Providing Pathways to Excellence for Each Student

**Grade 1 Mathematics**

**Unwrap a Standard: *What do students have to know and be able to do?***

**Domain: Measurement and Data**

**Cluster**: Represent and interpret data*(supporting cluster)*

**Domain/Reporting Category Weight:** 26% - 28% of Grade 3 AASA items

**Standard: 1.MD.C.4** Organize, represent, and interpret data with up to three categories; ask and answer questions about the total number of data points, how many in each category, and how many more or less are in one category than in another.

**Performance/Achievement Level Descriptors**

|  |  |  |  |
| --- | --- | --- | --- |
| **Emerging (1)** | **Developing (2)** | **Proficient (3)** | **Distinguished (4)** |
| I can interpret data with up to three categories.I can ask and answer questions about the total number of data points, how many in eachcategory. | I can represent and interpret data with up to three categories.I can ask and answer questions about the total number of data points, how many in each category, and/or which category has more or less than another. | I can organize, represent, and interpret data with up to three categories.I can ask and answer questions about the total number of data points, how many ineach category, andhow many more or less are in one category than in another. | I can collect, organize, accurately represent, and interpret data with up to three categories.I can ask and answer questions about the total number of data points,how many in each category, and how many more or less are in one category than in another. |
|  |
| **Building Background Knowledge and skills: Flashback Standard**Standard: **K.MD.B.3** I can classify objects into given categories; count the number in each category and sort the categories by count. (Note: Limit category counts to be less than or equal to 10.) |
|  |
| **Extending Knowledge and skills: Preview Standard**Standard**: 2.MD.D.10** 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 the graph |

|  |  |
| --- | --- |
| **Essential Knowledge/Concepts*****What Do Students Need to Know/Understand?*****List the underlined nouns.** | **Essential Skills*****What Do Students Need to Be Able to Do?*****List the circled (or *italicized*) verbs.** |
| **DOK Level** **Level of content complexity rather than content difficulty.** |
| **WONDER Questions*****How can we capture student wonder?*****\*Including open-ended and ‘second’ questions** | **Essential Vocabulary*****What Do Students Need to Comprehend?*****List all key vocabulary**  |
| **Learning Objectives aligned to the Standard*****What are the Learning Intentions and Success Criteria that will guide student progress?*** |
| **Evidence of Student Mastery?*****How will we know when they know it?******How will we encourage each student to try?*** |
|  **Specific Instructional Framework?*****What will we do to help them know/understand/can do it?******What will we do for students who still don’t know it?******What will we do for students who already know it?*** |

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**Standard: 1.MD.C.4 Organize**, **represent**, and **interpret** data with up to three categories; **ask** and **answer** questions about the total number of data points, how many in each category, and how many more or less are in one category than in another.

**Performance/Achievement Level Descriptors**

|  |  |  |  |
| --- | --- | --- | --- |
| **Emerging (1)** | **Developing (2)** | **Proficient (3)** | **Distinguished (4)** |
| I can **interpret** data with up to three categories.I can **ask** and **answer** questions about the total number of data points, how many in eachcategory. | I can **represent** and **interpret** data with up to three categories.I can **ask** and **answer** questions about the total number of data points, how many in each category, and/or which category has more or less than another. | I can **organize**, **represent**, and **interpret** data with up to three categories.I can **ask** and **answer** questions about the total number of data points, how many ineach category, andhow many more or less are in one category than in another. | I can **collect,** **organize**, **accurately represent**, and **interpret** data with up to three categories.I can **ask** and **answer** questions about the total number of data points,how many in each category, and how many more or less are in one category than in another. |
|  |
| **Building Background Knowledge and skills: Flashback Standard**Standard: **K.MD.B.3** I can **classify** objects into given categories; **count** the number in each category and **sort** the categories by count. (Note: Limit category counts to be less than or equal to 10.) |
|  |
| **Extending Knowledge and skills: Preview Standard**Standard**: 2.MD.D.10** **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 the graph |

|  |  |
| --- | --- |
| **Essential Knowledge/Concepts*****What Do Students Need to Know/Understand?*****List the underlined nouns.**Data Data Points Graph Category Total Number How many AskAnswer More than Less than CollectOrganize Sort Compare Bar graphPicture Graph | **Essential Skills*****What Do Students Need to Be Able to Do?*****List the circled (or *italicized*) verbs.**Interpret Ask Answer RepresentOrganize Collect Compare Explain |
| **DOK Level** **Level of content complexity rather than content difficulty.****DOK 1 DOK 2 DOK 3** |
| **WONDER Questions*****How can we capture student wonder?*****\*Including open-ended and ‘second’ questions**How do we know there are more apples than bananas?I wonder what questions can be answered using our data?Can we create a question that is not answered by our graph? | **Essential Vocabulary*****What Do Students Need to Comprehend?*****List all key vocabulary** More than Less than Data Data points Graph Picture graph Bar graph question SortTotal number |
| **Learning Objectives aligned to the Standard*****What are the Learning Intentions and Success Criteria that will guide student progress?******See attached Learning intentions and Success Criteria*** |
| **Evidence of Student Mastery?*****How will we know when they know it?******How will we encourage each student to try?******See attached Diagnostic Formative Assessment (DFA)*** |
|  **Specific Instructional Framework?*****What will we do to help them know/understand/can do it?******What will we do for students who still don’t know it?******What will we do for students who already know it?******See attached Thinking Routines and Focus for Small Group Learning*** |

