



Skunk: A Stem-and-Leaf Plot Activity

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Curriculum

Grades 6-8; Probability and Statistics

Key Concepts

- Collect, organize, display, and interpret data in a stem-and-leaf plot.

Description

Students will gather data using a probability driven activity. The data gathered will be used to construct a stem-and-leaf. Inferences will be made using a single and double stem-and-leaf plot.

Materials

- 2 dice
- [Skunk Activity Sheet](#)

Safety

Follow normal classroom safety rules.

Time

45 minutes

Procedure

1. Each student begins the game by standing. The teacher rolls the dice. Each student gets the sum of the two numbers and enters it in the first "S" on their worksheet.
2. From now on, before each toss, a student has two choices.
 - a. They can sit down and collect no points for that roll.
 - b. They can choose to stand. For those students standing, the dice are tossed. If the number is a seven or eleven, all students standing lose all of their points in that column. If the number is not a seven or eleven, the number is added to their total score.
 - c. Students sitting when a seven or eleven is rolled get to keep all their points in that column.
3. Once a seven or eleven is rolled, students must move on to the next column.
4. Repeat Step 2 for the other letters in "Skunk." A total of five rounds are competed.
5. At the end of the fifth round each student adds the scores from the five columns.

6. While students are adding their scores, draw a stem-and-leaf plot on the board, with stems ranging 0 to 9. This is to represent the 10's units of the total score. If the numbers are higher, we can move into the hundreds digits.
7. As the students finish adding, direct them to come to the front of the room and record their score on the stem-and-leaf plot.
8. After all students have recorded their scores, discuss the method used to construct a stem-and-leaf plot. Also, discuss any trends that can be seen in the plot.
9. Repeat Steps 1-4 with the class.
10. Construct a double stem-and-leaf plot on the other side of the one all ready on the board. Students should come to the front of the room and enter their score on the stem-and-leaf plot.
11. Discuss any patterns, conclusions, and predictions. If students have discussed the measures of central tendency, have them find the measures for each round and compare.

Resources

Stem-and-Leaf Lessons

An online lesson that goes through the components of a stem-and-leaf. Provides the teacher ideas and student activities. There is also an interactive stem-and-leaf plots
<http://www.shodor.org/interactivate/activities/stemleaf/>

Teacher Notes/ Advance Preparation

1. This game should be played before you teach probability using two dice.
2. A table is included to enter data from each roll, but a sheet of notebook paper would work. Just have students draw columns and label them with the letters of "Skunk".
3. Do not allow students to enter any score if they are half sitting, half standing. I consider this an automatic out for that round. They need to pick one or the other.

Skunk Activity Sheet

	S	K	U	N	K
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					
11					
Total					

	S	K	U	N	K
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					
11					
Total					