

Department of Education
SPTVE
SHIELDED METAL ARC
WELDING (SMAW)10
Use Appropriate Personal Protective
Equipment (PPE)
Quarter 2: Week 2 Module



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EXPECTATIONS

At the end of the lesson, the learner is expected to:

1. identify Personal Protective Equipment (PPE) as per job requirements.
2. observe proper wearing of PPE in accordance with workplace safety policies.
3. explain the function/uses of Personal Protective Equipment.



PRE-TEST

Directions: Encircle the letter of the correct answer.

1. Made from light asbestos coated with aluminium protect all of the body during welding?
A. Leggings
B. Protective cover all
C. Safety shoes
D. Safety goggles
2. Which ones are made from leather to protect the legs and feet?
A. Leggings
B. Protective cover all
C. Safety shoes
D. Welding spats
3. Which are the heat resistant shoes?
A. Leggings
B. Protective cover all
C. Safety shoes
D. Welding spats
4. Which are made of chrome leather and protect our feet from spatter?
A. Leggings
B. Safety goggles
C. Safety shoes
D. Welding spats
5. Which are used where grinding and chipping off slags?
A. Protective cover all
B. Safety Goggles
C. Safety shoes
D. Welding Spats
6. It is an apparatus worn over the mouth and nose or the entire face to prevent the inhalation of dust, smoke, or other noxious substances.
A. Ear plugs
B. Face shield
C. Safety Goggles
D. Respirator
7. Which Personal protective equipment are used to protect our eyes and face from the arc rays and heat, spatter from the molten metal?
A. Face shield
B. Safety Goggles
C. Welding gloves
D. Welding helmet
8. A pair of devices that is meant to be inserted in the ear canal to protect the wearer's ears from loud noise or intrusion.
A. Ear plugs
B. Chipping hammer
C. Respirator
D. Safety shoes
9. It is made of chrome leather and protects our hands from heat, spatter, and radiations.

- A. Leggings
B. Protective cover all
C. Welding gloves
D. Welding spats
10. Which driving tool is used for straightening, bending and deforming metals?
A. Face shield
B. Leggings
C. Protective cover all
D. Welding shoes



LOOKING BACK

In the previous lesson, you have learned the fillet weld symbols. Now let us see if you still remember these fillet weld symbols.

Directions: Match the fillet weld symbols in Column A by choosing the letter of the correct answer in Column B.

COLUMN A	COLUMN B
_____1) Concave; Grinding	
_____2) tapered; Intermittent	
_____3) Flat contour	
_____4) hain intermittent	
_____5) onvex; Grinding	



BRIEF INTRODUCTION

To get started with your welding, you must have a set of safety gear but before you start it is good to familiarize with the different personal protective equipment according to their uses.

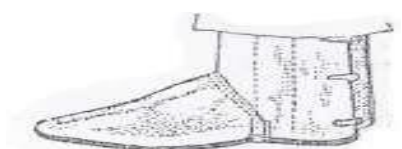
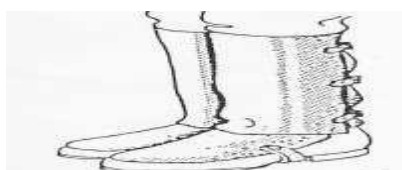
Protective cover all - are made from light asbestos coated with aluminum to protect the wholebody during welding.

Leggings - are made from leather to protect the legs and feet.

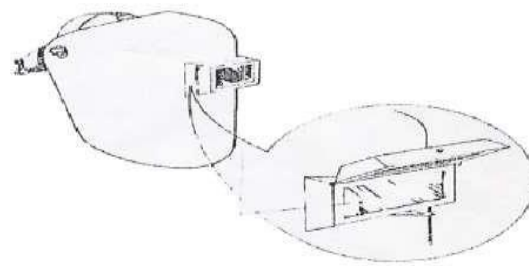
Safety Shoes- have heat resistant soles and impact resistant toes. Some safety shoes have metal in soles, while others protect workers from different types of electrical hazards.

Welding spats - are made of chrome leather and protects our feet from spatter.

Safety goggles - are used when grinding and chipping off slag.



Welding shield/helmet - is used to protect our face and eyes from the arc rays and heat, and the spatter from molten metal. The arc is viewed through a filter which reduces the intensity of radiation but allows a safe amount of light to pass for viewing the weld pool and end of the electrode.



