Lab Framework
Text: CORD Applied Mathematics (Green Books)
Unit number and title: Unit 19 – "Statistics"
  Short Description: (This lab will teach students the meaning of Mean, Median, and
Mode)
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Lab Title
Working with Statistics – Mean Median Mode

LAB PLAN

TEACHER: Teacher Prep/ Lesson Plan
- **Lab Objective**
  Students will be able to calculate the mean, median, and mode colors in a
  package of M & Ms

- **Statement of pre-requisite skills needed** (i.e., vocabulary, measurement
  techniques, formulas, etc.)
  Knowledge of Histograms

- **Vocabulary**
  Prediction, Histogram

- **Materials List**
  Handouts, Package of M & Ms for each student, several laptops with EXCEL
  on them, colored pencils, poster paper, and markers.
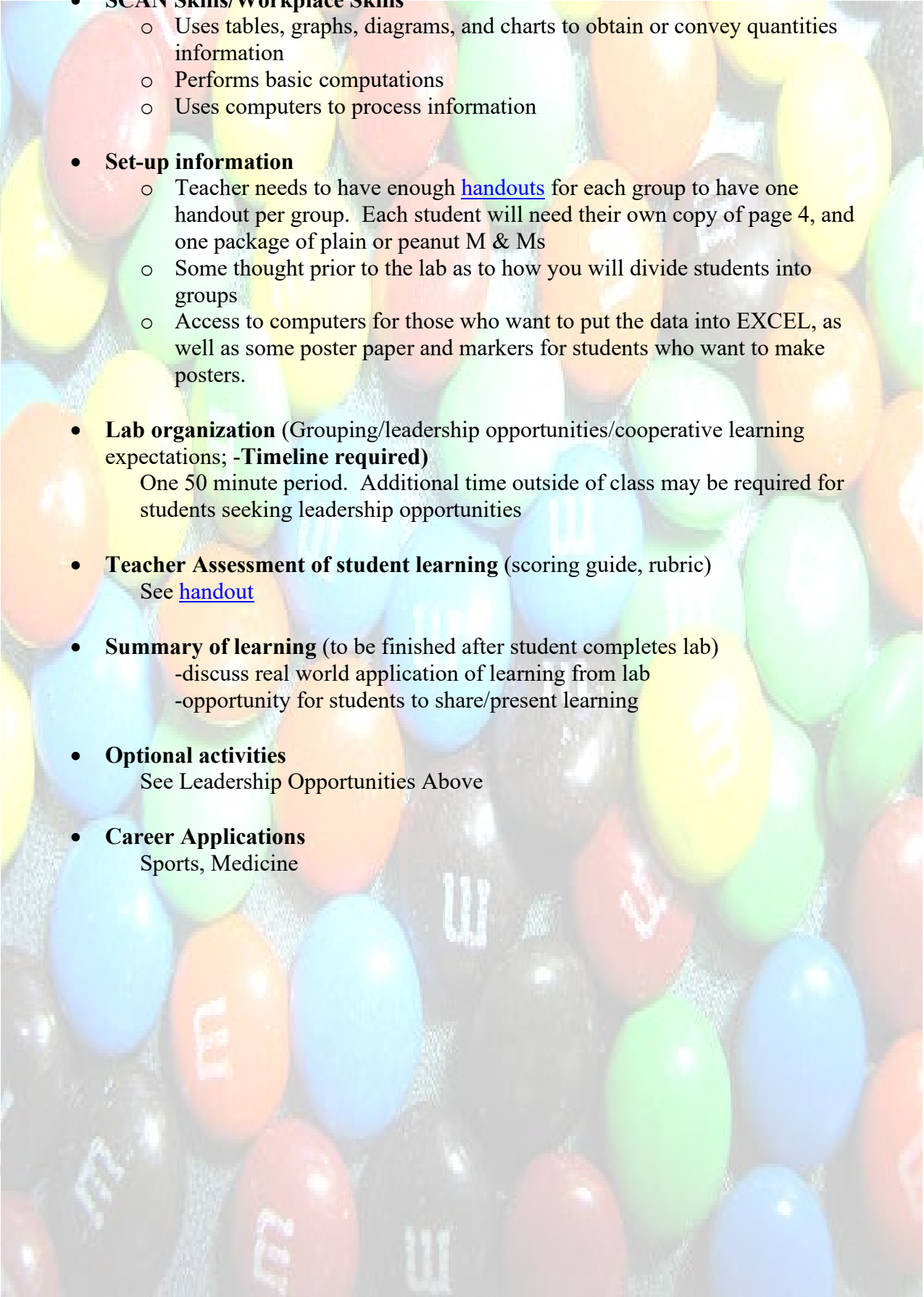
- **State Standards addressed**
  Math: (7.4.D Construct and interpret histograms, stem-and-leaf plots, and
             circle graphs.)
  Reading: (1.3.2. Understand and apply content/academic vocabulary critical
             to the meaning of the text, including vocabularies relevant to
             different contexts, cultures, and communities..)
  Writing: (2.4.1. Produces documents used in a career setting.)

