

# **TECHNOLOGY-10**

## **ESSENTIAL UNIT 3 (E03)**

(Project Emphasizing Spreadsheet Applications)  
(July 2017)

**Unit Statement:** The student will engage in a project that emphasizes spreadsheet applications. There is a flexibility for the teacher to choose a project that will encourage student interest in furthering his/her understanding of technology and its relevant application to their education.

*The technology teacher is encouraged to coordinate projects with subject area teachers.*

**Essential Outcomes:** (must be assessed for mastery)

1. The Student Will identify and define a topic for investigation.
2. TSW use a spreadsheet application to gather data during an investigation.
3. TSW conduct an activity, keeping track of pertinent data.
4. TSW create a spreadsheet and use the spreadsheet to record relevant information based on observations of the activity.
5. TSW demonstrate the use of basic spreadsheets functions such as MAX, MIN, SUM and AVG.
6. TSW convert data into bar graphs and pie charts.
7. TSW present their results to an audience.

### **Suggested Materials and Software:**

Spreadsheet applications such as OpenOffice Calc, Microsoft Excel, [Google Docs](#), [Zoho](#) or similar applications are good for analyzing data and creating graphs and charts that are good for presentation.

List of useful books for the class reading, discussion and worksheet activities:

- Computer Activities: teaching with spreadsheets by Zellers, Carolyn
- Computer Activities through the year. Grades 4-8 by Gimotty, Susan
- Computer and Internet Dictionary for ages 9 to 99 by Berry, Charles

### **Suggested Websites:**

[Destiny Webpath Express](#) (found on QSI schools Library site) use this search engine to find age-appropriate websites that align with this unit.

<http://www.gcflearnfree.org/topics/office2013/> - Free tutorials Office 2013

<http://www.gcflearnfree.org/topics/office2016/> - Free tutorials Office 2016

**Suggested Activities, Assessment Tools and Strategies:**

(TSW 1) - Students explore and practice a spreadsheet application completing a variety of short activities lead by a teacher.

(TSW 2) - Technology teacher can collaborate with a homeroom, Mathematics, or/and Science teachers and come up with a topic for investigation: Weather tracking, Food preferences and suggestions for a school cafeteria, Improvement for a school, Attendance checklist, Influence of human activity on nature, Nationality statistic of a school, Reading top list and etc.

(TSW3-4) - Using the lemonade game, create a spreadsheet, keeping track of important data.

Using candy such as M & M's or Skittles, create a spreadsheet and keep track of the colors of the various bits of candy.

(TSW 1-7) Create a survey ([online survey applications](#)) and use the results to create spreadsheet data that can be manipulated into charts and graphs for eventual presentation. Students can come up with an essential question related to one of the studied topics in a class, create a survey using a spreadsheet application, conduct it and analyze results for further presentation to an audience.

(TSW 5-6) <http://www.gcflearnfree.org/excel2013/> - Excel 2013 tutorials  
<http://www.gcflearnfree.org/excel2016/> - Excel 2016 tutorials

Students can use any available presentation softwares to present their topic to an audience (<https://www.customshow.com/best-powerpoint-alternatives-presentation-programs/> ).

*ASSESSMENT RUBRIC FOUND ON FOLLOWING PAGE.....*

**Assessment Rubric – E03 – Project Emphasizing Spreadsheet Applications**

Student Name: \_\_\_\_\_ Date: \_\_\_\_\_ To receive a 'B' the student must show 'B' level mastery on ALL Essential Outcomes. (TSW's) To receive an 'A', the student must show 'A' level mastery on 2 of 3 available and 'B' level mastery on all remaining TSW's.

TSW	'A' Level Mastery	'B' Level Mastery	'P' Comments
1. The Student Will use a spreadsheet application to accomplish a goal.		The student is able to employ a spreadsheet application to achieve a goal.	
2. TSW identify and define a topic for investigation.	The student can justify why their topic of investigation is best served by using a spreadsheet application.	The student can identify a topic for investigation.	
3. TSW conduct an activity, keeping track of pertinent data.		The student can conduct an activity and keep pertinent data using a spreadsheet application.	
4. TSW create a spreadsheet and use the spreadsheet to record relevant information based on observations of the activity.		The student can create and use a spreadsheet to record information based on observations.	
5. TSW demonstrate the use of basic spreadsheets functions such as MAX, MIN, SUM and AVG.	The student can select the most appropriate functions to use for the situation.	The student can demonstrate the use of basic spreadsheet functions.	
6. TSW convert data into bar graphs and pie charts.	The student can justify why they chose a particular chart or graph to represent their data.	The student can convert data into bar graphs and pie charts.	
7. TSW present their results to an audience.		The student can present their results to an audience.	