

Graphs

Reporting Category Probability and Statistics

Topic Using graphs to make comparisons, predictions, and inferences

Primary SOL 8.13a The student will make comparisons, predictions, and inferences, using information displayed in graphs.

Materials

- Name That Graph handout (attached)
- Relationship of Height to Age Scatterplot (attached)
- Chart paper
- Newspapers and/or magazines (or computer with access to the Internet and printer)
- Scissors

Vocabulary

bar graph, line graph, histogram, circle graph, line graph (earlier grades)
scatterplot (8.13b)

Student/Teacher Actions (what students and teachers should be doing to facilitate learning)

1. Distribute copies of the Name That Graph handout. Have students work with partners to name each type of graph and come up with a situation and type of information that could be represented on each graph. Discuss as a class the different types of graphs and what information each graph could be representing.
2. Display the Relationship of Height to Age Scatterplot, and ask students to brainstorm different types of questions that would require comparisons, predictions, and/or inferences about the information displayed in the graph in order to answer. Record good questions on chart paper, and lead a discussion about possible answers to the questions.
3. Divide the class into small groups, and have each group find a graph in newspapers and/or magazines (or on the Internet). You may want to assign each group a type of graph to find. Once they have found their graph, have each group create a list of questions that would require comparisons, predictions, and/or inferences about the information displayed in the graph in order to answer. Have each group also create an answer key for their questions.
4. When groups have finished creating and answering their own questions, have each group exchange their graph and questions with another group and answer the questions related to a different graph.

Assessment

- **Questions**
 - What are the differences between a bar graph and a line graph?
 - How do you make a prediction based on information displayed in a line graph?
- **Journal/Writing Prompts**
 - Describe a situation for which creating a bar graph would be useful.
 - Describe a situation for which creating a line graph would be useful.

- Describe a situation for which creating a scatterplot would be useful.

Extensions and Connections (for all students)

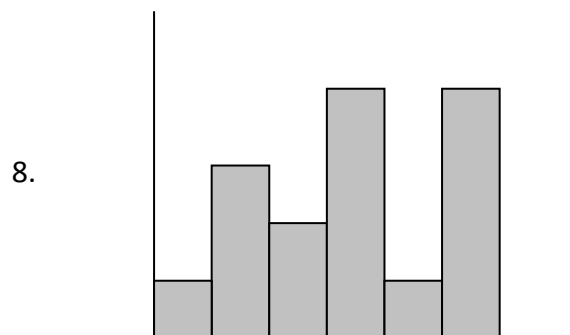
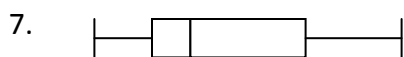
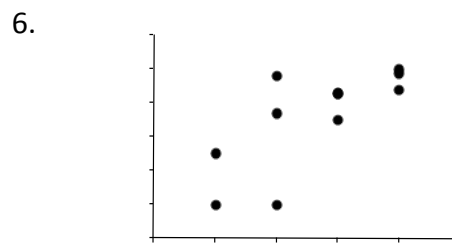
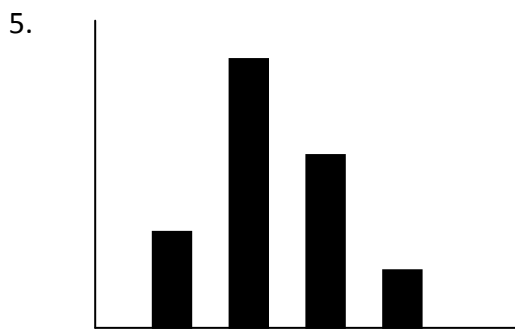
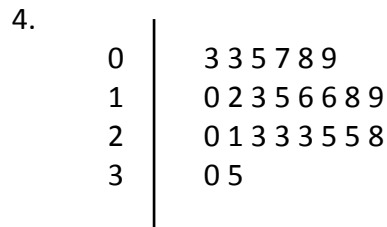
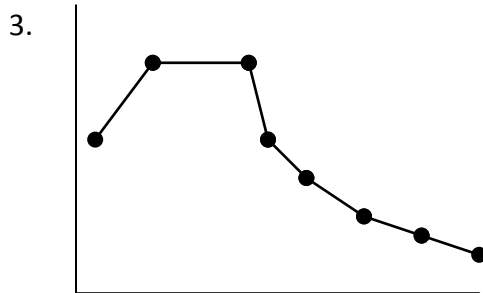
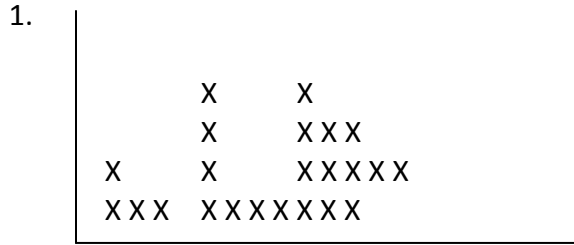
- Have students collect their own data and create their own graph, or have the entire class collect data together and create a class graph. Then, have them develop questions about the information in the graph they created.
- Have students represent the same data in two different types of graphs.
- Discuss line of best fit and how it is represented on scatterplots.

Strategies for Differentiation

- Provide students with a graph and questions about information in it at the beginning of the lesson so they have a model for such questions.
- Display large sample graphs around the room, or distribute a sample graph booklet to students.

Name That Graph

Name _____ Date _____



Relationship of Height to Age Scatterplot

