

Task: Creating & Formatting Simple Excel Spreadsheets and Charts Keyboarding/Technology, Grades 6-8

In every department of an advanced manufacturing facility, the use of Excel spreadsheets is vital. Creating, entering information, charting, and understanding manipulations within Excel spreadsheets are basic skills necessary at all levels of the production process from operators to managers. With this task, middle school students will be introduced to basic Excel setup. They will be required to follow teacher-guided directions and utilize technical reading skills to create a basic Excel spreadsheet and use it to prepare a simple Excel presentation chart.

Common Core State Standards

Common Core State Standards) associated with the task:

CCSS Reading for Technical Subjects: Key Ideas and Details, Grades 6-8

3. Follow precisely a multistep procedure when carrying out experiments, taking measurements, or performing technical tasks.

CCSS Reading for Technical Subjects: Craft and Structure, Grades 6-8

4. Determine the meaning of symbols, key terms, and other domain-specific scientific or technical context relevant to grades 6-8 texts and topics.

CCSS Reading for Technical Subjects: Integration of Knowledge and Ideas, Grades 6-8

7. Integrate quantitative or technical information expressed in words in a text with a version of that information expressed visually (e.g. in a flowchart, diagram, model, graph, or table.)

Tennessee CTE Standards addressed by the task:

Spreadsheet Applications Standard 2.0, The student will:

- 2.1 Relate vocabulary terms specific to spreadsheet applications.*
- 2.2 Utilize different types of cell entries and editing features.*
- 2.3 Format cells, rows, and columns.*
- 2.4 Perform document maintenance functions.*
- 2.5 Plan and create a customized worksheet.*

Spreadsheet Applications Standard 7.0, The student will:

- 7.1 Insert charts using table data.*
- 7.2 Manipulate charts using design and layout tools.*

Essential Understandings

What key insights should students take from participating in this task?

- Excel is a software tool that is essential in the business world. allows input, organization, and manipulation of data.*
- Creating an Excel spreadsheet is effective for organizing data in an understandable and logical manner.*
- Manipulating data within an Excel spreadsheet can create visual aides to better explain relationships among the data for comparison.*

Possible Solutions/Solution Paths

What solutions or solution paths are acceptable in achieving a correct response for this task? Be sure to address all parts of the task.

- *Each student will produce and print a spreadsheet with data input from opening a random bag of M & M candies. This spreadsheet will be customized to each student's M & M color counts.*
- *Additionally, each student will produce and print a formatted pie chart based solely on the information from his/her individual Excel spreadsheet.*

Additional Teacher Information

Add any additional notes that will help the teacher execute the task including necessary manipulatives, equipment, etc., and possible students misconceptions that may need to be addressed.

- *This task requires each student to be equipped with a technical instruction sheet (attached), an individual size bag of M & M chocolate candies, a computer station with Microsoft Excel installed, and access to a color printer.*
- *Teacher will provide an introduction to basic spreadsheets and allow time for discussion and questions.*
- *Teacher will facilitate and guide the reading of information and construction of spreadsheets and charts.*
- *Teacher will provide technical support for any equipment or software issues.*
- *Scaffolding and support will be provided for special education students, English language learners, and struggling readers by pre-teaching domain-specific vocabulary, using visual aides of sample projects, and when applicable use cooperative learning groups that will pair a struggling student with a more knowledgeable student.*

M & M Project

Excel Spreadsheet and Pie Chart

Please read the following instructions to create your basic Excel spreadsheet and use that information to create a visual pie chart that is correctly colored and labeled. You will be required to turn in both your spreadsheet and your pie chart.

- Open your bag of M & M's, separate candies by color, and count how many of each color candy is present. You will use this data to create your chart.
- Open a blank spreadsheet using Microsoft Excel.
- Enter your chart title in cell C1. Your chart title should be your name showing possession with M & M's (example: Robin Epps' M & M's).
- Click in cell C1 and drag mouse to H1. In the Home tab, alignment group, find and apply "Merge and Center" to the title.
- With the title still selected, on the Home tab, Font group, apply a new font color, font size and font style.
- Enter the color labels in column A starting with cell A3. Enter the M&M quantities in column B starting in cell B3.
- Click in cell A3 and drag mouse down to select all the colors down to cell A7. Continue to drag across to select all the numerical values on column B.
- Create a pie chart. Go to Insert tab > Charts group > Pie > 3D Exploded Pie.
- Format the chart. Click to select the chart. Go to Design tab > Chart layouts group > choose a chart layout that will produce numbers and labels on the pie pieces.
- Add a Chart Title. Click on the chart. Go to Layout tab > Labels group > choose Chart title "Above Chart". Enter your chart's title.
- Click once on the chart. Click a second time on an individual chart piece to select it for a color change. Right click on the selected chart piece and choose Format Data Point. Go to Fill > Solid Fill > Color. Choose a color for your chart piece. Repeat process for each chart piece.
- Deselect the chart. Go to Print preview. The chart may be partially cut off if it overlaps column I or J. Choose Page Setup and change the layout to landscape.
- Print.