

Length and Weight Measurement Center



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STEM-CTE HUB



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Length and Weight Measurement Center

The Measurement Combo STEAM Kit combines two of Lakeshore Learning's most engaging math centers—"How Much Does It Weigh?" and "How Long Is It?"—to give students a hands-on introduction to measuring mass and length. Through interactive, real-world applications, students learn how to use rulers, balance scales, and measuring tools to compare, estimate, and record measurements. This kit helps strengthen mathematical reasoning and supports early STEM learning through exploration, data collection, and teamwork.



Grade Level

Pre-K - 2nd

Group Size

2 - 4 students per group

Time Duration

20 minutes per activity

Content of Kits

Components

- 2 Balance Scales
- Assorted weight manipulatives
- Assorted length manipulatives
- 2 sets of weight activity cards
- 2 sets of length activity cards
- 2 sets of 6 foam feet
- 4 activity card holders
- Graph paper



Usage

Getting Started

- 1. Unpack and Organize Materials:** Open all four measurement centers and confirm that each set's pieces—balance scales, rulers, measuring tapes, weights, and measuring objects—are included and undamaged.
- 2. Introduce the Tools:** Demonstrate how to use each type of tool—balance scales for weight and rulers or tapes for length. Discuss the difference between standard and nonstandard units of measurement.
- 3. Group and Assign Tasks:** Divide students into small groups. Assign some groups to begin with weight measurement activities and others with length measurement tasks. Rotate groups halfway through the session.
- 4. Measure and Compare:** Have students select classroom objects to measure using both types of centers. They record their findings, compare data with peers, and discuss which tools give the most accurate results.
- 5. Reflect on Findings:** Bring the class together to share what they discovered about mass and length. Encourage students to discuss how measurement applies to everyday life (e.g., cooking, construction, design).

Storage

- Store small components like weights and blocks in zippered pouches or small containers.
- Place all bins in a cool, dry location to prevent damage to measuring tapes or paper cards.

Troubleshooting

- **Inaccurate Measurements:** Check that scales and rulers are placed on flat, stable surfaces before use.
- **Missing Pieces:** Substitute common classroom items for missing weights or objects (e.g., paperclips, cubes).
- **Confusion Between Units:** Use a visual anchor chart to remind students which side of the ruler measures inches vs. centimeters.
- **Unbalanced Scales:** If the scale tips unevenly when empty, check for debris or reposition the trays for balance.



Activity Guide

Beginner

Measure Around the Room

Students explore their environment by using rulers and scales to measure common classroom items. They record which items are longest, shortest, heaviest, and lightest, building familiarity with tools.

Intermediate

Estimate, Then Measure

Students estimate the weight or length of several objects, then measure to compare their predictions with actual data. This helps strengthen number sense and estimation accuracy.

Advanced

Graphing Measurements

Students record their measurements in a chart or bar graph to visualize differences between objects. They analyze trends—such as which materials are heavier or longer—and draw conclusions.

Extension Activities:

Design a Measurement Challenge

Students work in teams to design a classroom challenge that combines both length and weight measurement—such as “Build the longest paper bridge that holds the most weight.” This integrates engineering and math concepts.



Learning Extensions

STEAM Connections: Engineering - Math - Science

Learning Objectives:

- Develop accurate measuring and comparison skills for both length and weight.
- Strengthen understanding of standard units and tools of measurement.
- Encourage data recording, analysis, and collaboration.
- Apply measurement concepts to real-world scenarios and problem-solving.

Career Connections:

- **Engineer:** Uses precision measurement to design and test structures.
- **Architect:** Relies on accurate measurement to plan buildings and models.
- **Scientist:** Measures and records data during experiments.
- **Carpenter or Builder:** Uses both weight and length measurements for practical applications.

Essential Employability Skills:

- Attention to Detail
- Data Recording
- Interpretation
- Teamwork and Communication
- Critical Thinking
- Organization





Resources and Accessibility

Safety Guidelines

- Handle measuring tools gently to prevent damage or injury.
- Avoid overloading balance scales.
- Use rulers and tapes appropriately—no swinging or whipping motions.
- Supervise younger students to ensure safe handling of small components.

Accessibility

- Use tactile rulers or raised markings for students with visual impairments.
- Allow extended time and peer support for students with motor challenges.
- Provide large-print for easier readability.
- Encourage verbal collaboration for students who benefit from auditory processing.

Library Catalog



Library Resources



Feedback

QR to feedback survey

