

## Stem-and-Leaf Plots – An Eye-Blinking Experience

### Purpose

Students will learn how to gather data and display it within a stem-and-leaf plot. Students will then compare the mean, median, and mode for a set of data.

### Materials

*For the teacher:* chalkboard, chalk, timepiece

*For each student:* paper, pencil

### Activity

#### A. Introduction

Tell students they are going to be gathering and analyzing data regarding the number of times each student can blink in 30 seconds.

#### B. Teacher-Led Activity

1. Ask students to predict the number of times they will be able to blink their eyes in 30 seconds.
2. Go around the room and ask each student his or her prediction. Record the predictions on the chalkboard.
3. Rewrite the predictions in a list in order from least to greatest. Keep this list on the board for use later in the activity.
4. Ask students for ideas about ways of grouping the data. Prompt students for the response of grouping by tens. Indicate members of each group of 10 by placing a circle around each group.
5. Tell students that we may use a stem and leaf plot to group the data.
6. Draw on the chalkboard the stem portion of a stem-and-leaf plot as below:

Stem	Leaf (predictions)
1	
2	
3	
4	
5	
6	

(continued)



### INCORPORATING TECHNOLOGY

Have students visit [www.shodor.org/interactivate/activities/stemleaf](http://www.shodor.org/interactivate/activities/stemleaf). Ask them to enter data from the partner activity to generate an electronic version of a stem-and-leaf plot. Have them compare their own graphs to the electronic version.

## Activity (continued)

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7. Place the data onto the stem-and-leaf plot.
8. Refer back to the original list of predictions. Ask students to find the mean, median, and mode of the set. Have students compare their answers to the stem-and-leaf plot. Ask students to comment about the connections between their answers and the data display.

### C. Partner Activity


1. Have students choose a partner.
2. Have one student blink their eyes and the other student count blinks and record the results. Students should then switch roles and repeat this procedure.
3. Time the students. Allow 30 seconds for each student.
4. Have students make a list of the outcomes ordered from least to greatest.
5. Have students place the outcomes on a stem-and-leaf plot.
6. Ask students to work with their partner to find the mean, median, and mode of the data set. Have students compare their answers to the stem-and-leaf plot. Ask students to comment about connections between their answers and the data display.

## Classroom Assessment


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### Basic Concepts and Processes

During the activity, discuss the following questions with your students to gauge their understanding of the Standard Indicators:

 How did you determine the grouping of your data?

 What is the mean of your data set?

 What is the mode of your data set?

 How could you determine the mode from your stem and leaf plot?

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