Unit 5 Measurement, Time, and Data
Math 1

Last Update: August 1, 2026

Archdiocesan Curriculum > Grade > Math 1 > Length of unit 23 to 25 days

Stage 1: Desired Results

General Information

In this unit, students will develop skills in measurement, time, and data. They will estimate and measure length using inches and centimeters, apply measurement tools such as inch and centimeter rulers, and use familiar objects to make reasonable estimates. Students will also learn to tell and write time to the hour and half hour using both analog and digital clocks, and draw times using the hour hand as a reference. Finally, students will collect and organize data using tally charts and picture graphs, where they will analyze and compare information to make sense of real-world situations.

Mathematical Practices

MP2 – Reason abstractly and quantitatively

MP4 – Model with mathematics

MP5 – Use appropriate tools strategically

MP6 – Attend to precision

Essential Question(s)

- How can we estimate and measure the length of objects using standard tools like inch and centimeter rulers?
- What strategies help us compare and order objects by their length?
- How do analog and digital clocks show time to the hour and half hour, and how can we read and write these times?
- What are the parts of a clock (hour hand, minute hand), and how do they help us tell time?
- How can we collect, organize, and interpret data using picture graphs and tally charts?

Enduring Understanding/Knowledge

Students will:

- Estimate lengths using 1-inch tiles.
- Use a ruler to measure the length of an object to the nearest inch.
- Use an object with a known length to estimate the length of another object.
- Measure length to the nearest centimeter using a centimeter ruler.
- Order objects by length.

Review/Assess

- Write times to the hour shown on analog clocks.
- Write times to the half hour shown on analog clocks.
- Tell times to the hour and half hour using analog and digital clocks.
- Use the hour hand to draw and write times on analog and digital clocks.

Review/Assess

- Analyze and compare data shown in a picture graph where each symbol represents one child.
- Collect data and complete a picture graph to represent the data.
- Analyze and compare data shown in a tally chart.
- Make a tally chart and interpret the information.

Review/Assess

Vocabulary

New	Review
• estimate • inch • inch ruler • centimeter • centimeter ruler • longest • shortest • hour hand • hour • half hour • minutes • minute hand • interval • picture graph • tally mark • tally chart	• length • long • short • measure • clock • morning • afternoon • night • graph • count • more • less • equal

Connections to Catholic Identity / Other Subjects

Religion/Catholic Identity:

- Graph or tally things that you may be collecting for an outreach project (with this unit being taught in November you could graph/tally types of canned vegetables donated for a food drive).
- Tally and graph favorite bible story.
- Survey the class about their favorite prayer- Our Father, Hail Mary, Glory Be- Make a bar graph or other graph to show the result.

Other Subject Here:

- **ELA:** After reading a story, survey the students about favorite characters- make a picture graph or bar graph to show the results.
  Using sight words for a unit or story, graph how many times the words are used in a given story.

- **Science:** Graph the weather for a week and then write a short summary about the weather for the week.
  Graph the phases of the moon for a month.

- **Social Studies:** Family size and population- Graph the size of each student's family. Discuss family sizes and the roles that family members play in communities

Differentiation

Enrichment

- **Measurement Estimation Challenges** – Encourage students to estimate lengths using non-standard units (e.g., paper clips, blocks) before measuring with rulers.
- **Time Word Problems** – Have students create and solve simple story problems involving elapsed time to the hour and half hour.
- **Design and Interpret Complex Picture Graphs** – Challenge students to collect their own data on topics of interest and create multi-category picture graphs with symbols representing different quantities.
- **Compare Data Representations** – Guide students to analyze the same data using picture graphs, tally charts, and bar graphs to identify advantages of each type.

Support

- **Hands-On Ruler Practice** – Provide rulers with clear markings and opportunities to measure classroom objects, emphasizing correct hand placement and reading to the nearest inch and centimeter.
- **Clock Manipulatives** – Use analog clock models with movable hands to practice telling and setting times to the hour and half hour, paired with digital clock displays.
- **Guided Data Collection** – Scaffold data collection activities with teacher support, using concrete objects to tally and organize data before creating charts.
- **Visual Vocabulary Cards** – Provide vocabulary cards with pictures and definitions for terms like “inch,” “hour hand,” and “tally mark” to reinforce concepts.
- **Use Sentence Frames** – Support language development with frames like “The object is ___ inches long,” or “The time on the clock is ___ o’clock.”

Standards & Benchmarks

Measurement:

1.MD.1
Order three objects by length; compare the lengths of two objects indirectly by using a third object.
1.MD.2
Express the length of an object as a whole number of length units, by laying multiple copies of a shorter object (the length unit) end to end; understand that the length measurement of an object is the number of same-size length units that span it with no gaps or overlaps. Limit to contexts where the object being measured is spanned by a whole number of length units with no gaps or overlaps.

Time:

1.MD.3
Tell and write time in hours and half-hours using analog and digital clocks.
1.MD.AOB.2
Tell time in hours, half hours, and quarter hours using a digital clock or analog clock. Estimate time intervals (1 hour, 30 minutes, 15 minutes, 1 minute) for activities (e.g., sharpen pencil, soccer game, etc).

Graphing:

1.MD.4
Organize, represent, and interpret data with up to three categories; ask and answer questions about the total number of data points, how many in each category, and how many more or less are in one category than in another.

Teaching Ideas/Resources

Websites/Resources:

- **Time to the Hour** – Video on how to tell time to the hour with an analog clock.
- **Time to the 1/2 Hour** – Video on how to tell time to the ½ hour.
- **Large Blank Clock** – You can either laminate these or use them in reusable sleeves. Have students draw the clock hands based on a time you give
- **Blank Data Forms and Charts** – Blank templates and worksheets to create your own charts and data practice.
- **Data! | Mini Math Movies | Scratch Garden** – Introduces how to organize data using tally marks.