SP 4.1

Chocolate Chip Mining Activity

Outcome SP 4.1 – Pre Test Review

1. What would be a good title for this graph? Put the title in the blank provided.
2. Looking again at the above graph, which color of popsicle was the most popular?

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1. The following pictograph represents the number of games won by 5 local soccer teams. Write two things you learn from this pictograph.

|  |  |
| --- | --- |
| **Team Name** | **Games Won** |
| Bullets |  |
| Sox |  |
| Hounds |  |
| Coyotes |  |
| Blues |  |

 = 2

1. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
2. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
3. Look at the following graph and answer the two questions below:

* 1. How many Smarties were in the package?

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* 1. What important item is missing in this graph?

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 5 . Roll a dice 15 times and record your results in the tally chart below:

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| **Number found on Dice** | **Number of times rolled** |
| 1 |  |
| 2 |  |
| 3 |  |
| 4 |  |
| 5 |  |
| 6 |  |

Using this information and a piece of grid paper to create a bar graph. Include all the necessary parts of a bar graph. Attach the grid paper to the back.

**Instructions**

**Before completing this assignment, the students must work through their outcome-based work booklets in order to gain some background information on graphs. The booklets include mini assignments from the Math Makes Sense textbook and other digital resources.**

**Vocabulary Sheet**

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| **Word** | **Definition** |
| **Data** | A collection of information gathered by observation, questioning or measurement. It is organized in graphs or charts.  |
| **Chart** | A way to organize collected data |
| **List** | A way to organize numbers or information. (Hint: your mom may often create one of these before going to the grocery store.) |
| **Tally Mark** | A way of counting items by making one mark for each item you count, and grouping by 5s as you go.  |
| **Tally Chart** | A chart on which a count is kept by using tally marks.  |
| **Line Plot** | A graph that uses and X to show each piece of data.  |
| **Bar Graph** | A graph using bars on a grid to show data.  |
| **Title** | The part of a graph that tells what the graph is about.  |
| **Axis** | A line along the edge of a graph. We label each axis to tell what data is displayed.  |
| **Scale** | The numbers written along either axis in a graph. The number of items each unit on a bar graph represents.  |

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| **Word** | **Definition** |
| **Key** | Tells what each symbol on a pictograph represents  |
| **Scale** | The number of items each square on a bar graph represents |
| **Vertical Axis** | A number line that runs up and down along the edge of a graph. It must be labelled to what data it displays.  |
| **Horizontal Axis** | A number line that runs left and right along the edge of a graph. It must be labelled to tell what data it displays.  |
| **Horizontal Bar Graph** | A graph that displays data by using horizontal bars of equal width on a grid.  |
| **Vertical Bar Graph** | A graph that displays data by using vertical bars of equal width on a grid.  |
| **Pictograph** | A graph that uses symbols to display data. Each symbol can represent more than one object. (hint: this type of graph MUST have a key) |

**Assignment Sheet**

**Directions**: The \_\_\_\_\_\_\_\_\_ Bakery needs your help eating cookies, but first you have a job to complete. The \_\_\_\_\_\_\_\_ Bakery hashired you to find out who puts the most chocolate chip in their cookies. The \_\_\_\_\_\_\_\_\_\_ Bakery wants to have the most chocolate chips in their cookies, so they need you to do some research for them. The Bakery has collected different brands of cookies for testing. Your job is to mine chocolate chips out of the cookies by following these directions:

1. Wash your desk and hands
2. Place a layer of paper towel on your desk.
3. Collect 1 cookie of each brand and place on the paper towel
4. Label each brand of cookie by writing on the paper towel
5. Ask your teacher for your mining tools (toothpick, plastic spoon)
6. Mine your cookie for chocolate chips and count the full chocolate chips
	1. Please do not smash the cookie because the chocolate chips will break and your data will be ruined. This will result in you being fired from your job. You will need to carefully break the cookie apart to dig out the chocolate chips.
7. Record your data in a tally chart.

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1. Enjoy your cookies and clean up your mess.
2. Use the data in your tally chart to create a pictograph, bar graph and line plot.
3. Once you have finished your research and graphs you will need to write a 3-sentence report telling the \_\_\_\_\_\_\_\_\_\_ Bakery how many chocolate chips were in the cookies and how many chocolate chips they need to have in their cookies in order to have the most chocolate chips in their cookies.

**Line Plot**

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**Bar Graph**

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Pictograph

Name:

Use your data from your tally chart to create a pictograph. Don’t forget to give your pictograph a title and labels.

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| Key:  = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  |

**Graphing Rubric Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

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| **Scale**  | Scale is visible in a key with labels and is appropriately sized for the data set.Scale is organized and neatly displayed in a many-to-one correspondence  | Scale is visible but not appropriately sized for the data set. Scale is displayed in a one-to-one display  | Scale is visible but are not appropriately sized for the data set.  | No Scale is visible  |
| **Neatness and Attractiveness**  | Neat and attractive. Chose colors that go well together and make the graph easy to understand. A ruler and graph paper were used.  | A ruler and graph paper were used to make the graph readable. Printing is readable  | Lines are neatly drawn but the graph is without color and no ruler was used.Coloring messy and printing is hard to read.  | Appears messy and "thrown together" in a hurry. Lines are visibly crooked and graph has no color. Printing is messy and hard to read.  |
| **\*\*\*Title**  | Title is creative and clearly relates to the problem being graphed (includes dependent and independent variable). It is printed at the top of the graph.  | Title clearly relates to the problem being graphed (includes dependent and independent variable) and is printed at the top of the graph.  | A title is present at the top of the graph.  | A title is not present.  |
| **Labeling of X axis**  | The X axis has a clear, neat label that describes the units used for the independent variable (e.g, days, months, participants' names).  | The X axis has a clear label that describes the units used for the independent variable.  | The X axis has a label.  | The X axis is not labeled.  |
| **Labeling of Y axis**  | The Y axis has a clear, neat label that describes the units and the dependent variable (e.g, % of dog food eaten; degree of satisfaction).  | The Y axis has a clear label that describes the units and the dependent variable (e.g, % of dogwood eaten; degree of satisfaction).  | The Y axis has a label.  | The Y axis is not labeled.  |