Earplugs- is a pair of device that is meant to be inserted in the ear canal to protect the wearer's ears from loud noise or intrusion.



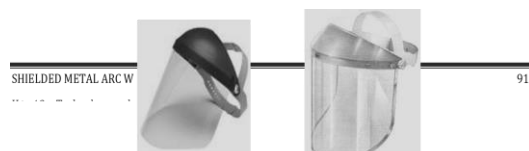
Respirators- is an apparatus worn over the mouth and nose or the entire face to prevent the inhalation of dust, smoke, or other noxious substances.



Leather jacket is made of chrome leather and prevents the entry of sparks between our clothes and body.



Face shield - is best for general protection because it can be worn under an arc welding helmet



Welding gloves/gauntlet - is made of chrome leather and protects our hands from heat, spatter, and radiations.




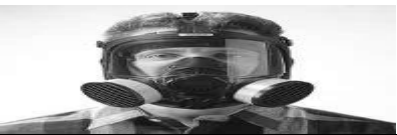
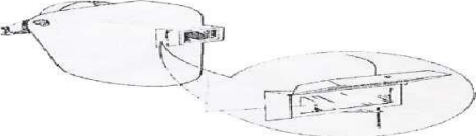




ACTIVITIES

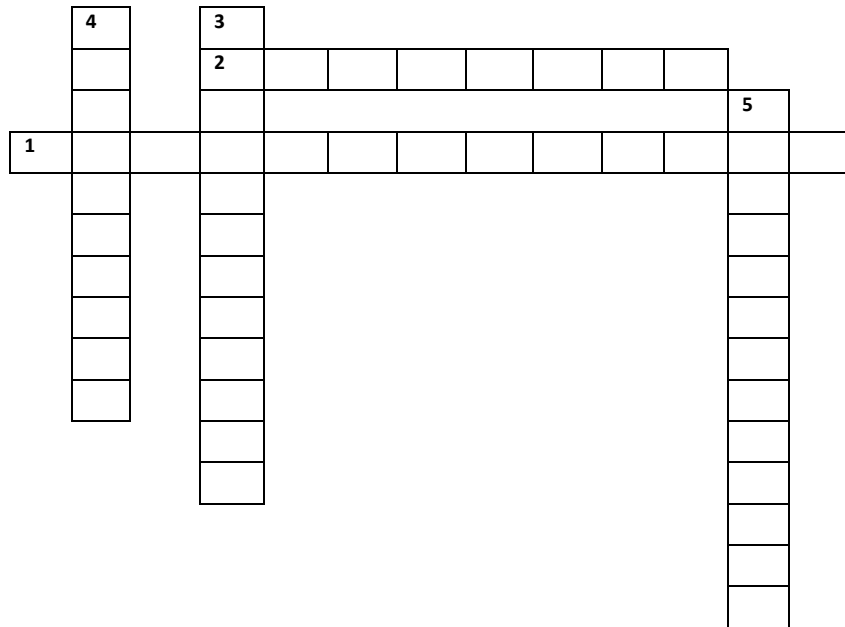
Activity 1. "NAME ME"

Directions: Complete the table by writing the name of the protective gear or PPE in Column B.

A		B
1		
2		
3		
4		
5		

Activity 2: "CROSSWORD PUZZLE"

Directions: Complete the crossword by filling in a word that fits each clue.



Across:

1. Made of chrome leather and protects our hands from heat, spatter, and radiations.
2. It is a pair of device that is meant to be inserted in the ear canal to protect the wearer's ears from loud noise or intrusion.

Down:

3. It is made of chrome leather and protects our feet from spatter.
4. Best for general protection because it can be worn under an arc welding helmet.
5. Is used to protect our face and eyes from the arc rays and heat, and the spatter from molten metal. The arc is viewed through a filter which reduces the intensity of radiation but allows a safe amount of light to pass for viewing the weld pool and end of the electrode.



REMEMBER

The personal protective equipment in welding are very much important in order to complete the task. The observation of health and safety precautions in welding operation is of greatest importance. Your life and that of the others are more important than the job you are doing.



