Mathematics, Grade 6 Unit IX: Lesson 4

## Experiment / Report: Marvelous Memory Man



How many things can people remember? Your project is to find out. Review how to find mean, median, and mode. Research how to make a frequency table.

Get a container and fill it with 30 objects such as a coin, a pencil, a key, etc. Test some of your classmates by letting them observe the contents of your box for 30 seconds and then writing down as many as they can remember. Record their response in a frequency table. Calculate the mean, median and mode of things remembered.

Repeat the experiment with a new group and vary the time. Make a new frequency chart and calculate the mean, median and mode. Record your results in a table.

Repeat the experiment a third time. Look for a connection between the amount of time observed and the number of objects recalled. Which statistical tool (mean, median, or mode) seems to be most useful in this experiment? Are there certain objects that seem to be easier to remember than others? Are there common characteristics that seem to make these objects easier to remember? Write the results of your experiment in the form of a report.

Share your report with the class.

**Extension:** Repeat the experiment on the previous card, but change the number of objects and see what effect this has on the frequency, mean, median, and mode.

Share these results with the class.

**Hyperextension:** Repeat experiment 1, changing only the kinds of objects in the box. Use the results of your frequency table to choose objects likely to be remembered easily. See what effect the results have on the frequency table, mean, median, and mode.

Share the results with the class.

**Super Hyperextension:** Using the information from all previous tests, design a "New and Improved" memory box game guaranteed to increase your memory success. Test your new memory box on people you have tested before and have data for comparison. Analyze the results.

Share the results with the class.