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 each  category. | 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 in  each category, and  how 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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**Grade 1 Mathematics**

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

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

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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 each  category. | 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 in  each category, and  how 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 Ask  Answer More than Less than Collect  Organize Sort Compare Bar graph  Picture Graph | **Essential Skills**  ***What Do Students Need to Be Able to Do?***  **List the circled (or *italicized*) verbs.**  Interpret Ask Answer Represent  Organize 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 Sort  Total 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 generated  A cartoon dog wearing sunglasses  Description automatically generated | ~~IIII~~ ~~IIII~~ |  | A cartoon dog with its tongue out  Description automatically generated  A cartoon dog wearing sunglasses  Description automatically generated | ~~IIII~~ IIII |
|  |  |  |  |  |
| A cartoon dog with its tongue out  Description automatically generated  A cartoon dog wearing sunglasses  Description automatically generated | ~~IIII~~ III |  | A cartoon dog with its tongue out  Description automatically generated  A 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.

A cartoon pig standing on a black background

Description automatically generated A cow with horns on its head

Description automatically generated A black background with a black square

Description automatically generated with medium confidence A black background with a black square

Description automatically generated with medium confidence A cow with horns on its head

Description automatically generated A cow with horns on its head

Description automatically generated A cow with horns on its head

Description automatically generated A black background with a black square

Description automatically generated with medium confidence A cartoon pig standing on a black background

Description automatically generated

**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. |