

















Technology-Connected Lesson Plan

Title:	Exploring the Mode, Median, and Mean
Grade Levels:	3 rd - 6 th
Curriculum Areas:	Math
Measurable Objectives:	<ul style="list-style-type: none">  TLW learn the difference between mean, median, and mode.  TLW count candy and use the data to calculate mean, median, and mode (by color).  TLW apply their learning to another collection of data.
LA Content Standards:	<ul style="list-style-type: none">  D-2-E - constructing, reading, and interpreting data in charts, graphs, tables, etc;  D-3-E - formulating and solving problems that involve the use of data;
Grade Level Expectations (GLE)	<ul style="list-style-type: none">  Distinguish among the processes of counting, calculating, and measuring and determine which is the most appropriate strategy for a given situation (M-2-M)  Use various types of charts and graphs, including double bar graphs, to organize, display, and interpret data and discuss patterns verbally and in writing (D-1-M) (D-2-M) (P-3-M) (A-4-M)
K12 Educational Technology Standards:	<ul style="list-style-type: none">  Students use technology tools to enhance learning, increase productivity, and promote creativity.  Students use productivity tools to work collaboratively in developing technology-rich, authentic, student-centered products.  Students use technology tools to process data and report results.
Technology Connection:	<ul style="list-style-type: none">  online Create-a-Graph tool  Optional - Graph Club, Graph Master software
Procedures:	<ul style="list-style-type: none">  Give each student a bag of candy.  Students can work on their own, in pairs, in small groups, in larger groups and, finally, as a whole class to figure mean, median, and mode of collections of candy data. They fill in the

data they collect on the Counting Candy Worksheet.

🖨️ Count and graph the number of pieces of candy in their packs by color. Each student can graph his/her results or use the online [Create-a-Graph tool](#) to show their color-by-color tallies.

🖨️ Use the above data to figure the *mean*, the average number of pieces of candy of each color. For example, if the data indicates 1 red candy, 2 green candies, 3 orange candies, 7 yellow candies, and 7 purple candies, the mean, or average number of pieces of each color is 4.

$$1 + 2 + 3 + 7 + 7 = 20 \text{ and } 20 \text{ (total candies) divided by } 5 \text{ (different colors)} = 4 \text{ (the average number of pieces of each color)}$$

🖨️ Use the data to calculate the median, or middle number. For the example above (1, 2, 3, 7, 7), the *median* is 3.







🖨️ Use the data to calculate the mode, or the number that occurs most frequently. For the example above (1, 2, 3, 7, 7), the *mode* is 7.

🖨️ Next, each student fills in the data on the Counting Candy worksheet in the row next to *Student 1*. Then each pairs up with a classmate and adds that classmate's data to their charts next to *Student 2*. Then the two students work together to figure out mean, median, and mode of their combined data and record that information on the work sheet.

🖨️ Next, combine two pairs of students to form groups of four. Have each student add the work sheet data for the two new people in their group next to *Student 3* and *Student 4*. Then have them work together to figure out mean, median, and mode for all four people in the group and record the information on the work sheet.

🖨️ Next, combine two groups of four and have students add the data for the four new people in their groups next to *Student 5*, *Student 6*, *Student 7*, and *Student 8* on the worksheet. Then students work together to figure out mean, median, and mode for their combined data and record the information on the work sheet.

🖨️ Finally, collect data for the entire class and challenge students to use that data to calculate mean, median, and mode for the entire class.

Materials:	 Candy (small bag of M&Ms)  Counting Candy Worksheet
Assessment:	 Observation and participation  Counting Candy Worksheet
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