Small Power and Equipment- 2nd Trimester **Randy Adams** **Fall 2012**

Week 1

Date	**Learning Targets: I can…**	**Activities**	**Assessment**
11/12	1. Describe class expectations for behavior and work ethic 2. Understand class activities and competencies to be gained 3. Identify opportunities to get involved in FFA	- Icebreaker - Overview of the Syllabus and Competencies (post it notes and then posters over units) - Class Materials needed - Classroom Expectations	• Return syllabus agreement and Explore Bowhunting Agreement by Friday 8/17
11/13	1. Create a classroom notebook 2. Develop a SAE Project and keep records	- Develop a table of contents for notebook - SAE Calendar Pages	• Notebook Checks four times per semester
11/14	**Unit 1: Beginnings and Safety** 1. Trace the developments of small engines throughout history	- Small Engine Timeline	- Exit Slip
11/15	1. Identify common injuries occurred from the operation of small engines	- Video and PPT	- brainteaser
11/16	1. Describe and practice general shop safety procedures	- Fire triangle test - Shop Tour and Clean Up	- Notebook notes checked

Week 2

Date	**Learning Targets: I can…**	**Activities**	**Assessment**
11/19	Identify combustible metals and identify ways to combat fires in the shop area.	Shop fuel labeling	• Quiz
11/20	Describe the effects of carbon monoxide on the human body	Open Response Writing	• Open Response
11/21	Thanksgiving Break		
11/22	Thanksgiving Break		
11/23	Thanksgiving BReak		

Week 3

Date	**Learning Targets: I can…**	**Activities**	**Assessment**
11/26	Identify right to know labels and cautiously work with hazardous materials Identify safety colors and describe ways to protect against noise induced hearing loss	Right to Know Powerpoint and Discussion	- Quiz over shop safety Right to Know Label Creating
11/27	Describe the dangers associated with moving machinery, parts, and blades Describe the effects of carbon monoxide poisoning on the human body	Mummy game (rotations per minute- Interest Approach) - drill press, standard lawn mower bales, table saw, band saw, pedestal grinder http://www.youtube.com/watch?v=pxLzIj68s5E http://www.youtube.com/watch?v=KmgIqVwytwA&feature=related	- Carbon monoxide worksheet
11/28	Safety Review Guide	Review Guide	Review Guide
11/29	Shop Safety Review Game		
11/30	Safety Exam		

Week 4

Date	**Learning Targets: I can…**	**Activities**	**Assessment**
12/3	Differentiate between internal and external engines Identify the parts of the small engine	PPT and Parts Lab	Quiz
12/4	Describe the four strokes of an internal combustion engine	Crankcase Lab	Lab sheet
12/5	Describe the differences between 4-stroke and 2-stroke engines	Graphic Organizer	Quiz
12/6	Calculate piston displacement and describe horsepower ratings of small engines (Shaley Finchem teaching)	Shaley Finchem (UK Agriculture Education student guest teaching)	NA
12/7	Utilize energy conversion principles to better understand the work output of a small engine	Energy Conversions	Equation Worksheet

Week 5

Date	**Learning Targets: I can…**	**Activities**	**Assessment**
12/10	Convert Celsius and Fahrenheit in order to describe energy transfer in a small engine Calculate pressure, area, and force in a small engine to describe the work that is accomplished	Iceman Interest Approach Pressure with Balloons Video PPT Notes and Worksheet	Worksheet Quiz on 12/11
12/11	Calculate torque and horsepower in a small engine to describe the work that is accomplished	Torque Wrench Interest Approach	Workseet Quiz on 12/12
12/12	Calculate piston displacement	Review Lab for Conversions and Calculations Piston Displacement PPT Worksheet	Identification quiz
12/13	Calculate Piston Displacement	Piston Displacement Lab	Energy Conversions Quiz
12/14	Identify commonly used and specialty tools used in small engine repair	Tools Lab	Identification quiz

Week 6

Date	**Learning Targets: I can…**	**Activities**	**Assessment**
12/17	Review for the engine operations exam	Study Guide	Notebook Grade
12/18	Review for the engine operations exam	Review Game	Exam
12/19	Engine Operations Exam	Exam	Exam Notebook Check- 100 points
12/20	Christmas Break!		
12/21	Christmas Break!		

Week 7

Date	**Learning Targets: I can…**	**Activities**	**Assessment**
12/31	Break		
1/1	Break		
1/2	Break		
1/3	Unit 3: Ignition Systems Describe how a magneto generates an electrical current and set the air gap	PPT and Lab	Lab Grade
1/4	Draw and label a small engine ignition system	Video and Notes	Drawing of System

Week 8

Date	**Learning Targets: I can…**	**Activities**	**Assessment**
1/7	List and explain the principles of operation pertaining to small engine carburetors	Torque Spark Plug Carburetion Notes	Quiz
1/8	Describe the various types of carburetors	Carburetion Notes	Ignition System Quiz
1/9	SUB PLAN Complete the ignition systems study guide	Study Guide	Study Guide Completion
1/10	Troubleshoot carburetion problems	Troubleshooting Reference Page	Carburetion Quiz
1/11	Describe how the ignition and carburetion systems work in sync to make engine operation possible	Repair Manual Writing Activity	Essay

Week 9

Date	**Learning Targets: I can…**	**Activities**	**Assessment**
1/14	Troubleshoot carburetion problems	Troubleshooting Carburetors Worksheet Study Guide	Study Guide and Exam
1/15	Review for the Exam	Review Game	Exam
1/16	Complete the ignition and carburetion exam	Exam	Exam
1/17	**Unit: Engine Disassembly and Assembly** Break down the engine and identify the various systems in operation	Engines Lab	Summative Project
1/18	Break down the engine and identify the various systems in operation	Engines Lab	Summative Project

Week 10

Date	**Learning Targets: I can…**	**Activities**	**Assessment**
1/21	No School		
1/22	Break down the engine and identify the various systems in operation	Engines Lab	Summative Project
1/23	Break down the engine and identify the various systems in operation	Engines Lab	Summative Project
1/24	Break down the engine and identify the various systems in operation	Engines Lab	Summative Project
1/25	Break down the engine and identify the various systems in operation	Engines Lab	Summative Project

Week 11

Date	Learning Targets: I can…	Activities	Assessment
1/28	Complete the parts identification and oral exam for engine dissassembly	Engine Lab	Exam
1/29	Assemble the engine so that combustion can occur and the engine can operate	Engine Lab	Exam
1/30	Assemble the engine so that combustion can occur and the engine can operate	Engine Lab	Exam
1/31	Assemble the engine so that combustion can occur and the engine can operate	Engine Lab	Exam
2/1	Troubleshoot problems with engine operation	Troubleshooting Lab	Troubleshooting Grid

Week 12

Date	**Learning Targets: I can…**	**Activities**	**Assessment**
2/4	NO SCHOOL		
2/5	Troubleshoot engine problems using a logistics chart	Engine Sabotage Lab	Troubleshooting engine problems
2/6	Complete an engine repair project and keep accurate records of maintenance completed	Small Engines Business	Engine Repair
2/7	Complete an engine repair project and keep accurate records of maintenance completed	Small Engines Business	Engine Repair
2/9	Complete an engine repair project and keep accurate records of maintenance completed	Small Engines Business	Engine Repair