours: 150

Ir-Razzjonal

Fil-korsijiet preliminari tat-Tieni Livell tal-Kulleġġ Malti tal-Arti, ix-Xjenza u t-Teknoloġija, l-ilsien Malti jintgħallem għax:

1. Ninqdew bih biex nikkomunikaw u nirrelataw man-nies ta' madwarna;

2. Nużawh biex b'mod kreattiv nesprimu l-emozzjonijiet, ħsibijietna u xewqatna;

3. Jintuża fl-oqsma vokazzjonali u għandu reġistru tekniku prattiku u funzjonali;

4. Jiġbor fih l-identità lingwistika u kulturali ta' ġensna.

L-Għanijiet

Biex l-istudenti jiksbu din l-unità jridu juru li kapaċi:

1. Jwieġbu mistoqsijiet, jitkellmu b'Malti tajjeb kif ukoll jieħdu sehem f'taħditiet u f'diskussjonijiet.

2. Jifhmu dak li jisimgħu.

3. Jaqraw u jifhmu testi varji.

4. Jiktbu b' Malti tajjeb skont ir-regoli tal-ortografija u s-sintassi.

CDKSK-206-2107 Information Technology

Unit level (MQF): 2

Credits: 6

Delivery Mode: Face to Face

Total Learning Hours: 150

Unit Description

This unit is made up of a number of competences including the competence to use personal computers; the competence to manage efficiently a personal computer; the competence to operate effectively within the operating system and the competence to make productive, creative, and efficient use of the main office application software packages: word processing software, spreadsheet software, presentation software, web-browsing software & e-mail management software.

This unit is designed to ensure that learners are not only taught the knowledge and skills associated with productive, creative, and effective use of personal computers but should be given sufficient opportunities to find, exchange and share information. This should also ensure that learners develop the proper and correct attitudes associated with the use of information and ICT.

This unit should guide the learners to have a broad understanding of how ICT can help their learning, their work, and their social life. Learners will start to develop the ability to decide when and how to use ICT and be aware of the limitations associated with this use.

Learning Outcomes

On completion of this unit a learner will be able to:

1. *Identify the main concepts of ICT and computer management.*
2. *Use a word processing application to accomplish basic everyday tasks.*
3. *Use a spreadsheet application to input, format data and prepare charts.*
4. *Create basic presentations using presentation software.*
5. *Apply essential web browsing and electronic communication concepts and skills.*

CDKSK-206-2102 Community Social Responsibility

Unit level (MQF): 2

Credits: 6

Delivery Mode: Face to Face

Total Learning Hours: 150

Unit Description

This key skill presents the opportunity for MQF level 2 learners to explore their individual self and their social environment whilst also reflecting about future goals. Learners will identify and understand different aspects of their personal self, whilst reflecting upon what composes their self-confidence. Learners will also become familiar and grasp different life skills that would empower them to explore their surroundings and become responsible and inclusive members in society.

The learners will also be presented with tools and techniques, which will assist them in becoming more employable whilst honing their organisational skills. Through the completion of a compulsory community work experience, learners will recognise the benefits of self-management skills towards the acquisition of balance within one's lifestyle. The completion of the compulsory community work project will also present the ideal opportunity for the learners to analyse their experience and evaluate their own performance.

Learning Outcomes

On completion of this unit a learner will be able to:

1. *Identify personal attributes and experiences that influence the development of the self.*
2. *Examine ways and means towards becoming more employable.*
3. *Recognise responsible interactions between the individual and the surrounding communities.*
4. *Explain duties and requirements for engaging in a community work experience.*

CDKSK-206-2008 Science

Unit level (MQF): 2

Credits: 6

Delivery Mode: Face to Face

Total Learning Hours: 150

Unit Description

In this Level 2 key skill, learners will enhance their knowledge on the aspect of natural sciences, mainly via focusing on three different areas which consist of the living world, the physical world and the world of technology.

As part of the living world, learners will learn about the basic unit of which all living things are composed of – the cell and its components. Furthermore, they will become familiar with the differences and similarities between plants, animals and fungi based on their physical characteristics and the way they obtain food. Learners will also enhance their knowledge on the organisation of the human body – different organs that carry out different functions, are located in different areas of the body and are grouped forming body systems. Also, learners will increase their awareness on factors that affect the overall well-being of an individual, including diet and lifestyle.

In the case of the physical world, learners will become familiar with different materials found in the immediate environment. They will observe and describe their physical properties and then be able to compare and classify objects/materials/tools based on their physical properties. It is strongly suggested that lectures refer to objects/materials/tools that are related to the learners' area of study so as to increase the relevance of the topic. Learners will discuss advantages and disadvantages of local energy sources, combustion of fuels, associated hazards and action to prevent accidents, methods via which heat is transferred and the importance of insulation.

The main focus of the area 'the world of technology' will be on health and safety whereby the learner will describe and explain ways of reducing exposure to threats to health and safety at home and in the workplace, discuss how one can increase the body's resistance to disease, and recognise situations of risk to safety and increase awareness about how to avoid accidents.

The remainder of the unit will consist of an investigation related to the environment; with one of these investigations completed in collaboration with Birdlife Malta.

Learning Outcomes

On completion of this unit the student will be able to:

1. *Communicate scientific information by using the scientific process skills of observing and grouping.*
2. *Apply science to enhance the quality of everyday life.*
3. *Promote sustainable living by exploring the link between the natural world and human behaviour.*
4. *Investigate the impact of anthropogenic activities on the environment.*