



AMART

Flexible Instruction Day 1

Assignment #1

Learning Standard	Framework (pa.gov) Pick learning standards from the crosswalk
Task # & Description	104 Identify and describe personal/lab safety requirements.

CONTACT INFORMATION/ASSISTANCE

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I will be available by email from 7:40-12, and 12:30-3:10 to answer your questions. Please reach out if you are having difficulty completing your assignments.

INSTRUCTIONS

Directions

Complete all activities independently using your classroom knowledge. No internet access is required. All work is due on the day we return to school.

Name: _____

Session: _____

____/____ points

Multiple Choice

Circle the best answer.

1. What is the number one rule in manufacturing?

- A. Speed**
 - B. Safety**
 - C. Production**
 - D. Cleaning**
-

2. Which PPE protects your eyes?

- A. Hoodie**
 - B. Gloves**
 - C. Safety Glasses**
 - D. Boots**
-

3. Loose clothing near rotating machinery can:

- A. Improve production**
 - B. Cause entanglement**
 - C. Reduce noise**
 - D. Improve safety**
-

4. A clean shop floor helps prevent:

- A. Better cutting**
 - B. Trips and falls**
 - C. Rust**
 - D. Programming errors**
-

5. Before using a machine, operators should:

- A. Ignore instructions**
 - B. Remove machine guards**
 - C. Receive training**
 - D. Increase spindle speed immediately**
-

6. Chips should be removed using:

- A. Bare hands**
 - B. A chip brush or proper tool**
 - C. Compressed air toward others**
 - D. Gloves near rotating equipment**
-

7. Long hair near rotating machinery should be:

- A. Left loose**
 - B. Covered in coolant**
 - C. Secured properly**
 - D. Ignored**
-

8. Which item is safest to wear in a machine shop?

- A. Sandals**
 - B. Loose jewelry**
 - C. Steel-toe boots**
 - D. Hoodie strings**
-

9. What should you do if a machine makes an unusual sound?

- A. Ignore it**
 - B. Increase spindle speed**
 - C. Stop and notify the instructor**
 - D. Remove guards and inspect it yourself**
-

10. Why is coolant used during machining?

- A. To increase heat**
 - B. To reduce heat and friction**
 - C. To make chips larger**
 - D. To slow spindle speed**
-

True or False

Write TRUE or FALSE.

_____ **Safety glasses should be worn in the shop.**

_____ **Horseplay is acceptable around machinery.**

_____ **Oil spills should be cleaned immediately.**

- _____ Machine guards help improve safety.
- _____ Distractions can lead to accidents.
- _____ Students should report damaged equipment.
- _____ PPE stands for Personal Protective Equipment.
- _____ Machines should only be operated with permission and training.
-

Manufacturing Safety Vocabulary

Match the term with the correct definition.

Term	Letter
PPE	_____
Coolant	_____
Emergency Stop	_____
Entanglement	_____
Machine Guard	_____
Lockout/Tagout	_____

Definitions

- A. A device used to quickly stop a machine**
 - B. Protective equipment worn for safety**
 - C. A barrier that helps protect operators**
 - D. Liquid used to reduce heat during cutting**
 - E. Getting caught in rotating machinery**
 - F. Procedure used to prevent accidental machine startup**
-

Shop Safety Situations

Circle the safest choice.

- 1. You notice coolant on the floor near a machine.**

- A. Ignore it**
- B. Walk through it carefully**

- C. Clean it or report it immediately
 - D. Cover it with cardboard
-

2. A student is not wearing safety glasses.

- A. Ignore it
 - B. Tell them safety glasses are required
 - C. Throw chips near them
 - D. Continue working normally
-

3. Your sleeves are loose before operating a lathe.

- A. Ignore them
 - B. Roll them up or secure them
 - C. Wear gloves instead
 - D. Increase feed rate
-

4. A machine guard is missing.

- A. Continue using the machine
 - B. Remove other guards too
 - C. Notify the instructor immediately
 - D. Operate the machine carefully anyway
-

5. A classmate is distracting others near machinery.

- A. Join in
 - B. Ignore it
 - C. Tell them to stop and notify the instructor if needed
 - D. Throw material at them
-

Measurement Review

Convert the following fractions to decimals.

$$1/2 = \underline{\hspace{2cm}}$$

$$1/4 = \underline{\hspace{2cm}}$$

$$3/8 = \underline{\hspace{2cm}}$$

$$5/8 = \underline{\hspace{2cm}}$$

$$3/4 = \underline{\hspace{2cm}}$$

$$7/8 = \underline{\hspace{2cm}}$$

Decimal Equivalency Chart

Fraction Decimal

1/8 0.125

1/4 0.250

3/8 0.375

1/2 0.500

5/8 0.625

3/4 0.750

7/8 0.875

Tool Identification

Match the tool with its use.

Tool Letter

Caliper _____

Micrometer _____

Safety Glasses _____

Chip Brush _____

Dial Indicator _____

Uses

- A. Measures very small dimensional changes
- B. Protects eyes from flying chips
- C. Used to safely remove chips
- D. Measures inside and outside dimensions
- E. Measures parts very accurately