- **Leadership Skills**
  - Draw your team's results on graph paper to find the average in order to
    check your work visually, and then demonstrate results to the class.
  - Students can make a poster to hang on the wall that defines/demonstrates
    Mean – Median – Mode
  - Students could put the data into EXCEL and use functions to calculate the
    Mean – Median – Mode, and then chart the data
  - Particular students can supervise the clean-up

- **SCAN Skills/Workplace Skills**
    - Uses tables, graphs, diagrams, and charts to obtain or convey quantities information
    - Performs basic computations
    - Uses computers to process information

- **Set-up information**
    - Teacher needs to have enough handouts for each group to have one handout per group. Each student will need their own copy of page 4, and one package of plain or peanut M & Ms
    - Some thought prior to the lab as to how you will divide students into groups
    - Access to computers for those who want to put the data into EXCEL, as well as some poster paper and markers for students who want to make posters.

- **Lab organization** (Grouping/leadership opportunities/cooperative learning expectations; -**Timeline required)**
    One 50 minute period. Additional time outside of class may be required for students seeking leadership opportunities

- **Teacher Assessment of student learning** (scoring guide, rubric)
    See handout

- **Summary of learning** (to be finished after student completes lab)
    -discuss real world application of learning from lab
    -opportunity for students to share/present learning

- **Optional activities**
    See Leadership Opportunities Above

- **Career Applications**
    Sports, Medicine

NAMES: _____ DATE: _____ PER: _____

_____

_____

_____

M & M LAB

Unit 19
Working with Statiscs

Directions: In the first column estimate how many M & Ms of each color you think there are in your bag of M & Ms. Then open your packet of M & Ms and answer the following questions. If you get stuck, please refer to your workbook for help.

Brown: _____   Actual: _____

Yellow: _____   Actual: _____

Red: _____   Actual: _____

Blue: _____   Actual: _____

Orange: _____   Actual: _____

Green: _____   Actual: _____

Total _____   _____

Why did you make those predictions?

_____

_____

NAMES: _____   DATE: _____   PER: _____

_____

_____

_____

_____

Using the graph below draw a histogram charting your actual number of M & M's for each color.

Bar Graph of My Bag

	Brown	Yellow	Red	Blue	Orange	Green
16						
14						
12						
10						
8						
6						
4						
2						
0						

NAMES: _____ DATE: _____ PER: _____

_____

_____

_____

_____

MEAN, MEDIAN, and MODE

NAME	BROWN	YELLOW	RED	BLUE	ORANGE	GREEN
TOTALS						

MEAN or AVERAGE (Total ÷ Amount of Students)

MEDIAN (Middle Number when put in order from LEAST to GREATEST)

MODE (Number that occurs most often)

COLOR	MEAN	MEDIAN	MODE
BROWN			
YELLOW			
RED			
BLUE			
ORANGE			
GREEN			