

BRAINERD HIGH SCHOOL

Curriculum Map

Name: Mike Markum Course: Transportation Core Date: August 2007
 Pre-Assessment: Pretest
 Mid-Term Assessment: Nine-week exam, competency check
 Final Assessment: Final exam and competency check list

<u>Month</u>	<u>Content</u>	<u>Essential Question(s)</u>	<u>Standards (SPI's)</u>	<u>Literacy Focus</u>	<u>Assessment</u>
Aug	<ul style="list-style-type: none"> • Explore career opportunities • OSHA and EPA requirements • Safety requirements • SkillsUSA • Explore employability requirements • Basic vehicle components, maintenance and repair 	<p>How could you present information to a customer in a professional manner?</p> <p>What was the most significant development in the transportation industry over the past 10 years? Justify your answer.</p> <p>Why would a business follow EPA regulations?</p> <p>In the case of an emergency, what are the proper procedures to follow?</p>	<p>1.0 Students will demonstrate leadership, citizenship, and teamwork skills required for success in the school, community, and workplace.</p> <p>2.0 Students will explore the transportation service industry and its career opportunities.</p> <p>3.0 Students will demonstrate communication skills required in the transportation service industry.</p> <p>5.0 Students will demonstrate transportation service technology safety practices, including OSHA and EPA requirements for transportation service and repair facilities.</p> <p>7.0 Students will demonstrate interpersonal and employability skills required in the transportation service industry.</p> <p>8.0 Students will examine basic engine functions, operation, components and their maintenance and repair.</p>	<p>Vocabulary</p> <p>Presenting information in a professional manner (both written and verbal)</p>	<input checked="" type="checkbox"/> Project/Presentation <input checked="" type="checkbox"/> Teacher Observation <input type="checkbox"/> Show and Tell <input type="checkbox"/> Self-Assessment <input checked="" type="checkbox"/> Test/Quiz <input type="checkbox"/> Other _____
Sept	<ul style="list-style-type: none"> • Trade-related math • Problem solving 	Name four of the basic automotive systems and	4.0 Students will apply mathematics and science	Students will use a fire extinguisher chart to	<input type="checkbox"/> Project/Presentation <input checked="" type="checkbox"/> Teacher Observation

	<ul style="list-style-type: none"> • Hand and power tool usage • How attitudes can impact success • Basic maintenance and repair of vehicles • Fire prevention and safety in the shop 	<p>describe their performance.</p> <p>Why is the work of NATEF important?</p> <p>Why would certain materials in the automotive workplace need to be stored in a fire-resistant cabinet?</p>	<p>knowledge and skills to transportation service technology.</p> <p>5.0 Students will demonstrate transportation service technology safety practices, including Occupational Safety and Health Administration (OSHA) and Environmental Protection Agency (EPA) requirements for transportation service and repair facilities.</p> <p>6.0 Students will identify and properly use, maintain, and store basic transportation service hand and power tools and equipment.</p> <p>7.0 Students will demonstrate interpersonal and employability skills required in the transportation service industry.</p> <p>8.0 Students will examine basic engine functions, operation, components and their maintenance and repair.</p>	<p>determine what type of extinguisher to use with different types of fires.</p> <p>Students will use MSDS information to identify safe use of chemicals and possible safety problems.</p>	<input type="checkbox"/> Show and Tell <input checked="" type="checkbox"/> Self-Assessment <input checked="" type="checkbox"/> Test/Quiz <input checked="" type="checkbox"/> Other <u>Lab work</u>
<p>Oct</p>	<ul style="list-style-type: none"> ▪ Problem solving, client relations ▪ SkillsUSA ▪ Work related communications ▪ Teamwork and conflict resolution ▪ Basic principles of chemistry and physics in relationship to transportation ▪ Care and proper use of tools ▪ Time management ▪ Preventive maintenance of vehicles 	<p>Why would an employer expect a technician to have their own basic set of tools?</p> <p>Describe two types of motors that drive power tools.</p> <p>What problems can occur from misusing a tool?</p>	<p>1.0 Students will demonstrate leadership, citizenship, and teamwork skills required for success in the school, community, and workplace.</p> <p>4.0 Students will demonstrate communication skills required in the transportation service industry.</p> <p>5.0 Students will apply mathematics and science knowledge and skills to transportation service technology.</p> <p>6.0 Students will</p>	<p>Students will explore the relationship between metric and customary measurements.</p> <p>Students will chart and analyze their own education, personal, and career skills and abilities as compared with those required in leadership roles.</p>	<input checked="" type="checkbox"/> Project/Presentation <input checked="" type="checkbox"/> Teacher Observation <input type="checkbox"/> Show and Tell <input type="checkbox"/> Self-Assessment <input type="checkbox"/> Test/Quiz <input checked="" type="checkbox"/> Other <u>Lab work</u>

			<p>identify and properly use, maintain, and store basic transportation service hand and power tools and equipment.</p> <p>7.0 Students will demonstrate interpersonal and employability skills required in the transportation service industry.</p> <p>8.0 Students will examine basic engine functions, operation, components and their maintenance and repair.</p>		
Nov	<ul style="list-style-type: none"> ▪ Identify different types of gasoline and diesel engines. ▪ Identify and explain 2 and 4 stroke engines ▪ Inspect, measure, and identify parts of the engine block assembly ▪ Inspect, measure, and identify parts of the engine cylinder head assembly. ▪ Measure timing gear and chain wear ▪ Inspect and replace timing belt; check tension ▪ ID components and function of the cooling system ▪ Perform cooling system, cap, and recovery system tests, determine necessary action 	<p>Why is it important to be able to identify fluid leaks by their color and/or smell?</p> <p>What problems can a cooling system pressure test diagnose?</p> <p>How can a service history provide valuable diagnostic information?</p> <p>How many piston strokes are needed for one power cycle? Describe each stroke.</p>	<p>8.0 Students will examine basic engine functions, operation, components and their maintenance and repair.</p> <p>10.0 Students will examine basic functions of the engine cooling systems and their maintenance and repair.</p>	<p>Students will practice writing up an estimate for a customer.</p> <p>Students will continue with vocabulary building.</p>	<input type="checkbox"/> Project/Presentation <input checked="" type="checkbox"/> Teacher Observation <input type="checkbox"/> Show and Tell <input type="checkbox"/> Self-Assessment <input checked="" type="checkbox"/> Test/Quiz <input checked="" type="checkbox"/> Other <u>Lab work</u>
Dec	<ul style="list-style-type: none"> ▪ ID components and functions of the lubricating system ▪ Explain the API certification chart and viscosity ratings of various oils and lubricants ▪ Perform oil and filter change ▪ Inspect, replace, and adjust drive belts, tensioners, and pulleys ▪ Test coolant, drain, flush, and refill cooling system 	<p>What circulated the oil through the engine?</p> <p>Describe how an engine is kept cool during combustion.</p>	<p>9.0 Students will examine basic functions of the engine lubricating systems and their maintenance and repair.</p> <p>10.0 Students will examine basic functions of the engine cooling systems and their maintenance and repair.</p>	<p>Students will read and explain the API chart</p> <p>Continue with vocabulary development</p>	<input type="checkbox"/> Project/Presentation <input checked="" type="checkbox"/> Teacher Observation <input type="checkbox"/> Show and Tell <input type="checkbox"/> Self-Assessment <input checked="" type="checkbox"/> Test/Quiz <input checked="" type="checkbox"/> Other <u>Lab work</u>

	with recommended coolant, bleed air as required.				
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