

**The Pennsylvania State University
Workforce Education and Development**

Lesson Plan Template

Name of Instructor: Larry Brown
Program Title: Welding Technology/ Welder
Course Title: Welding
Unit Title: Welding Assignment #5
Lesson Title: Flux Core Arc Welding Procedures
Lesson Performance Objective: Given the information students will be able to answer the following questions about Flux Core Arc Welding.
Time (length of lesson): 20-30 mins.
Equipment and Materials needed: Students will use a computer and or a textbook for finding information to complete assignments.
Technical Standard(s): CIP 701, 702, 703.
Academic Standard(s):
Introduction By now students have experienced basic Flux Core Shielded Arc welding procedures. Students will be able to research and answer questions on the worksheet.

Body: Students will gain information in this worksheet to assist them with step by step procedures using the Flux Core Shielded Arc Welding process.

Summary: Given the information each student will gain from completing the worksheet, students will return to the shop and perform welding tasks at a higher proficiency level.

Student Assessment:

Formative Assessment(s)

Summative Assessment:

Universal Design for Learning (UDL)

Multiple Means of Engagement:

Multiple Means of Representation:

Multiple Means of Expression:

Welding Assignment # 5

Flux Core Arc Welding

1. What is the difference between FCAW and GMAW _____
_____.
2. What type of welding machine is most used for FCAW _____.
3. FCAW-S wire is different than solid wire. Explain the difference between the two wires _____
_____.
4. Welding machine polarity must be _____ for welding with flux core shielded wire.
5. Flux core shielded wire can be used in windy conditions up to 30 mph and still produce quality welds. True or False.
6. Flux core filler wire is able to produce welds with a tensile strength of _____.
7. Name two advantages using flux core filler wire over SMAW _____
_____.
8. What type of drive rolls are preferred when welding with flux core shielded wire _____.
9. Flux core filler wires have a tensile strength of _____ psi.
10. Flux core shielded wire forms a slag over the weld to protect it from _____.
11. A common shielding gas mixture for FCAW-G is 75%argon and 25%CO₂, Nitrogen, Argon, or Helium. (Circle one)
12. FCAW is a cheaper welding process than SMAW process. True or False.
13. Welders often use CO₂ as a shielding gas when welding with FCAW-G wire. What is one of the main reasons _____
_____.
14. The welding FCAW-S requires the welder to use a nozzle on the welding gun. True or False.

NAME _____

MATH QUIZ.

$$\begin{array}{r} 1. \quad + \quad 314.08 \\ \quad \quad \quad \underline{117.79} \end{array}$$

$$\begin{array}{r} 2. \quad + \quad 43.51 \\ \quad \quad \quad 67.85 \\ \quad \quad \quad \underline{7.19} \end{array}$$

6% TAX

TOTAL _____

6% TAX

TOTAL _____

$$\begin{array}{r} 3. \quad 61.89 \\ + \quad 24.17 \\ \quad \quad \underline{11.27} \end{array}$$

$$\begin{array}{r} 4. \quad 135.55 \\ + \quad 318.06 \\ \quad \quad \underline{101.11} \end{array}$$

6% TAX

TOTAL _____

6% TAX

TOTAL _____

$$\begin{array}{r} 5. \quad 33.64 \\ + \quad 18.87 \\ \quad \quad \underline{91.93} \end{array}$$

$$\begin{array}{r} 6. \quad 467.91 \\ + \quad 848.79 \\ \quad \quad \underline{\quad \quad} \end{array}$$

6% TAX

6% TAX...

TOTAL _____

TOTAL _____

