

BERTHA-HEWITT HIGH SCHOOL
Spring Semester Curriculum Map 2015-16

Steve Pauly – Instructor

Course length: 18 weeks (90 hours)

Program Code: 019901

Course code: 40

Academic Standard Area: Course Title/Strand: Agricultural Mechanics

Grade Level: 10 -12

Textbook & Copyright date: Small Gas Engines 1975

WEEK #	TIMELINE	CONTENT/UNIT/SUB-STRAND	PROCESS/ACTIVITY/STANDARD	GOALS/BENCHMARK	ASSESSMENT	RESOURCES
1	5 days	Engine Construction and principles of operation. Two and four cycle engines	Read and discuss Chapters 1 and 2. Notes on chapter 1 and 2. Test on chapter 1 and 2	Students will be able to show and explain what makes up an “internal combustion engine”. Elements needed for an engine. Four basic parts that make an engine work. 8 to 1 compression ratio, The complete cycle of an engine. difference between a 2 stroke and 4 stroke engine, gas fuel system and diesel fuel system, and intake and exhaust system	Ag. Mechanic test on Chapter 1 and 2	Text book: Small Gas Engines Alfred C. Roth
2 - 3	10days	Fuel systems and Carburetion	Read Chapters 3 and 4 Notes on chapters 3 and 4. Review questions	Students will be studying the fuel and carburetion systems of two and four cycle engines	Chapter 3and 4 test	Text book: Small Gas Engines Alfred C. Roth
4-5	10 days	Ignition system and lubrication system	Read chapters 5 and 6 Notes on chapters 5 and 6 Review questions	Students will be identifying the parts of an ignition system and lubrication system	Chapter 5and 6 test	Text book: Small Gas Engines Alfred C. Roth
6-7	10 days	Engine Cooling Systems and trouble shooting and maintenance	Read chapters 7 and 9 Notes on chapters 7 and 9 Review questions	Students will identify the parts of the cooling system. Understand the types of cooling system. Students will also be able to trouble shoot possible problems with an engine and pin point the cause.	Chapter 7 and 9 test	Text book: Small Gas Engines Alfred C. Roth
5-9	25 days	Engine work in the Shop area	Students will be trouble shooting small engines. Trouble shooting	Students will help check for spark, proper	Students will fill out a weekly shop report of	

			the ignition system, compression system and carburetion system. Students will correct the problem and get engine running at peak efficiency.	compression by use of compression tester, and visually inspect the fuel system.	activities that they accomplished including clean-up. 10 points per day	
10-18	45 days	Engine work in the shop area	Student will be performing maintenance on their engines. Creating projects that have small engines as a part of the project.	Students will check the three systems of their engines. (the spark, compression and gas) Students will correct the problems and get the engines running	Students will fill out a weekly shop report of activities that they accomplished including clean-up. 10 points/day	

Check the MN Dept of Ed website for Academic Standard information