**Grade Level Tasks**

**Outcome SP1**

Critique Ways in which data is presented.

**Using Grade Level Tasks**

As you guide your students through the learning of SP1, you will be noting evidence of where students are in their learning. The included tasks may assist you in determining which students need clarification and/or further experiences with specific concepts and/or skills.

Assessment information will be gathered via observations, conversations, and work products. Tasks can be used in class for discovery, practice and/or formative assessment purposes. The tasks can be used as warm-ups, for journaling, as exit slips, to revisit past learning, and so on. They can be modified to meet student needs with the goal of increasing student learning with respect to this outcome.

Formative information on your students’ learning should be recorded on the spreadsheet *Grade Level Formative Data Collection*.

The following tasks are organized by Outcome Building Block.

**Building Block:** Compare the information that is provided for the same data set by a given set of graphs, including circle graphs, line graphs, bar graphs, double bar graphs and pictographs, to determine the strengths and limitations of each graph and justify the choice of a graphical representation for a given situation and its corresponding data set.

1. Math Makes Sense: the textbook is a great resource to find example questions that can be used with students. Below are some examples to get you started:  
   1. Math Makes Sense 8 Teacher Resource CD, Master 7.15a, Unit Test, Question 1
   2. Math Makes Sense 8, Pages 387-389: questions 4, 5, 6 and 9.
2. Which of the following graphs best represents the data? Justify your choice by listing the pros and cons of each graph type.

1. What are your first impressions of the following graph?

**Favorite Pizza**

**Cheese**

**Pepperoni**

**All-Meat**

**Legend = 4**

**Hawaiian**

* 1. Does this graph accurately reflect the data? Explain why or why not.

1. For the following categories of data, identify the type of graph you would choose and justify your choice.

|  |  |  |
| --- | --- | --- |
| Data | Graph Choice | Reason |
| Hours per day spent playing video games, going to school, sleeping, eating, doing homework |  |  |
| Number of birds by species visiting a bird feeder in one day |  |  |
| Favorite subject by gender |  |  |
| Money saved over the summer |  |  |

**Building Block:** Explain how the format of a given graph, such as the size of the intervals, the width of bars and the visual representation, could misrepresent the data.

1. Math Makes Sense: the textbook is a great resource to find example questions that can be used with students. Below are some examples to get you started:  
   1. Math Makes Sense 8 Teacher Resource CD, Master 7.5a, Unit Test
   2. Math Makes Sense 8 Pages 399-401: Questions 3, 4, 5, 6

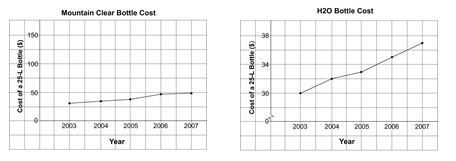
|  |  |
| --- | --- |
| Annie's Health Marks | |
| Month | Mark |
| Sept | 92 |
| Oct | 93 |
| Nov | 94 |
| Dec | 90 |

1. This following graph is misleading. What should be changed or added to make it more accurate?

1. At a local job fair, a company displayed this graph to show how wage increases over time. How could they have changed this graph to make the wage increase look more appealing? Explain your thinking.

1. Choose one of the following graphs to answer each question below and explain your reasoning:   
     
    bar graph, double –bar graph, circle graph, or line graph.  
   1. Which type of graph would be best to show the cost of purchasing a car over the past 20 years?
   2. What type of graph would be best to show the favorite after school activities of boys and girls?
   3. What type of graph would be best to show the cost of different brands of hoodies?

**Building Block:** Identify conclusions that are inconsistent with a given data set or graph and explain the misinterpretation.

1. Math Makes Sense: the textbook is a great resource to find example questions that can be used with students. Below are some examples to get you started:  
   1. Math Makes Sense 8, pages 401 and 402: questions 10 and 14
   2. Math Makes Sense 8, page 406: question 2
2. Sandra looked at the two graphs and decided she would not buy water from the Sparkling Water Company because of the rather large price increase. Do you agree with her? Why or why not? Explain your reasons.

Sparkling Water

Clear Water

1. Anne says that iPhone sales are three times that of Blackberry. Did she read the graph correctly?