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| Grade: 1 Subject: Mathematics | Unit of Study: Unit 7 – Fractions, Circle Graphs, and Clocks |
| Big Idea/Rationale | <ul style="list-style-type: none"> • Understanding fractions, circle graphs, symmetry and clocks • Unit 7 reviews and builds on children’s understanding of the relationship between part and whole. Activities in this unit introduce children to fractions, focusing on halves and fourths. As they work through the unit, children develop strategies for finding the fractional components of numbers and investigate the concept of symmetry by partitioning geometric shapes. They then apply this understanding to money, telling time, and circle graphs. • Halves and Doubles • Fourths, Halves, and other fractions • Simple circle graphs • Clocks and calendars |
| Enduring Understanding | <p>Students will understand that:</p> <ul style="list-style-type: none"> • A region can be divided into equal parts in different ways. • Some sets can be divided into equal parts in different ways. • The likelihood of an event occurring can be described using the words certain, impossible, likely and unlikely. • There are different ways to show time. • Minutes and hours are units of time that can be displayed on a clock. • Days, weeks and months are units of time that can be displayed on a calendar. • Time can be given to the hour. • Time is given in estimations. Students should estimate time and refer to their answers as “about 1 minute” or “about 1 hour.” |
| Essential Questions | <ul style="list-style-type: none"> • What is the meaning of double? • What does half mean? • What does symmetry mean? • What is a fraction? • Why are equal parts important? • When do we need to cut a whole into parts? • What does probability mean? • What is time? • How do we measure time? • Is time exact? • Why do we care about time? |
| Content (Subject Matter) | <ul style="list-style-type: none"> • Draw doubles as shapes • Find doubles of numbers 1 through 10. • Identify the pattern of doubles. • Find doubles of 1-digit numbers. |

- Solve story problems involving doubles.
- Find half of a set.
- Solve story problems involving halves.
- Apply the concept of half to the area of a shape.
- Discover the concept of symmetry.
- Understand the concepts of fourths and fraction notation.
- Use knowledge of halves to find fourths.
- Apply the concept of fourths to quarters and dollars.
- Use story problems to find fourths and halves of a dollar.
- Review multiples of quarters.
- Practice finding halves and fourths with story problems.
- Compare and order fractions.
- Recognize halves and fourths of a set when shown on a circle graph.
- Express comparisons using the terms *twice*, *half*, and *fourth*.
- Convert information between multiple graph formats.
- Make a circle graph showing halves and fourths of a collar.
- Conduct an experiment and make predictions in terms of probability.
- Interpret more complex circle graphs and express quantitative comparisons.
- Convert information from a circle graph to a table or picture graph.
- Conduct a probability experiment and graph results.
- Use probability terms to make predictions.
- Order common daily events.
- Conceptualize units of time.
- Read time to the hour using digital and analog clocks.
- Write time to the hour in standard time notation.
- Order common daily events and show position using ordinal numbers.
- Develop spatial concepts.
- Know the number of minutes in a whole hour and a half hour.
- Tell time to the half-hour using both digital and analog clocks.
- Write time to the half-hour in standard time notation.
- Convert between digital and analog representations of time.
- Convert information from one graph format to another.
- Order events and make a schedule of activities.
- Read a calendar to identify the days of the week and the months of the year.
- Know the days of the week and the months of the year in sequence and understand how the seasons change during the year.
- Solve a variety of problems using mathematical concepts and skills.

Standards

- **1.MD.A.3:** Tell and write time in hours and half-hours using analog and digital clocks.
- **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.

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| | <ul style="list-style-type: none">• 1.G.A.3: Partition circles and rectangles into two and four equal shares, describe the shares using the words <i>halves</i>, <i>fourths</i>, and <i>quarters</i>, and use the phrases <i>half of</i>, <i>fourth of</i>, and <i>quarter of</i>. Describe the whole as two of, or four of the shares. Understand for these examples that decomposing into more equal shares creates smaller shares. |
| Materials and Resources | <ul style="list-style-type: none">• First Grade Math Expressions, Math Journals, manipulatives, Math themed literature, IXL Mathematics |