Month	Subject/Chapter	State Standard/National Standard	Objectives
August	Unit 1 Shop Safety	Chemistry 3.1, Math Process 4.2, Env Sci Process Standard 6.4, Biology 1.3, Phys Sci Process Standard 2.1	a. The student will learn about personal protective equipment used to protect eye sight, hearing and the body. b. 2. The student will learn to avoid common shop hazards, including mechanical, chemical, electrical and fire hazards.
September	Unit 2 Tool ID	Biology 1.3, Phys Sci Process Standard 2.1	a. The student will be able to describe the distinguishing characteristics of a variety of tools, including screwdrivers, hammers, pliers, punches and chisels. b. The student will be able to identify and follow relevant safety tips. c. To learn the proper safety precautions associated with each tool. d. To learn the correct operation of common large wood power tools. e. To identify each tool discussed and understand its use.
October/November	Unit 5 Arc Welding	Environmental Science 3.5, 4.1, 4.3	a. To define shielded metal arc welding. b. To identify different types of preparation and safety involved in shielded metal arc welding. c. To explain different equipment involved. d. To identify electrode selection and classification. e. To examine base metals preparation. f. To describe different types of joints and welds. g. To learn examples of a good weld. h. To learn how to strike an arc. i. To explain how to create a pad of beads.

December	Unit 7 MIG Welding	Environmental Science 3.5, 4.1, 4.3	a. To understand and identify the correct procedures to set-up welding equipment. b. To understand the safety steps needed to conduct gas metal arc welding on carbon steel. c. To conduct various forms of gas metal arc welding machine set-up correctly. d. Construct Various projects utilizing MIG welding process.
January	Unit 8 Oxy Fuel Cutting	Environmental Science 3.5, 4.1	a. Identify equipment used for b. oxyacetylene cutting. c. Explain the purpose of oxygen and fuel gases used in oxy-gas cutting. d. Discuss the oxy-gas cutting process. e. Determine how to properly adjust an oxyacetylene flame. f. Demonstrate the procedure for cutting steel. g. Discuss errors made when cutting steel.
February/March	Unit 11 Small Gas Engine Safety/ Disassembly	Enviro Science 4.2, Chemistry 2.2; Chemistry Process Standard 4.3, 4.5;	a. To learn fundamental safety techniques. b. To learn how to properly remove the fuel tank, air filter, carburetor, muffler and blower housing. c. To be able to properly check engine compression and the ignition system. d. To be able to properly remove the cylinder head, crankcase breather, valves, flywheel and armature. e. To discuss the strokes of a 4-stroke cycle engine. f. To understand the function of the flywheel key g. To learn the proper methods of removing the sump, camshaft, piston and crankshaft. h. To learn how to properly remove the rings and wrist pin from the piston.

April/May	Unit 12 Small Gas Engine Assembly	Enviro Science 4.2, Chemistry 2.2; Chemistry Process Standard 4.3, 4.5;	a. To practice proper safety techniques. b. To be able to correctly assemble and install the piston. c. To learn how to appropriately install the crankshaft and camshaft. d. To be able to correctly install the valves. e. To learn how to properly assemble the armature and flywheel. f. To learn the proper steps in installing the cylinder head. g. To be able to properly install the crankcase breather and spark plug. h. To learn how to assemble the muffler, carburetor and blower housing. i. To learn the proper techniques needed to attach the air filter and fuel tank.