

Learning Activity Sheet for Mathematics

Quarter 2
Lesson

Worksheet for Mathematics Grade 7 Quarter 2: Lesson 2 (Week 2) SY 2024-2025

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| Learning Area: | Mathematics | Quarter: | 2 |
|---------------------|---------------------------------|-----------|----------|
| Lesson No.: | 2 | Date: | |
| Lesson Title/Topic: | Systems of Units of Measurement | | |
| Name: | | Grade & S | Section: |

- I. Pre-lesson Activity: Measurement Scavenger Hunt (Optional)
- **II. Objectives:** At the end of the activity, the learners:
 - 1. Reinforce their measurement skills.
 - 2. Apply measurement concepts to the real world.
- III. Materials Needed: rulers or tape measures, pencils, measurement worksheet
- IV. Instructions:
 - 1. You will be grouped into teams with 4 to 6 members to find objects within the school or classroom to measure. The list of objects that you will measure will be given by your teacher. Write the name of the objects in the first column.
 - 2. Teams should locate the specified objects and measure them accurately.
 - 3. Record measurements in the worksheet (in the table below).

| Object | Unit of Measure Used | Measurement |
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V. Synthesis:

| 1. | How did the scavenger hunt help you understand the role of measurement in the rea |
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| | world? |
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| 2. | Why is accurate measurement important in various professions? |
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| 3. | Can you think of situations where incorrect measurements could lead to problems? |
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| 4. | How can you apply measurement skills in your daily lives? |
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- I. **Pre-lesson Activity:** Measure and Build Project (Optional)
- **II. Objective:** At the end of the activity, the learners apply measurement skills in a practical construction project, reinforcing the importance of accurate measurements.

III. Materials Needed:

- pencils
- scissors
- 50155015

glue or tape

- rulers or tape measures
- worksheet or graph paper
- building materials such as popsicle sticks, cardboard, paper, or other craft supplies

IV. Instructions:

- 1. Design and build a miniature bridge, tower, or house using the materials you have.
- 2. Sketch your design on the worksheet.
- 3. Plan the structure's dimensions
 - a. For example, if you are building a miniature bridge, you need to consider the following:
 - i. Length: How long will the bridge be in inches or centimeters?
 - ii. Height: How tall should the bridge's arch or support be?
 - iii. Width: How wide should the bridge be?
 - iv. Arch Design: Will the bridge have an arch or other structural features?

Sketch of the Design (with dimensions and specified units of measure):

Actual Measurements:

| Dimension (e.g., length, height, width, specific part of the structure) | Actual Measurement (specify the unit) |
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| 1. | How did accurate measurements impact the success of your project? |
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| 2. | What challenges did you encounter during the construction phase, and how did you overcome them? |
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| 2 | Why is precision important in real-world construction and engineering projects? |

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- I. Activity No. 1: Non-standard Units of Measure
- **II. Objective:** At the end of the activity, the learners identify and use traditional or non-standard units of measure being used in their local culture or community.
- III. Materials Needed: pencil, worksheet, common objects to measure such as classroom item
- IV. Instructions:
 - 1. List the traditional units of measure being used in your community or culture.
 - 2. Use the traditional or non-standard units to measure the objects provided by your teacher. Record your measurements in the table below.

| Common Objects to Measure | Traditional or Non-standard Unit Used | Measurement |
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| V. Synthe | esis: |
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| What traditional units did you use? |
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| 2. | Were there variations in measurements within the group? |
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| 3. | How do traditional units reflect the history and traditions of your community or culture? |
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| 4. | Are there advantages to using traditional units in specific situations? |
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- I. Activity No. 2: English System of Measurement (Supermarket Unit Challenge)
- **II. Objectives:** At the end of the activity, the learners:
 - 1. familiarize with English units of measurement for length, weight, and capacity.
 - 2. associate locally available supermarket items with specific English units.

III. Materials Needed:

- pencil
- worksheet
- list of common supermarket products in the local supermarket

IV. Instructions:

- 1. You will be grouped into small teams, and then the list of local supermarket products will be distributed to each group.
- 2. Discuss and decide whether each product is typically measured in inches, feet, yards, ounces, pounds, fluid ounces, pints, quarts, or gallons.
- 3. Write your chosen unit next to each product on the list.

| Local Supermarket Product | English Unit |
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V. Synthesis:

| 1. | Why did your group associate specific products with inches, feet, or yards? What features of the product influenced your choice? Can you think of any other products commonly found in supermarkets that could be measured in inches, feet, or yards? |
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| 2. | What led your group to decide whether each product should be measured in ounces of pounds? Did the size or packaging of the products play a role in your decisions? Are there any supermarket items that you believe could be measured in tons? Why or why not? |
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| 3. | How did you determine the capacity units (fluid ounce, cup, pint, quart, or gallon) for the products? Were there any products where this was particularly challenging? Car you think of other supermarket products or beverages that might be measured in different capacity units? |
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- I. Activity No. 3: SI System or Metric System (Metric Measurement Exploration)
- **II. Objectives:** At the end of the activity, the learners:
 - 1. measure length, mass/weight, and capacity using the metric system.
 - 2. reinforce their understanding of the base units and prefixes of the metric system.

III. Materials Needed:

- Pencil
- Worksheet
- Metric rulers or meter sticks

- Kitchen scales or balances
- Graduated cylinders
- List of everyday objects to measure

IV. Instructions:

- 1. You will be grouped into small teams, and then each group will be assigned to one of the measurement stations.
- 2. You will be rotated through each station to allow you to explore all three categories of measurements: length, mass/weight, and capacity.
- 3. Measure the length (in centimeters and millimeters), mass (in grams), or volume (milliliters) of the objects at each station. Record your measurement in the given table.

Station 1: Station with metric rulers or meter sticks for measuring length

| Object | Measurement in centimeters | Measurement in millimeters |
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Station 2: Station with kitchen scales or balances for measuring mass/weight

| Object | Measurement in grams |
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Station 3: Station with graduated cylinders for measuring capacity

| Object | Measurement in milliliters |
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| V. | Synthesis: |
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| For 1 | Length Measurement: |
| 1. | What objects did you measure for length, and what were your measurements in centimeters and millimeters? |
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| 2. | How did the use of metric rulers or meter sticks simplify the process of measuring |
| | length? What are the advantages of using the metric system for length measurements? |
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| 3. | Can you identify any patterns or trends in the length measurements of different objects? |
| | Were there any objects where you needed to use a specific metric prefix? |
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| For I | Mass Measurement: |
| 1. | What objects did you measure for mass, and what were your measurements in grams? |
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| How did the use of kitchen scales or balances simplify the process of measuring mass? What are the advantages of using the metric system for mass measurements? |
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| Did you encounter any objects where the mass measurement was close to a whole number, making it easier to express in grams? Discuss this concept. |
| Volume Measurement: What liquid did you measure for volume, and what were your measurements in milliliters? |
| How did the use of graduated cylinders simplify the process of measuring volume? What are the advantages of using the metric system for volume measurements? |
| Can you compare the volume of different liquids or quantities of the same liquid using milliliters as a common unit? How does the metric system help in these comparisons? |
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