CHECK YOUR UNDERSTANDING

A. Directions: Express what you have learned in this lesson by completing the sentences below.

- 1) Full Face Respirator is an _____
- 2) Safety goggles are used when _____
- 3) Welding spats are made of _____
- 4) Protective coveralls are made from _____
- 5) Safety Shoes have heat resistant soles and _____

B. Directions: Write **TRUE** if the statement is correct and **FALSE** if the statement is incorrect.

- _____ 1. Safety shoes protect us from different types of electrical hazards.
- _____ 2. Welding will be easy if you use tools and equipment.
- _____ 3. To protect us from arc rays and heat use welding gloves.
- _____ 4. Welding gloves are made of metal.
- _____ 5. Use ear plug to prevent the inhalation of dust, smoke or other substances.



POST TEST

Directions: Encircle the letter of the correct answer.

1. It is an apparatus worn over the mouth and nose or the entire face to prevent the inhalation of dust, smoke, or other noxious substances.

- A. Ear plugs
- B. Face shield
- C. Safety Goggles
- D. Respirator

2. Which Personal protective equipment are used to protect our eyes and face from the arc rays and heat, spatter from the molten metal?

- C. Face shield
- D. Safety Goggles
- C. Welding gloves
- D. Welding helmet

3. A pair of devices that is meant to be inserted in the ear canal to protect the wearer's ears from loud noise or intrusion.

- C. Ear plugs
- D. Chipping hammer
- C. Respirator
- D. Safety shoes

4.. It is made of chrome leather and protects our hands from heat, spatter, and radiations.

- A. Leggings
- B. Protective cover all
- C. Welding gloves
- D. Welding spats

5. Which driving tool is used for straightening, bending and deforming metals?

- A. Face shield
- B. Leggings
- C. Protective cover all
- D. Welding shoes

6. Made from light asbestos coated with aluminium protect all of the body during welding?

- A. Leggings
- B. Protective cover all
- C. Safety shoes
- D. Safety goggles

7. Which ones are made from leather to protect the legs and feet?

- A. Leggings
- B. Protective cover all
- C. Safety shoes
- D. Welding spats

8. Which are the heat resistant shoes?

- A. Leggings
- B. Protective cover all
- C. Safety shoes
- D. Welding spats

9. Which are made of chrome leather and protect our feet from spatter?

- A. Leggings
- B. Safety goggles
- C. Safety shoes
- D. Welding spats

10. Which are used where grinding and chipping off slags?

- A. Protective cover all
- B. Safety Goggles
- C. Safety shoes
- D. Welding Spats

		<p>Key to Corrections:</p> <p>Pre-test</p> <p>1. B</p> <p>2. A</p> <p>3. C</p> <p>4. D</p> <p>5. B</p> <p>6. D</p> <p>7. D</p> <p>8. A</p> <p>9. C</p> <p>10. A</p> <p>Looking Back</p> <p>1. C</p> <p>2. D</p> <p>3. A</p> <p>4. E</p> <p>5. B</p> <p>Activities</p> <p>Act. 1</p> <p>1. D</p> <p>2. A</p> <p>3. E</p> <p>4. C</p> <p>5. B</p>
<p>Post-test</p> <p>1. B</p> <p>2. D</p> <p>3. A</p> <p>4. B</p> <p>5. A</p> <p>6. C</p> <p>7. A</p> <p>8. B</p> <p>9. D</p> <p>10. D</p>	<p>Checking your understanding</p> <p>A.</p> <p>1. is an apparatus worn over the mouth and nose or the entire face to prevent the inhalation of dust, smoke, or other noxious substances.</p> <p>2. grinding and chipping off slag.</p> <p>3. chrome leather and protects our feet from spatter.</p> <p>4. from light asbestos coated with aluminum to protect the wholebody during welding.</p> <p>5. impact resistant toes. Some safety shoes have metal in soles, while others protect workers from different types of electrical hazards.</p> <p>B.</p> <p>1. T</p> <p>2. T</p> <p>3. F</p> <p>4. F</p> <p>5. F</p>	

References

- Public Technical Vocational High Schools, Competency-Based Learning material, Second year, SMAW NCI, (Department of Education 2008)
- http://img.diytrade.com/cdimg/340379/1362621/0/1133753301/Welding_gloves.jpg
- http://1.bp.blogspot.com/_1p20WdeXKKs/TVFOqgHuFAI/AAAAAAAAAKj8/DrB1yHyAqVI/s1600/Respirator1.jpg