

# Unit 4 - Data Analysis, Geometry & Equal Shares

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

## Unit Overview

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### Enduring Understandings

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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

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Why are picture graphs, bar 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

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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

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MATH.2.DL	Data Literacy
MATH.2.DL.A	Understand concepts of data
MATH.2.DL.A.1	Understand that people collect data to answer questions. Understand that data can vary.
MATH.2.DL.A.2	Identify what could count as data (e.g., visuals, sounds, numbers).
MATH.2.DL.B	Represent and interpret data
MATH.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.
MATH.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.
MATH.2.G	Geometry
MATH.2.G.A	Reason with shapes and their attributes
MATH.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.
MATH.2.G.A.2	Partition a rectangle into rows and columns of same-size squares and count to find the total number of them.
MATH.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

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PFL.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.
PFL.9.1.2.PB.2	Explain why an individual would choose to save money.
CS.K-2.8.1.2.AP.2	Model the way programs store and manipulate data by using numbers or other symbols to represent information.
CS.K-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.
CS.K-2.8.1.2.DA.4	Make predictions based on data using charts or graphs.
CS.K-2.8.1.2.NI.2	Describe how the Internet enables individuals to connect with others worldwide.
WRK.9.1.2.CAP.1	Make a list of different types of jobs and describe the skills associated with each job.

TECH.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).
TECH.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).
TECH.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
<a href="#">Assessment Evidence Resource</a>	

## 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	