

Chapter 12 - Overview & Support

Classify and Sort Data

Standards:

MD. Classify objects and count the number of objects in each category.

K.MD.3

Classify objects into given categories; count the numbers of objects in each category and sort the categories by count.

Additional Standards:

CC. Know number names and the count sequence.

K.CC.3

Write numbers from 0 to 20. Represent a number of objects with a written numeral 0-20 (with 0 representing a count of no objects).

CC. Count and tell the number of objects.

K.CC.4

Understand the relationship between numbers and quantities; connect counting to cardinality.

- a. When counting objects, say the number names in the standard order, pairing each object with one and only one number name and each number name with one and only one object
- b. Understand that the last number name said tells the number of objects counted. The number of objects is the same regardless of their arrangement or the order in which they were counted.
- c. Understand that each successive number name refers to a quantity that is one larger.

K.CC.5

Count to answer "how many?" questions about as many as 20 things arranged in a line, a rectangular array, or a circle, or as many as 10 things in a scattered configuration; given a number from 1–20, count out that many objects.

******Special Note:**

- Go Math! Supplies plenty of plane attribute shapes for sorting whole class or small group. Make sure to prep ahead of time to be ready for each lesson.
- This chapter requires extensive prep for each lesson. You will need different shapes and/or connecting cubes each day. It is suggested that you have manipulatives put in a container for each child, rather than setting out a large container to share. This will ensure that the management of this lesson runs smoothly.

Suggested Routines:

- Shape talks-use plane attribute shapes for modeling
- Matching games (shape matching-matching photos/blacklines of shapes to the actual shape)
- Manipulate and compare plane shapes
- Opportunities to recognize 2D shapes and their attributes. Eg: color, size and shape.
- Rotate flip and arrange puzzle pieces to complete a design (pattern blocks and tangrams)
- Counting Collections- count/sort/compare

¹ Limit category counts to be less than or equal to 10.

Resources to Support Routines:

<https://tedd.org/mathematics/>

[Teacher Education by Design: TEDD](#)

Quick Images

Counting Collections

Choral Countings

Number Strings

[Number Talks](#) by Sherry Parrish (several books available at site)

Manipulatives/Materials included in Go Math!:

2D (plane) plastic or foam attribute shapes, 2D (plane) picture representations, and connecting cubes in various colors.

Supplemental Manipulatives/Materials:

Sorting mats, sorting “rings” (hula hoops) or yarn to make a ring to sort as you demonstrate whole class, and crayons.

Technology:

Go Math Academy website-Math on the Spot videos, Think Central website-animated math models, HMH Mega Math.

Vocabulary:

blue	green	red	yellow	category	classify
shape	size	big	small	graph	attribute
fewer	more	yes	no	same	color

Strategies for Chapter:

Play games describing and sorting shapes, modeling, hands on experiences where students manipulate and sort shapes based on specified attributes.

Eg: Shape games, riddles, “What’s my attribute?”, I Spy, “Which does not belong?”, “Where does this belong?”

Look in the marginalia at EL Strategy for pre teaching strategies and math journal ideas.

Color Coding:

Green (G) - The lesson accurately reflects the Framework standard(s).

Yellow (Y) - This lesson includes notes to refer to while planning the lesson.

Red (R) - This lesson does not accurately reflect the Framework standard(s). Skip the lesson.

Essential Questions:

How does sorting help you display information?

**Refer the essential questions in each lesson to formulate your teaching objectives for the lesson.*

How can you classify and count objects by color, shape, and size?

How can you make and read a graph to count objects that have been classified into categories?

Students will be able to:

-classify and count objects by their color, shape, and/or size

-read graphs and make graphs sorting objects into categories

Lesson-by-Lesson Overview:

*****Plan instruction with the content standards, math practice standards and Go Math essential question as guiding focus. Wherever possible it is suggested that children engage with hands on activities/concrete tools and resources in lieu of workbook pages.**

Lesson #, Standard	Title	Materials	Vocab	Notes
Show What You Know				
12.1 Y K.MD.3	Classify and Count by Color	Need to give each student a container of shapes to sort	blue, category, classify, color, green, red, yellow, attribute, color	Use additional strategies to support these sorting lessons. See above "Strategies for Chapter" for ideas to supplement instruction.
12.2 Y K.MD.3	Classify and Count by Shape	Need to give each student a container of shapes to sort	shape, category, classify	Use additional strategies to support these sorting lessons. See above "Strategies for Chapter" for ideas to supplement instruction.
12.3 Y K.MD.3	Classify and Count by Size	Need to give each student a container of shapes to sort	big, small, size, category, classify	Use additional strategies to support these sorting lessons. See above "Strategies for Chapter" for ideas to supplement instruction.
Mid-Chapter Checkpoint- as part of lesson 12.3				

12.4 Y K.MD.3	Make a Concrete Graph	Use connecting cubes: orange, green, red and blue You will also need green triangle and circle shapes	graph, category, classify	Use additional strategies to support these sorting lessons. See above "Strategies for Chapter" for ideas to supplement instruction.
12.5 Y K.MD.3	Read a Graph	crayons	category, classify, graph	Use magnetic counters on the board to model graphing and comparing.
Ch. 12 Test Y	Pgs. 517-520		sort, same, category, big, large, small, Yes, No, classify, graph, more, color, size, shape	
Reteach/ Intervention Options:	Review assessment results. Refer to RTI strategies at the end of the TE chapter 12 Review/Test: <ul style="list-style-type: none"> ● Reteach Blackline Masters ● Math centers/workshop and/or math standards games. ● Small group instruction focused on a single standard using the Intensive Intervention materials. ● Whole group instruction focused on a single standard. ● Use student examples (no name) and correct as a whole group discussing math reasoning. Use that math reasoning to support their corrections and validate their math though processes. ● Small group math discussion: Use a few problems from the blackline summative assessment guide for Chapter 12. Pull problems that seemed difficult for some students on the Review/Test. Present the each problem and have the groups discuss the strategies to solve the problems. ● Math standards games and/or technology apps that support specific standards. ● In small groups, do the "Performance Task" from the Assessment Book in Go Math! Share strategies and discuss whole class. 			

Additional Suggestions/Notes

Silicon Valley Mathematics Initiative (SVMi) Tasks

Counting Fruit 2012

Fruit Salad 2012 (Addition is utilized)

Classroom Organization 2015 (5)

