

MA.1.DP.1.1

Overarching Standard: *MA.1.DP.1* Develop an understanding for collecting, representing, and comparing data.

Benchmark of Focus

MA.1.DP.1.1: Collect data into categories and represent the results using tally marks or pictographs.

Example: A class collects data on the number of students whose birthday is in each month of the year and represents it using tally marks.

Benchmark Clarifications

Clarification 1: Instruction includes connecting tally marks to counting by 5s.

Clarification 2: Data sets include geometric figures that are categorized using their defining attributes and data from the classroom or school.

Clarification 3: Pictographs are limited to single-unit scales.

Related Benchmark/Horizontal Alignment

- MA.1.NSO.1.1
- MA.1.GR.1.1

Vertical Alignment

Previous Benchmarks

MA.K.DP.1.1

Next Benchmarks

MA.2.DP.1.1

Purpose and Instructional Strategies

The purpose of this benchmark is to get students thinking about how they can organize information in a way that can be interpreted. In Kindergarten, students collected and sorted objects. Student results are recorded by students either verbally or with written numerals or drawings. The expectation is not for students to create a graph on their own. (MTR.5.1).

- Instruction includes providing opportunities for students to understand that bundling tally marks into groups of five allows for more efficient counting of larger data sets. (MTR.5.1)
- Instruction includes guiding students to skip count by 5s when using tally marks that have been bundled into fives. (MTR.3.1)
- Instruction includes real-world context for data representations. (MTR.7.1)
- Instruction includes providing opportunities for students to choose a representation (pictograph or tally marks) for their data set and have discussions of the efficiency of the representation.
- Instruction includes the understanding that different types of graphs are useful in representing different contexts.

Common Misconceptions or Errors

- Students may not recognize that when using tally marks, they make a slash through four tally marks to represent a bundle of five tally marks.

Strategies to Support Tiered Instruction

- Teacher models how to make groups of five using straws and gives students straws and have students practice placing straws in groups of five, including how to arrange the fifth straw in a group. The teacher has the students practice counting the straws in groups of five and then records the number of straws they counted using both tally marks and numerals. If the student isn't sure how to draw a bundle of five tally marks correctly, the teacher shows them how to draw the fifth tally mark diagonally across four tally marks. The teacher has the student count each tally mark to verify that there are five tallies. Next the teacher models how to make groups of six and has the student show them where they would place a sixth tally mark as it should be near the bundle of five but not a part of the bundle. Next, the teacher has the students practice placing a sixth straw in their bundle. Once the students have successfully modeled how to create six with straws, the teacher asks the students to draw larger numbers, such as seven or nine with tally marks and record the numeral.

Questions to ask students:

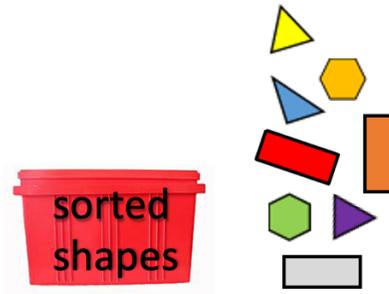
- **What are some ways you can organize and represent data to make it easier to interpret?**
 - Sample answer that indicates understanding: *You can make a tally chart or pictograph to show the data in an organized way.*
- **If you were going to tally 7 people that liked the color blue, what would that look like?**
 - Sample answer that indicates understanding: *I would draw 7 tallies like this (The student correctly makes a bundle of 5 tallies and 2 more). I know that this is 5, 6, 7.*
- **If you were going to collect data about your classmates' favorite dessert, would you do it with tally marks or make a pictograph? Why?**
 - Sample answer that indicates understanding: *I would create a tally chart because that is a lot of people, and it would be easier and quicker to make tallies than a bunch of pictures.*
- **What could be the possible categories in a tally chart or pictograph if we collected data about people's favorite color?**
 - Sample answer that indicates understanding: *The different categories could be red, blue, and green.*

Instructional Tasks

Instructional Task 1

Josie was sorting out figures for her teacher and made a tally chart for the figures she put in the bin. The bell rang before Josie had a chance to sort all the figures and finish her chart. Help Josie finish by adding tally marks for the figures she hasn't sorted yet.

Shape		Total
	triangle	
	hexagon	
	rectangle	



Instructional Items

Instructional Item 1

The students in Mrs. Frank's class collected data on the color of shirts they would wear on the school field trip. Students could choose red, blue, or green. Organize the data using a pictograph. *Teacher Tip: Students may sketch circles to represent shirts.*

Tameka- red	Cindy- blue	Mark- blue
Randy- blue	Lin- blue	Greg- red
Raphael- green	Lisa- green	Shawna- blue

_____ shirts	
_____ shirts	
_____ shirts	

Instructional Item 2

Julie wants to know the favorite flavor of milk for first grade students. Is it chocolate, vanilla, or strawberry milk? Collect data from your classmates on their favorite flavor of milk. Then, represent the results using tally marks.

Additional Resources:

[CPALMS Resources](#)

Resources/Tasks to Support Your Child at Home:

Have your child collect data and make a tally chart/pictograph about objects in your home. Some options include:

- the number of pennies, nickels, dimes, and quarters in a coin jar
- the red, orange, yellow, green, blue, and purple Fruit Loops
- the number cars, dolls, stuffed toys in the toy box

Read Aloud Book: [Tally O'Malley](#) – read the story with your child and have them keep track of the data with their own tally marks. Make a chart with each of the characters' names, the colors they choose, and their tallies. See how the children's tally marks compare with the marks in the book. *Extension: have your child choose one of the tally charts and use the same data to create a pictograph.

Pizza Survey: Have your child take a survey, ask family, friends, and neighbors, "What kind of pizza do you like best?" Have your child determine the 3 types of pizza categories for everyone to choose from. When finished collecting the data, work together to tally the responses or show the data in a pictograph.