



SAMPLE ASSESSMENT OUTLINE

AUTOMOTIVE ENGINEERING AND TECHNOLOGY
GENERAL YEAR 12

Copyright

© School Curriculum and Standards Authority, 2015

This document – apart from any third party copyright material contained in it – may be freely copied, or communicated on an intranet, for non-commercial purposes in educational institutions, provided that the School Curriculum and Standards Authority is acknowledged as the copyright owner, and that the Authority's moral rights are not infringed.

Copying or communication for any other purpose can be done only within the terms of the *Copyright Act 1968* or with prior written permission of the School Curriculum and Standards Authority. Copying or communication of any third party copyright material can be done only within the terms of the *Copyright Act 1968* or with permission of the copyright owners.

Any content in this document that has been derived from the Australian Curriculum may be used under the terms of the [Creative Commons Attribution 4.0 International licence](#).

Disclaimer

Any resources such as texts, websites and so on that may be referred to in this document are provided as examples of resources that teachers can use to support their learning programs. Their inclusion does not imply that they are mandatory or that they are the only resources relevant to the course.

Sample assessment outline

Automotive Engineering and Technology – General Year 12

Unit 3 and Unit 4

Assessment type and weighting	Assessment task and weighting	When/ Duration	Assessment task
Response 15%	5%	Semester 1 Weeks 1–2	Task 1: Automotive mechanics – safety This task is to be completed prior to attempting any practical work Activities: <ul style="list-style-type: none"> • watch workshop safety video • understand general safety aspects of workshop practice • complete automotive safety certificate • choose an automotive workshop machine or skill and describe, through demonstration, the safe operational requirements
	3%	Semester 1 Weeks 3–6	Task 2: Report on different fuels and lubricants <ul style="list-style-type: none"> • scientific principles – chemical and mechanical energy, energy conversion • fuels and lubricants, their association with different engines and automotive technologies • performance of different types of fuels in various types of engines
	2%	Semester 1 Weeks 11–15	Task 5 Part A: Report on the rules and regulations and social, economic and environmental implications and consequences Worksheet/s or assignment on rules and regulations/social, economic and environmental implications and consequences
	2%	Semester 2 Weeks 1–3	Task 5 Part B: Report on the automotive industry, regulations and development of vehicle performance Worksheet/s or assignment on the automotive industry, regulations and development of vehicle performance
	3%	Semester 2 Weeks 6–8	Task 7: Investigate the principles of torque, rotational power and pressure/stress Investigations to understand torque, rotational power and pressure/stress in the power train, steering systems and braking systems
Investigation and diagnostics 20%	5%	Semester 1 Weeks 9–10	Task 4 Part A: Design brief – design a tool or device to be used during automotive workshop activities
	5%	Semester 2 Weeks 4–8	Task 6: Vehicle maintenance – current processes and latest techniques <ul style="list-style-type: none"> • use flow charts and problem-solving skills to diagnose faults in conjunction with the use of specialised tools and equipment • identify service, repair and maintenance requirements of more advanced engines, and the skills, knowledge, materials, parts and equipment needed to optimise performance • identify occupational safety and health requirements for different processes • use collaborative practices involved in workshop activities Investigations to understand and demonstrate processes for the following, rotating through a series of activities:

Assessment type and weighting	Assessment task and weighting	When/ Duration	Assessment task
			<ul style="list-style-type: none"> • methods of diagnosis for fault finding • compression test • engine timing • oils and oil filters • air and fuel filters • radiator and coolant • brake pads and brake fluid • tyres, tread, pressures and rotation • different suspension systems • electrical wiring, lights and bulbs
	5%	Semester 2 Weeks 9–11	Task 8 Part A: Vehicle trouble-shooting techniques Complete the following trouble-shooting tasks: <ul style="list-style-type: none"> • methods of diagnosis for fault finding • jumpstart • electrical lights test and changing a bulb
	5%		Task 8 Part B: Vehicle trouble-shooting techniques <ul style="list-style-type: none"> • compression test • engine timing tune up
Production and assembly 50%	15%	Semester 1 Weeks 6–8	Task 3: Complete under-vehicle activities Perform all occupational safety and health (OSH) requirements while in the workshop <ul style="list-style-type: none"> • complete an under-vehicle inspection of front and rear chassis and suspension set ups • complete the process to lubricate, where necessary, the components of the steering and drive systems • complete a procedure to remove and replace a rear shock absorber and strut
	15%	Semester 1 Weeks 11–15	Task 4 Part B: Managing production – Produce the proposed tool or device to be used during automotive workshop activities <ul style="list-style-type: none"> • use workshop equipment safely to produce the tool or device
	5%	Semester 2 Weeks 1–3	Task 4 Part C: Test and evaluate finished workshop tool or device
	15%	Semester 2 Weeks 12–15	Task 9: Design a model and apply different methods of fitting and joining automotive materials together
Externally set task 15%	15%	Semester 1 Week 13	A written task or item or set of items of 50 minutes duration developed by the School Curriculum and Standards Authority and administered by the school
Total 100%	100%		