Pre-K Chapter 9

Content Area: **Math**
Course(s):
Time Period: **May**
Length: **6-8 Weeks**
Status: **Published**

Enduring Understandings

During this chapter, students will learn to:

- Identify, collect, and organize data.
- Compare amounts of data to interpret graphs.
- Make a model to problem solve.

After this chapter, students will learn to:

- Compose and decompose numbers.
- Add numbers to 10. Subtract from 10.

Unit Overview

In Chapter9, students will learn to gather data, record information on a graph, and gather information from a graph.

Having laid a foundation in Chapter 1 Attributes and Chapter 2 Sorting and Classifying, students will use sorting by attribute skills to make comparisons. Students will extend their use of sorting skills by exploring ways to organize information called data. This sorted information will be presented in both real and picture graphs. Graphs will be interpreted as comparisons of more, less, and the same are made.

What's Happening Developmentally?

This area mathematics incorporates a child's basic knowledge of measurement, geometry, and operations. Through the use of attributes, the young child is able to understand and interpret data compiled into a set or sets of information.

The **3-year-old** is at the beginning level of understanding and using concrete or real graphs. Drawing on their familiarity of primary colors, favorite toys, or knowledge of shapes (circles verses non-circles), they are eager to engage in simple data collection and representation. For example, by using real graph that holds art utensils (crayons, chalk, pain brush), the question could be answered: "What is your favorite object to draw with?"

With guidance, **4-year-olds** are venturing into the use of picture graphs as well as continued experience with real graphs. At this level they may have a more personal reason for relying on such data. For example, they may prefer a certain grocery store because it offers more fruit-smoothie flavors. Graphs that address children's interest have the greatest appeal for them.

The typical **5-year-old** continues in the venture to create and interpret real and picture graphs. In some cases they find the information interesting enough to share with others (did you know that...?) and more and more rely on such to help them make personal decisions.

Essential Questions

How do I collect data, show it, and use it?

Instructional Strategies & Learning Activities

Lesson	9-1	9-2	9-3	9-4
Lesson/Objective	**Collecting Data for a Graph** (pp. 56A-56D) **Objective**: Students will collect, organize, and display data.	**Real Graphs** (pp. 57A-57D) **Objective:** Students will construct a real graph and discuss the data.	**Picture Graphs** (pp. 58A-58D) **Objective:** Students will construct a picture graph and discuss the data.	**Problem-Solving Strategy: Make a Model** (pp. 59A-91B) **Objective:** Students will use the strategy of Making a Model to solve a problem.
Foundation for CCSS	K.CC.4a, K.CC.5, K.MD.3	K.CC.4a, K.CC.5, K.CC.6, K.MD.3	K.CC.4a, K.CC.5, K.CC.6, K.MD.3	K.CC.4a, K.CC.5, K.CC.6, K.MD.3
Math Vocabulary	collect, data, information	collect, column, data, real graph, row	picture graph	
Lesson Resources	**Materials:** Flip book, chart paper, crayons, paper, red	**Materials:** Flip Book, apples, teddy bears, toy dinosaurs, yarn, ice cube trays,	**Materials:** Flip Book, paper, photo of a butterfly and caterpillar,	**Materials:** Flip Book, paper, Blackline Master page 124, tape,

	and blue cubs **Manipulatives-** none **Other Resources-** *Mouse Shapes* by Ellen Stoll Walsh	platic sandwich bags **Manipulatives-**bear counters, connecting cubs **Other Resources-** *10 for Dinner* by Ellen Bogar *Our Favorite Things* by Becky Manfredini	Blackline Master page 118, poster board, crayons, coins **Manipulatives-** none **Other Resources-** *The Crayon Book* by Pam Munoz Ryan & Jerry Pallotta	crayons **Manipulatives-** connecting cubes, attribute buttons, strings **Other Resources-** *Giraffe Graphs* by Melissa Stewart
Technology connectED	Song: "Organizing Data"	Song: "Organizing Data"	Song: "Organizing Data"	Song: "Organizing Data"
Researching All Learners	Stepping Back English Language Learners Going Farther	Stepping Back English Language Learners Going Farther	Stepping Back English Language Learners Going Farther	Stepping Back English Language Learners Going Farther

Integration of Career Readiness, Life Literacies and Key Skills

	Different types of jobs require different knowledge and skills.
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).
9.4.2.CT.3	Use a variety of types of thinking to solve problems (e.g., inductive, deductive).

Computer Science and Design Integration

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.
8.2.2.ED.3	Select and use appropriate tools and materials to build a product using the design process.

Interdisciplinary Connections

All disciplines are incorporated into the preschool program when appropriate.

LA.RI.K.1	With prompting and support, ask and answer questions about key details in a text.
LA.RI.K.2	With prompting and support, identify the main topic and retell key details of a text.
LA.RI.K.4	With prompting and support, ask and answer questions about unknown words in a text.
LA.RI.K.7	With prompting and support, describe the relationship between illustrations and the text in which they appear (e.g., what person, place, thing, or idea in the text an illustration depicts).
LA.RF.K.1	Demonstrate understanding of the organization and basic features of print.
LA.RF.K.2	Demonstrate understanding of spoken words, syllables, and sounds (phonemes).
LA.RF.K.3	Know and apply grade-level phonics and word analysis skills in decoding and encoding words.

Differentiation

Each chapter in MyMath teacher manual contains differentiated instruction for Approaching Level, On Level, and Above Level students.

Modifications & Accommodations

IEP and 504 accommodations will be utilized in addition to the differentiated instruction in the Unit.

Benchmark Assessments

Checklists

Teacher observation

Formative Assessments

Checklists

Teacher observation

Discussion

Summative Assessments

Assessments for chapters located in MyMath Unit.

Instructional Materials

See Above

Standards

4.1	Children begin to demonstrate an understanding of number and counting.
4.1.4	Understand the relationship between numbers and quantities (i.e., the last word stated when counting tells “how many”):
4.1.4.a	Accurately count quantities of objects up to 10, using one-to one-correspondence, and accurately count as many as 5 objects in a scattered configuration.
4.1.4.b	Arrange and count different kinds of objects to demonstrate understanding of the consistency of quantities (i.e., “5” is constant, whether it is a group of 5 people, 5 blocks or 5 pencils).
4.1.4.c	Instantly recognize, without counting, small quantities of up to 3 or 4 objects (i.e., subitize).
4.1.5	Use one to one correspondence to solve problems by matching sets (e.g., getting just enough straws to distribute for each juice container on the table) and comparing amounts (e.g., collecting the number of cubes needed to fill the spaces in a muffin tin with one cube each).
4.2.2	Begin to represent simple word problem data in pictures and drawings.
4.3.1	Sort, order, pattern, and classify objects by non-measurable (e.g., color, texture, type of material) and measurable attributes (e.g., length, capacity, height).
4.3.3	Compare (e.g., which container holds more) and order (e.g., shortest to longest) up to 5 objects according to measurable attributes.