**Create a Diagnostic Formative Assessment (DFA)**

***How will we know when they know it?***

***How will we encourage each student to try?***

**Item #1:** Alignment to PLD 1.MD.C.4.**0** (Flashback to **K.MD.B.3**)

Your teacher has given you a baggy with red triangles and blue circles.

**PART A.** Sort the shapes with the same shape and color into the labeled boxes below.

**PART B.** How many blue circles do you have in the box?

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  |  |  |  |  |  |  |  |

|  |  |
| --- | --- |
| Blue Circles | Red Triangles |
|  |  |

 How many blue circles do you have in the box? \_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Item #2:** Alignment to PLD 1.MD.C.4.**1**

Katrina placed her blocks in the chart below.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  |  |  |  |  |
|  |  |  |  |  |

How many blocks are there? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Item #3:** Alignment to PLD 1.MD.C.4.**2**

Mr. Lopez has purchased fruit for his family.

|  |  |
| --- | --- |
| A yellow banana on a black background  Description automatically generated |  |
| A yellow banana on a black background  Description automatically generated |  |
| A yellow banana on a black background  Description automatically generated | A red apple with green leaf  Description automatically generated |
| A yellow banana on a black background  Description automatically generated | A red apple with green leaf  Description automatically generated |
| **Bananas** | **Apples** |

 **PART A.** How many bananas did Mr. Lopez purchase for his family? \_\_\_\_\_\_\_\_\_\_\_\_

 **PART B.** How many apples did Mr. Lopez purchase for his family? \_\_\_\_\_\_\_\_\_\_\_\_

 **PART C.** Did Mr. Lopez purchase more bananas or apples? \_\_\_\_\_\_\_\_\_\_\_\_

**Item #4:** Alignment to PLD 1.MD.C.4.**3**

Doris wanted to know how many cats and dogs living with her friends. The table shows each dog and cat recorded by Doris.

|  |  |  |
| --- | --- | --- |
| A cartoon dog with its tongue out  Description automatically generated | A cartoon dog wearing sunglasses  Description automatically generated | A cartoon dog wearing sunglasses  Description automatically generated |
| A cartoon dog wearing sunglasses  Description automatically generated | A cartoon dog with its tongue out  Description automatically generated | A cartoon dog wearing sunglasses  Description automatically generated |
| A cartoon dog wearing sunglasses  Description automatically generated | A cartoon dog with its tongue out  Description automatically generated | A cartoon dog wearing sunglasses  Description automatically generated |

 Circle the chart that shows the correct number of cats and dogs.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| A cartoon dog with its tongue out  Description automatically generatedA cartoon dog wearing sunglasses  Description automatically generated | ~~IIII~~ ~~IIII~~ |  | A cartoon dog with its tongue out  Description automatically generatedA cartoon dog wearing sunglasses  Description automatically generated | ~~IIII~~ IIII |
|  |  |  |  |  |
| A cartoon dog with its tongue out  Description automatically generatedA cartoon dog wearing sunglasses  Description automatically generated | ~~IIII~~ III |  | A cartoon dog with its tongue out  Description automatically generatedA cartoon dog wearing sunglasses  Description automatically generated | ~~IIII~~ II |

**Item #5:** Alignment to PLD 1.MD.C.4.**3**

Carol went on a class trip to a farm. She recorded the number of horses and number of cows she saw at the farm.

        

 **PART A.** Organize the number of pigs, cows, and horses in the graph below.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Horses** |  |  |  |  |  |
| **Cows** |  |  |  |  |  |
| **Pigs** |  |  |  |  |  |

 **PART B.** How many pigs did Carol see at the farm? \_\_\_\_\_\_\_

 **PART C.** How many cows did Carol see at the farm? \_\_\_\_\_\_\_

 **PART D.** How many horses did Carol see at the farm? \_\_\_\_\_\_\_

 **PART E.** How many more cows than horses did Carol see at the farm? \_\_\_\_\_\_\_

**Item #6:** Alignment to PLD 1.MD.C.4.**4**

La Tanya and her classmates in Flagstaff, AZ recorded the weather during March of this year. They recorded their findings in the table below.

