

Lesson Plan

Course Title: Manufacturing Systems

Session Title: Measuring

Performance Objective:

Measure to within one sixteenth of an inch with a standard ruler.

Specific Objectives:

Students will label measurements as 1/4ths, 1/8ths, and 1/16ths.

Preparation

TEKS Correlations:

Manufacturing Systems

123.43(15)(D)

... use the appropriate units of measure...

Interdisciplinary Correlations:

Math

111.36(M.1)

The student uses a variety of strategies and approaches to solve both routine and non-routine problems.

Teacher Preparation:

References:

None

Instructional Aids:

1. Measuring PowerPoint
2. Measuring Worksheets
3. Measuring Test

Materials Needed:

1. Paper
2. Pencil
3. Rulers
4. Various measuring devices

Equipment Needed:

Computer with PowerPoint Software
Infocus Projection

Learner Preparation:

None

Lesson Plan

Introduction (LSI Quadrant I):

Say: In order to build or construct anything, you must start with the most basic need to get information. This would be measurement.

Ask: Is there anything in this classroom that does not have a size associated with it?



Let students name some examples in the classroom.

Say: It all starts with units of measure, for example one inch.










Outline

Outline (LSI Quadrant II):

Instructors can use the PowerPoint presentation, slides, handouts, and note pages in conjunction with the following outline.

MI	Outline	Notes to Instructor
 	I. Standard Measurements. A. Breaking down the UNIT. 1. FOOT 2. INCH B. Standard Fractions. 1. Values 2. Simplify C. Place measurements in proper sequence. D. Apply concept to measurements.	Show PowerPoint.

Copy and paste Multiple Intelligences Graphic in appropriate place in left column.

								
Verbal Linguistic	Logical Mathematical	Visual Spatial	Musical Rhythmic	Bodily Kinesthetic	Intra- personal	Inter- personal	Naturalist	Existentialist

Application

Guided Practice (LSI Quadrant III):

After showing the PowerPoint and explaining the measurement practice sheets:

Say: It is very important to remember that measuring devices are tools and not toys. Please treat them with care.

Students will begin the measurement worksheets.

Independent Practice (LSI Quadrant III):

Let students see various types of rules and measuring devices, and practice taking measurements around the classroom on different items.

Summary

Review (LSI Quadrants I and IV):

Who can list the basic standard units of measurements (Foot, Inch, 1/16th inch)?

Why do we have different measurement units?

Who can list all 1/16th inch fractions between 0 and 1?

Evaluation

Informal Assessment (LSI Quadrant III):

The teacher will monitor the students' progress during guided practice and provide assistance when needed.

Formal Assessment (LSI Quadrant III, IV):

Have students take a measurement test after going over the practice sheets. You can give them on different increments depending on the student's ability.

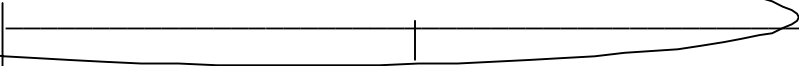
Extension/Enrichment (LSI Quadrant IV):

The students that have mastered the skills can be encouraged to offer peer tutoring in this skill, not only during this time frame, but also throughout the future. This is an overlap to their math skill.

Measuring 1

Name: _____ Student #: _____ Score: _____

From the line on the left, measure the given distance and make the line as shown in the example.

Example: 

$3 \frac{3}{4}$ "

$1 \frac{1}{2}$ "

$2 \frac{1}{4}$ "

$\frac{3}{4}$ "

$4 \frac{1}{4}$ "

$2 \frac{3}{4}$ "

$\frac{1}{2}$ "

$1 \frac{3}{4}$ "

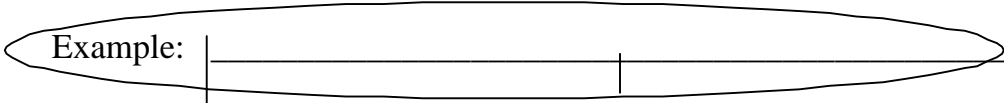
$\frac{1}{4}$ "

$4 \frac{3}{4}$ "

Measuring 2

Name: _____ Student #: _____ Score: _____

From the line on the left, measure the given distance and make the line as shown in the example.

Example: 

$3 \frac{3}{8}$ "

$1 \frac{7}{8}$ "

$2 \frac{5}{8}$ "

$\frac{3}{8}$ "

$4 \frac{1}{8}$ "

$2 \frac{7}{8}$ "

$\frac{7}{8}$ "

$1 \frac{3}{8}$ "

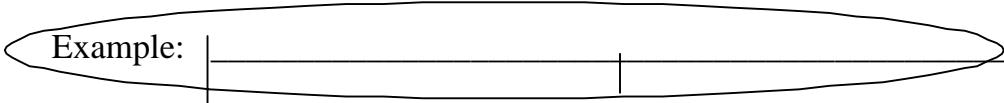
$\frac{1}{8}$ "

$4 \frac{5}{8}$ "

Measuring 3

Name: _____ Student #: _____ Score: _____

From the line on the left, measure the given distance and make the line as shown in the example.

Example: 

$3 \frac{5}{16}$ "

$1 \frac{15}{16}$ "

$2 \frac{11}{16}$ "

$\frac{9}{16}$ "

$4 \frac{13}{16}$ "

$2 \frac{3}{16}$ "

$\frac{15}{16}$ "

$1 \frac{9}{16}$ "

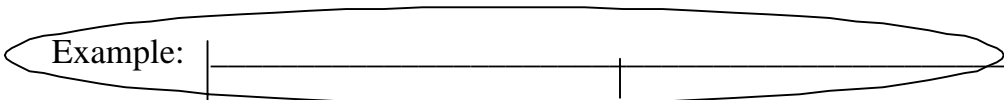
$\frac{7}{16}$ "

$4 \frac{1}{16}$ "

Measuring 4

Name: _____ Student #: _____ Score: _____

From the line on the left, measure the given distance and make the line as shown in the example.

Example: 

$1 \frac{9}{16}$ "

$3 \frac{5}{8}$ "

$2 \frac{1}{2}$ "

$\frac{7}{16}$ "

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

$3 \frac{1}{4}$ "

$\frac{5}{8}$ "

$2 \frac{11}{16}$ "

$\frac{3}{4}$ "

$1 \frac{13}{16}$ "

Measuring Test

Name: _____

Instructions: Using the ruler provided at the testing station, measure the item at the station, and record your results here. Measurements are to be whole numbers. With each answer, be sure to record what TYPE of unit the item has been measured with.

Station #1 _____ Station #6 _____

Station #2 _____ Station #7 _____

Station #3 _____ Station #8 _____

Station #4 _____ Station #9 _____

Station #5 _____ Station #10 _____