

# Candy Judging

## Utah Secondary Mathematics Core Curriculum Standards

Comparing experimental results with theoretical probability, comparing results of probability experiments, displaying data, collecting and interpreting data, using graphical representations and numerical summaries to answer questions and interpreting data

## GAISE Guidelines for Assessment and Instruction in Statistics Education

Level B Understanding – formulate questions, collect data, analyze data, and interpret the results

Teacher generated question – Are candies equally preferred?

Student generated questions – Which kind of candy does our class like best?

### Learning Outcomes

- Students become interested in statistics
- Students understand how to collect and interpret statistical information
- Students create and conduct a statistical investigation

### Specific Skills

- Students collect and record data
- Students chart results
- Students analyze results
- Students use data to answer questions

### Materials Needed

- Four different types of candies (e.g., Hershey<sup>®</sup> snack size Milk Chocolate, krackel<sup>®</sup>, mr. Goodbar<sup>®</sup>, Special Dark), enough for each student to have one of each type

### Directions

Ask the students if one type of chocolate candy is preferable over other chocolates. Guide the students setting up an investigation to find out if there is evidence that will support their hypothesis. Give each student one of each type of candy (make sure no students are allergic to chocolate). Then, have them taste and rate the candies from one (favorite) to four (least favorite). Use a random number table to randomize each judge's tasting order. Mention that in the ratings, there can be no ties. Also, remind them that the rankings need to be independent, so there will be no communication between the judges while doing their rankings. Collect and record the data. Discuss how to answer the research question with the rankings. A variation on this lesson is to use a selection of different favors of Hershey Kisses<sup>®</sup> instead of candy bars. Tell the students that the Hershey Company uses Kisses for taste testing!

	<i>Milk Chocolate</i>	<i>krackel</i>	<i>mr. Goodbar</i>	<i>Special Dark</i>
<b>Adam</b>	4	2	1	3
<b>Mallory</b>	3	2	4	1
<b>Marianne</b>	3	4	2	1
<b>Patrick</b>	3	4	2	1
<b>Darryl</b>	1	2	4	3
<b>Taylor</b>	1	4	2	3
<b>Tasha</b>	1	4	2	3
<b>Wes</b>	3	2	1	4
<b>Will</b>	1	4	3	2
<b>Amanda</b>	2	4	1	3
<b>Dave</b>	2	1	4	3
<b>Jason</b>	2	4	1	3
<b>Jake</b>	3	2	1	4
<b>Darcy</b>	4	2	1	3
<b>Marissa</b>	2	1	4	3
<b>Sum of Ranks</b>	35	42	33	40

Prompt the students to generate and answer data analysis questions.

*Were the candies equally preferred?*

*Which type of candy had the most ratings of 1, 2, 3 or 4?*

*Which type of candy had the best overall rating in our class?*

*What do these results tell us about the candies?*