Unit 4 - Data Analysis, Geometry & Equal Shares

Content Area: **Math**
Course(s):
Time Period: **Full Year**
Length: **Full Year**
Status: **Published**

Unit Overview

Enduring Understandings

Draw picture graphs, bar graphs, and line plots using tally charts.
Interpret information shown in picture graphs, bar graphs and line plots.

Use different strategies for collecting and measuring data.

Recognize and draw 2D and 3D dimensional shapes and solids.
Identify equal shares and partition a shape into halves, thirds, or fourths.
Partition rectangles into rows and columns of equal sized shares and count the squares to find the total number of squares.

Essential Questions

Why are picture graphs, bara graphs, and line plots important?

Why is interpreting data important?

How can picture graphs, bar graphs, and line plots help me interpret data?

How can I name, draw and partition geometric shapes?

Learning Objectives

Draw a picture graph to represent data.
Draw a bar graph to represent data.
Use a bar graph to solve problems.
Collect measurement data by measuring the length of objects and organizing it in a tally chart.
Interpret measurement data on a line plot.
Make a line plot to show the measurement of lengths of objects.
Recognize 2-dimensional shapes and their defining attributes.
Recognize 3-dimensional shapes and their defining attributes.

Identify equal shares.
Relate equal shares of the same shape.
Partition rectangles into rows and columns of squares of equal size.

Standards: Content

2.DL	Data Literacy
2.DL.A	Understand concepts of data
2.DL.A.1	Understand that people collect data to answer questions. Understand that data can vary.
2.DL.A.2	Identify what could count as data (e.g., visuals, sounds, numbers).
2.DL.B	Represent and interpret data
2.DL.B.3	Generate measurement data by measuring lengths of several objects to the nearest whole unit, or by making repeated measurements of the same object. Show the measurements by making a line plot, where the horizontal scale is marked off in whole-number units.
2.DL.B.4	Draw a picture graph and a bar graph (with single-unit scale) to represent a data set with up to four categories. Solve simple put together, take-apart, and compare problems using information presented in a bar graph.
2.G	Geometry
2.G.A	Reason with shapes and their attributes
2.G.A.1	Recognize and draw shapes having specified attributes, such as a given number of angles or a given number of equal faces. Identify triangles, quadrilaterals, pentagons, hexagons, and cubes. sizes are compared directly or visually, not compared by measuring.
2.G.A.2	Partition a rectangle into rows and columns of same-size squares and count to find the total number of them.
2.G.A.3	Partition circles and rectangles into two, three, or four equal shares, describe the shares using the words halves, thirds, half of, a third of, etc., and describe the whole as two halves, three thirds, four fourths. Recognize that equal shares of identical wholes need not have the same shape. For example, students partition a rectangle (i.e., the whole) into three equal shares, identify each of the shares as a ‘third’ and describe the rectangle as three ‘thirds’.

Standards: Interdisciplinary

9.4.2.CI.1	Demonstrate openness to new ideas and perspectives (e.g., 1.1.2.CR1a, 2.1.2.EH.1, 6.1.2.CivicsCM.2).
8.1.2.CS.1	Select and operate computing devices that perform a variety of tasks accurately and quickly based on user needs and preferences.
9.1.2.CAP.1	Make a list of different types of jobs and describe the skills associated with each job.
8.1.2.NI.2	Describe how the Internet enables individuals to connect with others worldwide.
9.1.2.PB.1	Determine various ways to save and places in the local community that help people save and accumulate money over time.
9.1.2.PB.2	Explain why an individual would choose to save money.

8.1.2.DA.4	Make predictions based on data using charts or graphs.
8.1.2.AP.2	Model the way programs store and manipulate data by using numbers or other symbols to represent information.
9.4.2.TL.1	Identify the basic features of a digital tool and explain the purpose of the tool (e.g., 8.2.2.ED.1).
9.4.2.TL.7	Describe the benefits of collaborating with others to complete digital tasks or develop digital artifacts (e.g., W.2.6., 8.2.2.ED.2).

Assessment Evidence

Formative	Collaborative Activities, Homework, Daily Classwork, Discussion, Independent Class Assignment, Informal Observations of Students, Games, Exit Slips, Questioning, Teacher Made Pages, Learning Centers, Problem of the Day, Reveal Workbooks, Fluency Checks, Curious, Activity Based Exploration, Guided Exploration, On My Own.
Summative	Tests, Mid-Chapter Checkpoint assessments, teacher generated assessments
Alternative & Benchmark	Alternative – Reteaching, One on One Conferencing, Learning Centers, student portfolio of assignments, Homework, Higher Order Thinking Problems, Additional leveled practice, orally administered assessments. Benchmark - LinkIt Benchmark Assessments, Totowa TPA
Assessment Evidence Resource	

Instructional Resources

Smartboard, Computers, websites and digital interactives/models, Multi-media presentations, video streaming, Brain Pop, Microsoft 365, Primary and Secondary Source Documents, Reveal, Resources, manipulatives, post-it notes, markers, number lines, chart & graph paper, construction paper, glue, scissors, paperclips, crayons, envelopes, dot ink & cards, geo blocks, number cubes/dice.

Instructional Resource List

Curricular Mandates

Below are the curricular requirements as defined in NJ Administrative Code and Statute

	Amistad		Diversity, Equity, and Inclusion
	Holocaust		LGBT and Disabilities (Grades 6-12)
	Climate Change		Asian American & Pacific Islander

Social Emotional Learning (SEL) Competencies

NJ Social and Emotional Learning Competencies & Sub-Competencies

X	Self-Awareness	X	Relationship Skills
X	Responsible Decision-Making	X	Social Awareness
X	Self-Management		

21st Century Skills & Themes

	Global and Cultural Awareness	X	Technology Literacy		Planning and Budgeting
X	Creativity and Innovation		Financial Institutions		Risk Management and Insurance
	Information and Media Literacy		Digital Citizenship		Economic and Government Influences
X	Critical Thinking and Problem Solving		Credit Profile		Career Awareness and Planning
	Civic Financial Responsibility		Financial Psychology		