

Grade: 1 Subject: Mathematics	Unit of Study: Unit 6 – Comparisons and data formats
Big Idea/Rationale	<ul style="list-style-type: none"> • Using picture graphs, tables and calibrated units to help make comparisons clear and visual. • Unit 6 reviews and builds on children’s understanding of comparing numbers. Children are introduced to picture graphs, tables and calibrated units. Use of these graphic representations helps children see information in a way that makes comparisons clear and visual. As children discuss relationships such as how many more and how two amounts can be made equal, they develop precision in mathematical expression. • Comparisons with graphs • Comparisons with tables and stories • Comparisons with measurement units • Comparisons with shapes and patterns
Enduring Understanding	<p>Students will understand that:</p> <ul style="list-style-type: none"> • Data can be represented visually using tables, charts and graphs. • The form of representation you choose for your data depends on the kind of information you are collecting. • Many real life objects are examples of plane shapes and solid shapes. • Plane shapes and solid shapes have properties that can be examined and described as sides and corners. • Plane shapes can be combined and divided into other plane shapes. • Plane and solid shapes can be sorted by attributes. • Shapes can be moved in a variety of ways and still remain the same shape. • Many shapes can be divided in half evenly on the line of symmetry.
Essential Questions	<ul style="list-style-type: none"> • What is data? • How can we show what we have learned? • How do we read a graph? • How is a table similar to a graph? • How can we describe geometric figures? • Where can we find plane shapes and solid shapes?
Content (Subject Matter)	<ul style="list-style-type: none"> • Use picture graphs to make comparisons. • Construct simple picture graphs and make comparison statements using <i>more</i>, <i>fewer</i>, and <i>less</i>. • Construct simple graphs and compare data. • Interpret graphs with multiple rows. • Use the terms <i>most</i>, and <i>fewest</i> to compare graphed data. • Gather classroom data and create graphs with multiple rows. • Express comparisons using appropriate terms. • Gather classroom data and create graphs with multiple rows.

- Express comparisons using appropriate terms.
- Gather classroom data and organize it into graphs and tables.
- Express a variety of quantitative comparisons based on a table.
- Develop spatial concepts and vocabulary.
- Solve comparison story problems with known and unknown quantities.
- Express comparisons using the terms *more* and *fewer*.
- Solve comparison story problems with known and unknown quantities.
- Express comparisons using correct terms.
- Measure with inches and compare lengths.
- Recognize advantages of using a standard unit of measurement.
- Measure with inches.
- Record information in a table and compare lengths.
- Rotate and compare shapes.
- Predict and draw the next shape in rotation.
- Combine triangles to create more complex shapes.
- Identify and compare shapes.
- Sort and classify two-dimensional shapes.
- Identify and describe parallelograms, trapezoids, and hexagons.
- Recognize congruent shapes.
- Explore common solid shapes.
- Sort and classify solid shapes.
- Investigate how solid shapes can be composed and decomposed.
- Predict the results of putting together and taking apart solid shapes.
- Investigate and continue a variety of geometric and number patterns.
- Recognize patterns and use them to solve problems.

Standards

- **1.NBT.B.3:** Compare two-digit numbers based on meanings of the tens and one digits, recording the results of comparisons with the symbols $>$, $=$, $<$.
- **1.MD.A.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.*
- **1.MD.A.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.
- **1.G.A.1:** Distinguish between defining attributes (e.g., triangles are closed and three-sided) versus non-defining attributes (e.g., color, orientation, overall size) ; build and draw shapes to possess defining attributes.

	<ul style="list-style-type: none">• 1.G.A.2: Compose two-dimensional shapes (rectangles, squares, trapezoids, triangles, half-circles, and quarter-circles) or three-dimensional shapes (cubes, right rectangular prisms, right circular cones, and right circular cylinders) to create a composite shape, and compose new shapes from the composite shape.¹
Materials and Resources	<ul style="list-style-type: none">• First Grade Math Expressions, Math Journals, manipulatives, Math themed literature, IXL Mathematics