Basic Measurement for Welding

Unit Outline

1. Project Team Members: Inglis, J., Marsh, D., Shappell, C.

2. Title of Course: Welding (10-11-12 grade)

3. Title of Unit or Project: Basic Measurement

4. Approximate length of Unit or Project: 2 Weeks

5. Brief description of the Unit or Project with an expected final outcome.

   Given various measuring devices and instruction on the use of these devices the student will be able to make accurate measurements on a piece of metal.

6. Major Goals of Unit:

   Student will be able to:

   1. Identify and describe to others designated measuring devices.
   2. Discuss safety procedures related to the handling and safe use of the devices to the class.
   3. Demonstrate an understanding through the ability to accurately measure using designated measuring devices.

7. Sequence of balanced and integrated activities for students:

   Students will complete the following activities:

   Introduction – Relate fractions and related math principles through a handout accompanied with an oral presentation. Establish a base line for future growth that will advance student achievement.
   (Use Rubric # 1)

   Equipment Demonstration- In a group students will identify proper and safe use of measuring devices. Measuring devices involved in this demonstration are: foot rule, folding rule, retractable steel tape, and architect's scale.

   Application:
   Guided practice- Through related instruction, students will determine measurements of designated objects using the various measuring devices.
   Unguided practice- Students will individually produce measurements according to criteria on specified checklist.
   (Use Rubric # 2)

8. Checklist or rubric of assessment components for students:
   Two rubrics are attached to this document.

9. Specific Standards addressed in this Unit or Project:

Ref. #	Name of Standard	Title of Individual Standard
Goal 1:		
1.1.8 A, E, F	PA RWSL	Learning to read independently.
	SCANS	Reading
Goal 2:		
1.6.8 D	PA RWSL	Speaking & Listening.
	SCANS	Speaking, Listening, Thinking, and Sociability.
Goal 3:		
1.1.8	HPA RWSL	Learning to read independently.
2.1.8 A	PA ASM	Numbers, number systems and number relationships.
2.2.8 B	PA ASM	Computation and Estimation.
2.3.8 A, D	PA ASM	Measurement and Estimation.
2.3.11 A	PA ASM	Measurement and Estimation
2.4.8 B	PA ASM	Mathematical Reasoning and Connections.
2.5.8 A	PA ASM	Mathamatical Problem Solving & Communication.
3.1.10 D	PA ASST	Unifying Themes.
3.2.10 B	PA ASST	Inquiry and Design.
	SCANS	Reading, Thinking, Arithmetic/ Mathematics.

Rubric No. 1

Name: _____ Date: _____

The student:	Acceptable	Unacceptable
- Demonstrates good listening skills		
- Adds positively to the discussion		
- Uses professional language		
- Knowledgeable/ prepared		
- Not distracting to group		

Rubric No. 2

Name: _____ Date: _____

The student:	Acceptable	Unacceptable
- Measured to specified dimensions		
- Used proper type of marking technique		
- Used measuring tools safely		
- Demonstrated proper use of foot rule		
- Demonstrated proper use of folding rule		
- Demonstrated proper use of retractable steel tape		
- Demonstrated proper use of architect's scale		