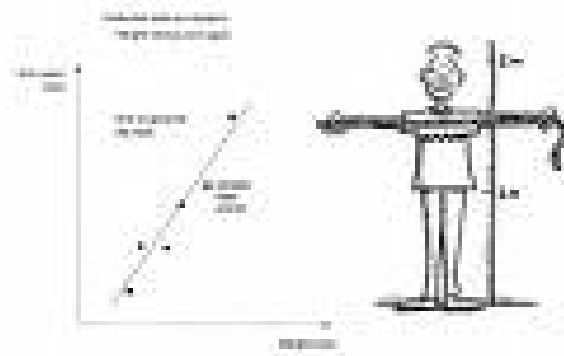


Oak Grove Elementary

Grade 4



TIMS Math Lab:

Unit 1:

Arm Span vs. Height

Name: _____

Date: _____

Draw

Draw a picture of the setup for your experiment. Show the variables Arm Span (A) and Height (H) in your picture. Use Irma's hand length and height picture to help you draw a picture of your Arm Span vs. Height experiment. Remember to label the variables.

Discuss

(Found on page 20 in the SG.)

1.

A. Is arm span a categorical or a numerical variable? _____

B. Is height a categorical or a numerical variable? _____

2. What is the same about all the people you measured for this experiment?

Collect



(Found on page 21 in the SG.) Measure the arm span and height of each person in your group to the nearest inch. Record your group's data in the data table. Discuss any patterns you see in the data table.

Graph



(Found on page 21 in the SG.) Graph your group's data. Plot arm span on the horizontal axis (left and right) and height on the vertical axis (up and down). Scale your horizontal axis to at least 75 inches and the vertical axis to at least 100 inches. Remember to label each axis.



(Found on page 21 and 22 in the SG.) Use your class data and your graphs to help you and your group answer the following questions. Include units with your answers. Be read to share your answers with the entire class.

3.

A. Describe your group's graph. What do you notice about these points?

B. Describe the class graph. What do you notice about the points?

4. Compare your group's graph and the class graph. How are they alike and how are they different? _____

5.

A. If you measured a new classmate's arm span and height, where do you think his or her data would lie? _____

B. If a fourth-grader from another classroom had an arm span of 53 inches, what would you predict about his or her height? _____

6.

A. In which part of the graph would a first-grade data cluster in comparison to fourth-grade data—in the area marked A, B, or C? _____

B. In which cluster would a kangaroo's data fall—in the area marked A, B, or C? _____



(Found on page 22 and 23 in the SG.) Use your class graph to discuss the following:

7. Use your class graph to estimate the average arm span of your classmates. (HINT: This is a number that represents ALL the arm spans in your classroom.)

8. Use your graph to estimate the average height of your classmates.

9.

A. Find the median height in your class: _____

B. Find the median arm span in your class: _____

C. Compare your estimate. Were you close? _____

10.

A. Use a red pen or marker to plot the data point for the median height and arm span on your graph.

B. Where is the data point for the median values compared to the other data points on the graph? _____
