May Gr. 3 Unit 12: Represent and Interpret Data

Content Area: **Math**
Course(s):
Time Period: **May**
Length: **4-5 Weeks**
Status: **Obsolete**

Unit Overview

Students will understand how to represent data using scaled graphs, how to interpret data in graphs, how to use a line plot and how to use a ruler to measure to the nearest half or quarter inch.

Enduring Understandings

Pictographs and scaled bar graphs can be used to represent data sets. We can use a line plot or represent data.

Rulers are divided into half and quarter inches to get more accurate measurements.

Essential Questions

How do we obtain useful information from a set of data?

Instructional Strategies & Learning Activities

- **Pacing Guide**
  Suggested Pacing

Instruction	10 days
Review/Assessment	2 days
Total*	**12 days**

- *Includes additional time for remediation and differentiation.

Lesson	Objective	Material & Manipulatives	Vocabulary	Standard
Lesson 1 *pp. 691-696* **Collect and Record Data**	Collect and record data through observations and surveys.	• small brown paper bag • connecting cubes	**data** **frequency** **table** **survey** **tally marks** **tally chart**	Preparation for 3.MD.3 3.MD.4 **Supporting Cluster** **MP 2, 3, 4, 5, 8**

Lesson	Objective	Materials	Vocabulary	Standards
Lesson 2 *pp. 697-702* **Draw Scaled Picture Graphs**	Draw a scaled picture graph.	• sticky notes	**picture graph analyze pictograph interpret key**	3.MD.3 **Supporting Cluster** **MP 2, 3, 4, 5, 6**
Lesson 3 *pp. 703-708* **Draw Scaled Bar Graphs**	Draw scaled bar graphs.	• sticky notes	**bar graph scale**	3.MD.3 **Supporting Cluster** **MP 1, 2, 3, 4, 5, 6**
Lesson 4 *pp. 709-714* **Relate Bar Graphs to Scaled Picture Graphs**	Relate bar graphs to scaled picture graphs.			3.MD.3 **Supporting Cluster** **MP 1, 2, 3, 4, 8**
Lesson 5 *pp. 715-720* **Draw and Analyze Line Plots**	Draw, organize, and analyze data in line plots.	• sticky notes	**line plot**	3.MD.4 **Supporting Cluster** **MP 2, 3, 4, 5, 6, 8**
Check My Progress				
Lesson 6 *pp. 723-728* **Hands On: Measure to Halves and Fourths of an Inch**	Measure lengths to the nearest half inch and nearest quarter inch.	• inch ruler • few items less than 12 inches in length • connecting cubes	**half inch quarter inch**	3.MD.4 **Supporting Cluster** **MP 2, 3, 6**
Lesson 7 *pp. 729-734* **Collect and Display Measurement Data**	Collect and display measurement data to fractions of an inch.	• inch ruler • blank piece of paper • red and blue colored pencils		3.MD.4 3.OA.3 **Supporting Cluster** **MP 1, 2, 4, 5, 8**
Lesson 8 *pp. 735-740* **Problem Solving Investigation: Solve a Simpler Problem**	Solve problems by solving a simpler problem.			3.MD.3 3.MD.4 **Supporting Cluster** **MP 1, 2, 4, 6**
My Review and Reflect				

Integration of Career Readiness, Life Literacies and Key Skills

WRK.9.2.5.CAP.1	Evaluate personal likes and dislikes and identify careers that might be suited to personal likes.
WRK.9.2.5.CAP.2	Identify how you might like to earn an income.
WRK.9.2.5.CAP.3	Identify qualifications needed to pursue traditional and non-traditional careers and occupations.
WRK.9.2.5.CAP.4	Explain the reasons why some jobs and careers require specific training, skills, and certification (e.g., life guards, child care, medicine, education) and examples of these

	requirements.
TECH.9.4.5.CT	Critical Thinking and Problem-solving
TECH.9.4.5.CT.1	Identify and gather relevant data that will aid in the problem-solving process (e.g., 2.1.5.EH.4, 4-ESS3-1, 6.3.5.CivicsPD.2).
TECH.9.4.5.DC.4	Model safe, legal, and ethical behavior when using online or offline technology (e.g., 8.1.5.NI.2).
	Digital identities must be managed in order to create a positive digital footprint.
	An individual's passions, aptitude and skills can affect his/her employment and earning potential.
	The ability to solve problems effectively begins with gathering data, seeking resources, and applying critical thinking skills.
	Collaboration with individuals with diverse perspectives can result in new ways of thinking and/or innovative solutions.
	Curiosity and a willingness to try new ideas (intellectual risk-taking) contributes to the development of creativity and innovation skills.

Technology and Design Integration

Students will interact with Smartboard, Chromebooks and document camera.

CS.3-5.8.1.5.DA.1	Collect, organize, and display data in order to highlight relationships or support a claim.
CS.3-5.8.1.5.DA.2	Compare the amount of storage space required for different types of data.
CS.3-5.8.1.5.DA.3	Organize and present collected data visually to communicate insights gained from different views of the data.
CS.3-5.8.1.5.DA.4	Organize and present climate change data visually to highlight relationships or support a claim.
CS.3-5.8.1.5.DA.5	Propose cause and effect relationships, predict outcomes, or communicate ideas using data.
CS.3-5.DA	Data & Analysis
	The type of data being stored affects the storage requirements.
	Computing devices may be connected to other devices to form a system as a way to extend their capabilities.
	Data can be organized, displayed, and presented to highlight relationships.
	Individuals can select, organize, and transform data into different visual representations and communicate insights gained from the data.
	Many factors influence the accuracy of inferences and predictions.

Interdisciplinary Connections

Leveled Math readers "Students at Work".

LA.RI.3.1	Ask and answer questions, and make relevant connections to demonstrate understanding of a text, referring explicitly to the text as the basis for the answers.
LA.RI.3.4	Determine the meaning of general academic and domain-specific words and phrases in a

	text relevant to a grade 3 topic or subject area.
LA.RI.3.7	Use information gained from text features (e.g., illustrations, maps, photographs) and the words in a text to demonstrate understanding of the text (e.g., where, when, why, and how key events occur).
LA.RI.3.10	By the end of the year, read and comprehend literary nonfiction at grade level text-complexity or above, with scaffolding as needed.
CAEP.9.2.4.A.2	Identify various life roles and civic and work - related activities in the school, home, and community.
CAEP.9.2.4.A.4	Explain why knowledge and skills acquired in the elementary grades lay the foundation for future academic and career success.

Differentiation

Each My Math unit throughout the series offers "approaching level", "on level" and "Beyond level" differentiated instructional hands-on choices, as well as ELL differentiated support. Please refer to the teacher edition for the activities.

Modifications & Accommodations

IEP and 504 accommodations will be followed.

Benchmark Assessments

Aimsweb Assessment, Chapter Pretests, Dreambox

Formative Assessments

Teacher observation

Student conferences

Discussion

Activities

games

homework

Summative Assessments

My Math chapter assessments

Instructional Materials

See materials listed above

Standards

MA.3.MD.B.3	Draw a scaled picture graph and a scaled bar graph to represent a data set with several categories. Solve one- and two-step "how many more" and "how many less" problems using information presented in scaled bar graphs.
MA.3.MD.B.4	Generate measurement data by measuring lengths using rulers marked with halves and fourths of an inch. Show the data by making a line plot, where the horizontal scale is marked off in appropriate units— whole numbers, halves, or quarters.
MA.3.OA.A.3	Use multiplication and division within 100 to solve word problems in situations involving equal groups, arrays, and measurement quantities, e.g., by using drawings and equations with a symbol for the unknown number to represent the problem.