**Project Title:** Statistical Analysis - M&M Math

**Appropriate Grade Levels:** 6-8

**Activity Objective:** To teach students about probability and prediction while helping students expand their thinking about careers using statistical analysis.

**Materials Needed:**

* At least three packages of plain M&M’s (could use miniature packages as well)
* Piece of paper and a writing utensil
* Calculator

**What is statistical analysis?** Statistics is applied mathematics that includes summarizing and interpretation of observations. <http://encyclopedia.kids.net.au/page/st/Statistics>

**Louisiana Grade Level Standard:**

6.SP Statistics and Probability

 B. Summarize and describe distributions

5. Summarize numerical data sets in relation to their content, such as by:

C. Giving quantitative measures of center (median and/or mean) and variability (interquartile range) as well as describing any overall pattern and any striking deviations from the overall pattern with reference to the context in which the data were gathered.

**Rationale:** Statistical analysis and predictions are an important concept for discovery or creating new knowledge. Statistics are widely used to make revelations in all scientific domains, business, social sciences and many other fields. Understanding statistics is necessary for applied mathematics and the application of mathematical tools.

**Careers Related to Statistical Analysis:**

**Mathematics Teacher** - Deliver lessons that develop students’ theoretical and applied mathematical skills

 <https://www.bls.gov/ooh/education-training-and-library/middle-school-teachers.htm>

**Software Engineer** - focus on applying the principles of engineering to software development

<https://www.bls.gov/ooh/computer-and-information-technology/software-developers.htm>

**Accountant** - helps businesses make critical financial decisions by collecting, tracking, and correcting the company's finances

<https://www.bls.gov/ooh/business-and-financial/accountants-and-auditors.htm>

**Data Analyst** - collects and stores data on sales numbers, market research, logistics, linguistics, or other behaviors

<https://www.bls.gov/ooh/business-and-financial/market-research-analysts.htm>

<https://www.bls.gov/ooh/computer-and-information-technology/software-developers.htm>

**Learn More:** How can you and your child learn more about statistical analysis at home?

1. Visit Math Game Time and choose appropriate grade levels for probability games, videos and worksheets.

<https://www.mathgametime.com/subject/probability>

2. Take a walk and record how many birds, squirrels, and dogs you see. Notice the probability of seeing one animal over another.

3. Try working on free printable probability worksheets with your child to improve their understanding.

<https://www.education.com/worksheets/probability-and-statistics/>

**Link to Youtube Video**: <https://youtu.be/2InbuHr7GBY>