WHAT'S YOUR WINGSPAN? BAR GRAPH (4TH GRADE)

TEACHER GUIDE

Objective: The student will be able to interpret bar graphs based on their own wingspan measurements.

TEKS: **4.13(B)**: The student is expected to interpret bar graphs.

At The Texas State Aquarium, the students were given the opportunity to visit Grace, the Bald Eagle. Grace is a female bald eagle who lives at the Eagle Pass at the Texas State Aquarium. Female bald eagles are larger than males, having a wingspan of up to 8 feet. Males have a wingspan of about 6 $\frac{1}{2}$ feet. (NOTE: Students had the chance to measure their own wingspan at the measurement station. If students were not able to get their measurements at the aquarium, they can do it in the classroom.)

Collect each wingspan measurement for all class members and organize the data into a bar graph. The students will observe how you organize the data and display it in a graph.

To Collect the Data:

Give each student one sticky note. Have students write their name and their wingspan measurement (in inches) on their sticky note. (It will be easiest to have students round their measurement to the nearest inch.) Collect the data by having students place their sticky note on a sheet of butcher paper that you have posted on the board. The students do not have to place their sticky notes in any particular order or organization.

Organizing the Data:

Discuss how the data is unorganized right now and how it can be organized in order for it to be interpreted correctly. Ask students for suggestions on how the data can be organized. You may want to suggest that the best way to organize this data is in a frequency table. Since many students are about the same size, you should have several students with the same wingspan, as well as a few smaller and larger wingspans.

Example:

50 inches	|||
51 inches	~~||||~~
52 inches	|
53 inches	||
54 inches	|||
55 inches	|
56 inches	|||

Displaying the Data:

Rearrange the sticky-notes on the butcher paper with all the 50-inch notes in one column, the 51-inch notes in another, etc. Ask students if they know what kind of graph you have just formed. Some students may answer that it is a pictograph, while others may say it is a bar graph. As a pictograph, each sticky note represents one student. As a bar graph, each sticky note represents one portion of the bar. Have the students copy the bar graph on their own graph paper. Make sure to discuss the parts of a graph: a title and labels on both axes.

Example:

Interpreting the Data:

Using the graph, students can use the information that you create, or they can create their own questions. If students create their own questions based on the data, have them exchange with a partner and check each others' answers. This questioning should lead into conversations about the data shown.

Name _____ Date _____

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At The Texas State Aquarium, you were given the opportunity to visit Grace, the Bald Eagle. Grace is a female bald eagle who lives in Eagle Pass at the Texas State Aquarium. Female bald eagles are larger than males, having a wingspan of up to 8 feet while males have a wingspan of about 6 $\frac{1}{2}$ feet.

You had the chance to measure your own wingspan at the measurement station. If you were not able to get your measurements at the aquarium, you can do it now.

With your class data, you should be able to interpret the data in order to answer and create questions based on the information from the graph.

1.] After your teacher has created a bar graph with your class data, copy it in the space below.

Your Class Wingspan Measurements Bar Graph

2.] What was the smallest wingspan in your class? _____

3.] What was the largest wingspan in your class? _____

4.] What wingspan measurement occurs the most often on the graph of your class?

_____

How many times did it occur? _____

5.] Write 3-4 true statements about your graph.

a.] _____

_____

b.] _____

_____

c.] _____

_____

d.] _____

_____

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ANSWER KEY

1.] Bar graphs will vary.

2.] Answers will vary.

3.] Answers will vary.

4.] Answers will vary.

5.] Statements will vary, but should be able to be proven with the graph.