

Herbert Morrison Technical  
Industrial Technology Department  
Automotive Technology

Course Outline			
Academic year: 2020-2021 Grade: 10 Teacher: Loren Phipps			
Months	Sections	Content	Suggested Assessment
Oct	Core Section 1 Fundamentals of industry.	Occupational Health and Safety Standards (a) Industry health and safety regulations  Safety in the workshop 1 Definition of safety 2 Consequences of working in an unsafe manner or environment  Areas of safety: 1 Personal 2 General 3 Safety Rules 4 Safety signs/symbols	<ul style="list-style-type: none"> <li>➤ Quiz</li> <li>➤ Presentation (PowerPoint, Written/Oral)</li> <li>➤ Class Activity</li> <li>➤ Assignment</li> <li>➤ Research</li> </ul>
Oct		Personal Protective Equipment (PPE): (a) Eye Protection  (1) Safety Glasses, Goggles, Face Shields  (b) Hand Protection  (2) Leather Gloves, Rubber Gloves, Vinyl Gloves. (C) Other PPE's:  <ul style="list-style-type: none"> <li>➤ Lab Coats, Overalls, Ear Muffs, Ear Plugs, Protective Shoes and Respirators</li> </ul> Accident- Definition/ Hazards  Causes of accidents: Carelessness, Ignorance, Unsuitable Clothing, untidiness, Improper use of Tools and Machinery, Improper lifting techniques. MSDS.	

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Nov	National Standards Curriculum (NSC)	<p>Introduction to tools and equipment</p> <p>Basic Hand Tools</p> <p>Classifications of hand tools</p> <p>(A) Wrenches</p> <p>(1) Opened end</p> <p>(2) Box end</p> <p>(3) combination</p> <p>(B) Sockets</p> <p>(1) Types of sockets and uses</p> <p>C Screwdrivers</p> <p>(1) Types of Screwdrivers and uses</p> <p>D Pliers</p> <p>(1) Types of Pliers and uses</p> <p>E Hammer, Chisels and Punches</p> <p>(1) Use of hammer, chisels and punches</p> <p>F Files, Saws and Holding tools</p> <p>(1) types of files and saws purpose of holding tools</p> <p>G Cleaning Tools</p> <p>(1) why are cleaning tools important?</p> <p>H Pry Bars, Probe and Pickup Tools</p> <p>(1) Purpose and uses</p>	<ul style="list-style-type: none"> <li>➤ Quiz</li> <li>➤ Class Activity</li> <li>➤ Research</li> <li>➤ Assignments</li> </ul>
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Dec	NSC	<p>Power Tools and Equipment</p> <p>Introduction to power tools</p> <p>Portable power tools- examples and uses</p> <p>Stationary power equipment- examples and uses.</p> <p>Pneumatic tools- examples and uses</p> <p>Electric and batter operated tools- examples and uses</p> <p>Safety in using tools and equipment</p> <p>Maintenance of tools and equipment</p>	<ul style="list-style-type: none"> <li>➤ Quiz</li> <li>➤ Presentation Written and Oral</li> <li>➤ Simulation</li> <li>➤ Class Activity</li> <li>➤ Assignment</li> <li>➤ Research</li> </ul>

Jan-Feb	NSC	<p>Introduction to Cooling System</p> <p>Principles of Cooling System and Operation</p> <p>Tools and equipment used to service cooling system</p> <p>State how system associated with the cooling system should be identified diagnosed for repairs or adjustment</p> <p>Accurately state how to service cooling system without damage to any component</p> <p>Preparation of service reports, cleaning tools equipment work area</p> <p>Label and explain diagram of cooling system and state the importance of the cooling system.</p>	<ul style="list-style-type: none"> <li>➤ Quiz</li> <li>➤ Presentation, Written/Oral</li> <li>➤ Class Activity</li> <li>➤ Simulation</li> <li>➤ Research</li> </ul>
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Mar-Apr	NSC	<p>Preparing for General Servicing</p> <p>Identify the major parts of a typical automotive engine.</p> <p>Describe the four-stroke cycle.</p> <ol style="list-style-type: none"> <li>(1) Intake stroke</li> <li>(2) Compression stroke</li> <li>(3) Power stroke</li> <li>(4) Exhaust stroke</li> </ol> <p>Define common engine terms.</p> <ol style="list-style-type: none"> <li>(1) Engine block</li> <li>(2) Top end</li> <li>(3) Bottom end</li> <li>(4) Crankshaft</li> <li>(5) Piston</li> <li>(6) Water jackets</li> <li>(7) Combustion chamber</li> <li>(8) TDC</li> <li>(9) BDC</li> </ol> <p>Explain the basic function of the major parts of an automotive engine.</p> <ol style="list-style-type: none"> <li>(1) Combustion chamber</li> <li>(2) Radiator</li> <li>(3) Crankshaft</li> <li>(4) Piston</li> <li>(5) Connecting rod</li> <li>(6) Timing mechanism</li> <li>(7) Spark plugs</li> <li>(8) Oil galleries</li> </ol> <p>Cite and demonstrate safe working practices related to engines.</p> <p>Correctly answer ASE certification test questions that require knowledge of the basic operation of piston engines.</p>	<ul style="list-style-type: none"> <li>➤ Quiz</li> <li>➤ Presentation Written/Oral</li> <li>➤ Class Activity</li> <li>➤ Assignment</li> </ul>
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May	NSC	REVISION	<ul style="list-style-type: none"> <li>➤ Quiz</li> <li>➤ Quiz</li> </ul>
Jun		Exam	Exam

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