

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

Lesson Plan Template

Name of Instructor: Larry Brown
Program Title: Welding / Welder
Course Title: Welding
Unit Title: Welding Assignment #3
Lesson Title: Gas Metal Arc Welding Procedures
Lesson Performance Objective: Given the information students will be able to research and answer the following questions about Gas Metal Arc Welding procedures.
Time (length of lesson): 20-30 mins.
Equipment and Materials needed: Computer and or textbook for information.
Technical Standard(s): CIP 601, 602, 603.
Academic Standard(s):
Introduction By now students have experienced basic Gas Metal Arc Welding procedures. They will be able to research and answer the questions on the worksheet.

Body: Students will gain information in this worksheet to assist them with step by welding procedures using Gas Metal Arc Welding process.

Summary: Given the information in this worksheet students will be able to 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:

Gas Metal Arc Welding Assignment #3

1. A GMAW power source must be A. High Voltage B. Variable Voltage, C. Constant Voltage, D. Direct Current.
2. GMAW is capable of producing three modes of metal transfer. Name one of the three modes. _____.
3. What does the term Birdnesting mean when welding with the GMAW process. _____.
4. Name the three types of drive rolls used in GMAW _____.
5. What is the most common shielding gas used when welding with E 70S6 wire _____.
6. Contact tips are made of what type of metal _____.
7. Name an advantage of using CO₂ for a shielding when welding with solid wire _____.
8. Name a disadvantage of using CO₂ for a shielding gas _____.
9. For most welding when using the GMAW process the gas flow rate is approximately _____.
10. When welding with solid wire which current flow or polarity should be used for deep penetration _____.
11. What is the oxygen content in the air we breathe _____.
12. The _____ should be removed before welding.
13. Drive rolls in GMAW machines are made of A. Stainless Steel, B. Cast Iron, C. Cast Steel, D. Harden Steel
14. Welding with E70S3, or E70S6 wire what does the 70 mean _____.
15. What does CTWD mean _____.

FIND CENTER OR HALFWAY POINT OF THE NUMBERS BELOW

1. 17

2. $36\frac{1}{2}$

3. 15

4. $8\frac{3}{4}$

5. 21

6. $3\frac{1}{2}$

7. $19\frac{1}{2}$

8. $13\frac{1}{8}$

9. $27\frac{3}{8}$

10. $91\frac{3}{4}$

