

# HAZLETON AREA SCHOOL DISTRICT



## DISTRICT UNIT/LESSON PLAN

Teacher Name : Richard Tihansky

Subject : Welding Technology

Start Date(s): Q2 Week 6

Grade Level (s): 10-11-12

Building : HACC

## Unit Plan

### Unit Title: SMAW Shielded Metal Arc Welding

**Essential Questions:** What are the advantages and disadvantages of SMAW welding?

In SMAW, which type of welding machine is used and why does it require a shielding gas?

What is the purpose of slag?

In SMAW, what result can be expected with respect to heat distribution between the base metal and the electrode with DCEN as compared to DCEP?

**Standards: Standard CC.3.5.9-10B Determine the central ideas or conclusions of a text; etc....**

**Standard CC.3.6.9-10.B Write informative or explanatory texts, including the narration of technical processes, etc.**

**Standard 2.1.HS.F.5 Choose a level of accuracy appropriate to limitations on measurement when reporting quantities**

**Summative Unit Assessment: P.O.S. 501: The student will perform safety inspections of SMAW equipment and accessories.**

**502: The student will make minor external repairs to SMAW equipment and accessories.**

**503: The student will set up and operate SMAW welding equipment.**

**505: The student will make grove welds in all positions**

Summative Assessment Objective	Assessment Method (check one)
Students will-Perform safety inspections of SMAW equipment. Make minor external repairs to SMAW equipment. Set up and operate SMAW equipment. Make fillet welds in all positions.	<input checked="" type="checkbox"/> Rubric <input checked="" type="checkbox"/> Checklist <input type="checkbox"/> Unit Test <input type="checkbox"/> Group <input checked="" type="checkbox"/> Student Self-Assessment  <input type="checkbox"/> Other (explain)

## DAILY PLAN

Day	Objective (s)	DOK LEVEL	Activities / Teaching Strategies	Grouping	Materials / Resources	Assessment of Objective (s)
1	The student make a grove welds in the 3G position (POS 505)	3	Read chapter 10 in the Welding Skills Text beginning on page 121 Identify proper Electrode to be utilized while operating SMAW equipment. Identify the different parts of the Electrode and their functions.	S	Welding Skills Text Book Various Personal Protective Equipment SMAW welding Machine	<b>Formative</b> -Upon completion of the SMAW unit the students will pass a written exam. <b>Summative</b> - The student will pass a performance test on ferrous metals. <b>Student Self - Assessment</b> -The students will analyze their welds for visual defects.
2	The student make a grove welds in the 3G position (POS 505)	3	Read chapter 10 in the Welding Skills Text beginning on page 121 Identify proper Electrode to be utilized while operating SMAW equipment. Identify the different parts of the Electrode and their functions.	S	Welding Skills Text Book Various Personal Protective Equipment SMAW welding Machine	<b>Formative</b> -Upon completion of the SMAW unit the students will pass a written exam. <b>Summative</b> - The student will pass a performance test on ferrous metals. <b>Student Self - Assessment</b> -The students will analyze their welds for visual defects.
3	The student make a grove welds in the 3G position (POS 505)	3	Read chapter 10 in the Welding Skills Text beginning on page 121 Identify proper Electrode to be utilized while operating SMAW equipment. Identify the different parts of the Electrode and their functions.	S	Welding Skills Text Book Various Personal Protective Equipment SMAW welding Machine	<b>Formative</b> -Upon completion of the SMAW unit the students will pass a written exam. <b>Summative</b> - The student will pass a performance test on ferrous metals. <b>Student Self - Assessment</b> -The students will analyze their welds for visual defects.
4	The student make a grove welds in the 3G position (POS 505)	3	Read chapter 10 in the Welding Skills Text beginning on page 121 Identify proper Electrode to be utilized while operating SMAW equipment. Identify the different parts of the Electrode and their functions.	S	Welding Skills Text Book Various Personal Protective Equipment SMAW welding Machine	<b>Formative</b> -Upon completion of the SMAW unit the students will pass a written exam. <b>Summative</b> - The student will pass a performance test on ferrous metals. <b>Student Self - Assessment</b> -The students will analyze their welds for visual defects.
5	The student make a grove welds in the 3G position (POS 505)	3	Read chapter 10 in the Welding Skills Text beginning on page 121 Identify proper Electrode to be utilized while operating SMAW equipment. Identify the different parts of the Electrode and their functions.	S	Welding Skills Text Book Various Personal Protective Equipment SMAW welding Machine	<b>Formative</b> -Upon completion of the SMAW unit the students will pass a written exam. <b>Summative</b> - The student will pass a performance test on ferrous metals. <b>Student Self - Assessment</b> -The students will analyze their welds for visual defects-