# Name

##

##  Grade 5 Mathematics Extension Menu

**Concept and/or Topic: Measurement**

**Directions: Choose** a learning activity from one square to complete. If you choose the square, “Write your idea here,” please see the teacher with your idea first.

**Circle**the number of the learning activity you choose.

**Turn in**this paper with your work.

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| --- | --- | --- |
| 1. **Draw** at least 4 different rectangles on graph paper. **Determine** the area and perimeter of each rectangle. **Compare** the area and perimeter of your rectangles. **Analyze** the differences among the rectangles and **summarize** your findings. | 2.**Create** a table with four columns. **Label** the columns with: Activity; Estimated Time; Actual Time; Actual Time in Seconds. **Estimate** and **record** how long you think it will take you to do the following tasks:* Read one page of your math book glossary
* Touch your toes 50 times
* Write the alphabet in cursive
* Stand/balance on one foot

**Perform** each of the tasks while timing yourself with a stopwatch. **Record** the actual time taken to do each task.**Convert** each Actual Timeto seconds.  |  3.**Plan** and **design** a map of an amusement park or playground using angles and geometric shapes. Include all parts of a map (title, key, compass rose, author, date). The following measurements must be included: 30°, 45°, 70°, 75°, 115°, 140°, 165°, and 180°**Label** the measure of each angle. **Write** a description of your design.  |
| 4.**Select** a recipe book. **Read** to identifyat least 6 different recipes that include liquid ingredients. **Prepare** a table with columns labeled cups, pints, quarts and gallons. **Record** the liquid measures for each recipe in the correct column. **Convert** each liquid measure to each other unit of measure to complete the table. Example: If the recipe calls for 1 Qt of milk, the chart would show:C Pt Qt Gal4 2 1 ¼ **Choose** two recipes and double them. **Record** each new doubled recipe on an index card. | 5.**Plan** and **design** a treasure map using your classroom. **Select** an ending point (such as the pencil sharpener, light switch, or teacher’s desk). **Determine** the starting point. **Devise** directions using measurements as part of the instructions. (For example: Start at the EXIT door and walk 1 1/8 meters, turn left and walk forward 2 1/3 yards…) Include the following: inches, feet, yards, millimeters, centimeters, meters | 6. **Experiment** with weight (ounces and grams) using the following:* scale
* weights
* various objects

**Create** a chart with three columns. **Label** the columns with:1. Name of Object
2. Estimated weight
3. Actual weight

**Estimate** the weight of each object. **Weigh** each object. Record the estimated and actual weight of each object on the chart. **Compare** and **contrast** the objects that weigh ounces and/or grams. **Summarize** your findings in a written paragraph. |
| 7.**Estimate** the current temperature in Fahrenheit *and* Celsius of:* Your classroom
* Outside of your school
* 4 different US cities
* 4 different non-US cities

**Record** your estimates. **Use** a thermometer to **determine** the classroom temperature and the outside temperature. **Record** the results. **Use** the Internet ([www.intellicast.com](http://www.intellicast.com)) to research the actual temperatures of the 4 US cities and 4 non-US cities. **Record** the results. **Create** a display of your findings. | **8. Write** your idea here.\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | 9.**Develop** a booklet to teach kindergarten students about basic measurement. Include the following:* ruler (inch, foot, yard, millimeter, centimeter and meter)
* scale (ounce, pound, gram)
* liquid measuring devices (ounce, **pint cup, quart, gallon, and liter)**

Include simple illustrations and descriptions, keeping your young audience in mind.  |

#### Teacher Resource Page

Grade 5 Mathematics Extension Menu

**Concept and/or Topic: Measurement**

**Intended Purpose: Extension/Enrichment Activity**

**Standard(s) and Indicators Addressed:**

MA.500.30 KNOWLEDGE OF MEASUREMENT

Box 1

 .25a Estimate and determine the perimeter of polygons

 .25b Find the area or perimeter of any closed figure drawn on a grid

 .26a Estimate and count to find the area of any closed figure on a grid

 .26b Apply the formula for area of a rectangle

Box 2

 .24a Estimate and find start, elapsed, and end time to the nearest minute

 .24b Compose/decompose time using hours, minutes, and seconds

Box 3

.15 Measure and draw single angles (between 0° and 180°) and angles within a polygon to the nearest degree using protractors

Box 4 .10 Calculate to determine equivalent units of pints, quarts, and gallons.

Box 5 .07a Select and use appropriate standard units and tools to estimate and determine length (to 1/8 in, ft, yd, mm, cm, m)

Box 6 .07c Select and use appropriate standard units and tools to estimate and determine weight (oz and g)

Box 7 .07b Select and use appropriate standard units and tools to estimate and determine temperature (F° and C°)

Box 9 MA.500.70.12 Represent, explain, and write about mathematical ideas and solutions using objects, pictures, data displays, mathematical language, and symbols

**Organizational Tips:**

Box 1: Supply graph paper.

Box 2: Provide stopwatches.

Box 3: Supply protractors and large paper for maps.

Box 4: Provide recipe books and index cards.

Box 5: Supply meter/yard sticks, rulers, tape measures, etc.

Box 6: Provide scales, weights, various objects for weighing (paper clips, pencils, erasers, etc.), and poster paper.

Box 7: Supply Fahrenheit and Celsius thermometers and access to the Internet.