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Sunny** | Smiling Sun Stock Illustrations – 22,141 Smiling Sun Stock Illustrations,  Vectors & Clipart - Dreamstime | Smiling Sun Stock Illustrations – 22,141 Smiling Sun Stock Illustrations,  Vectors & Clipart - Dreamstime | Smiling Sun Stock Illustrations – 22,141 Smiling Sun Stock Illustrations,  Vectors & Clipart - Dreamstime | Smiling Sun Stock Illustrations – 22,141 Smiling Sun Stock Illustrations,  Vectors & Clipart - Dreamstime | Smiling Sun Stock Illustrations – 22,141 Smiling Sun Stock Illustrations,  Vectors & Clipart - Dreamstime | Smiling Sun Stock Illustrations – 22,141 Smiling Sun Stock Illustrations,  Vectors & Clipart - Dreamstime | Smiling Sun Stock Illustrations – 22,141 Smiling Sun Stock Illustrations,  Vectors & Clipart - Dreamstime | Smiling Sun Stock Illustrations – 22,141 Smiling Sun Stock Illustrations,  Vectors & Clipart - Dreamstime | Smiling Sun Stock Illustrations – 22,141 Smiling Sun Stock Illustrations,  Vectors & Clipart - Dreamstime | Smiling Sun Stock Illustrations – 22,141 Smiling Sun Stock Illustrations,  Vectors & Clipart - Dreamstime |
| **Cloudy** |  |  |  |  |  |  |  |  |  |  |
| **Rainy** | 20,700+ Rain Clipart Stock Illustrations, Royalty-Free Vector Graphics & Clip  Art - iStock | 20,700+ Rain Clipart Stock Illustrations, Royalty-Free Vector Graphics & Clip  Art - iStock | 20,700+ Rain Clipart Stock Illustrations, Royalty-Free Vector Graphics & Clip  Art - iStock | 20,700+ Rain Clipart Stock Illustrations, Royalty-Free Vector Graphics & Clip  Art - iStock | 20,700+ Rain Clipart Stock Illustrations, Royalty-Free Vector Graphics & Clip  Art - iStock | 20,700+ Rain Clipart Stock Illustrations, Royalty-Free Vector Graphics & Clip  Art - iStock | 20,700+ Rain Clipart Stock Illustrations, Royalty-Free Vector Graphics & Clip  Art - iStock | 20,700+ Rain Clipart Stock Illustrations, Royalty-Free Vector Graphics & Clip  Art - iStock |  |  |
| **Snow** | Snow Cloud Clipart | FREE DOWNLOAD | Pearly Arts | Snow Cloud Clipart | FREE DOWNLOAD | Pearly Arts | Snow Cloud Clipart | FREE DOWNLOAD | Pearly Arts | Snow Cloud Clipart | FREE DOWNLOAD | Pearly Arts | Snow Cloud Clipart | FREE DOWNLOAD | Pearly Arts | Snow Cloud Clipart | FREE DOWNLOAD | Pearly Arts |  |  |  |  |

 **PART A.** How many rainy days did they have in March? \_\_\_\_\_\_\_\_

 **PART B.** How many more rainy days did they have than cloudy days? \_\_\_\_\_\_\_\_

 **PART C.** How many days did they record the weather? \_\_\_\_\_\_\_\_

**My Learning Intention and Success Criteria 1.MD.C.4 Individual Component Version**

|  |
| --- |
| **My Learning Intention:** I am learning to organize, represent, and interpret data. |
| **My Success Criteria** | **Post** | **Why am I learning this?** |
| I can count the number of items in a category. | 🥳🙂🤔 |  |
| I can correctly place data in a table. | 🥳🙂🤔 |
| I can read data from a picture graph. | 🥳🙂🤔 |
| I can answer questions about data in a table. | 🥳🙂🤔 |
| I can create a picture graph based on data. | 🥳🙂🤔 |
| What do I want to remember?  |

**Guided Group Lesson**

**Standard:1.MD.B.4** I am learning to **Organize**, **represent**, and **interpret** data with up to three categories; **ask** and **answer** questions about the total number of data points, how many in each category, and how many more or less are in one category than in another.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Group Members | Emerging | Developing | Proficient | Distinguished |
|  |  |  |  |

Warm-Up:

|  |
| --- |
| With a partner, students are provided a bag of attribute blocks and place them in an attribute sort chart. Students then use the chart to determine how many of each type block was in their bag. |

Vocabulary

More than Less than Data

Data points Graph Picture graph

Bar graph question Sort

Total number

equal to substitute unknown reason

Transformation Point on the line Function

|  |  |  |  |
| --- | --- | --- | --- |
| **Emerging** | **Developing** | **Proficient** | **Distinguished** |
| Students play a game of ‘be the teacher’. Each team is provided a picture graph with two or three categories. The teams are tasked with creating two questions that other teams will have to answer. | Pairs of students play a game of *Where do I Belong* matching sets of data, associated picture graph, and associated question answered in the graph. | Students collect, organize, accurately represent, and interpret data into three categories based on data provided by their teacher. | Students design a survey to be given to classmates based on a topic chosen by the team. They then organize, accurately represent, and interpret the data into categories based on data. Students then summarize what is revealed in the data. |

|  |  |  |
| --- | --- | --- |
| Observations: |  | Next Steps: |
| What you notice about your students during small group instruction. | What will you do with these students next? Change groups, repeat, etc. |