ICT Spreadsheet Essentials

Lesson 1: Introduction to Spreadsheets

LESSON SKILLS

After completing this lesson, you will be able to:

- Describe a spreadsheet and the ways in which it may be used.
- Identify the parts of the spreadsheet display.
- Insert and format text, numeric, date and time information into cells.
- Copy and move cell data.
- Format cells, columns and rows.
- Insert columns and rows.
- Apply shading and borders to a spreadsheet.
- Sort, filter and print a spreadsheet.

KEY TERMS

cell	fill handle	row
cell range	filter	spreadsheet
cell reference	formula bar	sort
column	merge	

Points to Ponder

These Points to Ponder are designed to help you focus on key elements in this lesson. They are also suitable for use to spark discussions or individual research.

- Create a definition for "spreadsheet" using your own words.
- Think about how to add a column to a spreadsheet.
- Think about the difference between a row and a column.
- Think about how to resize a row or column.
- Describe the different data-formatting options available in spreadsheets (for example, Currency).
- Hypothesize why a user would use borders and shading within a spreadsheet.

Overview

This lesson introduces fundamental spreadsheet skills. You will learn how to navigate and create spreadsheets, format rows and columns, and format cell data.

Spreadsheet Basics

Objectives

8.1.1: Define "spreadsheet" and describe ways it may be used.

8.1.2: Identify the parts of the spreadsheet display, including cells, columns and rows, cell references, cell range.

8.1.3: Create and navigate through multiple spreadsheets in a file.

The need to track information and calculate values dates back to the beginnings of civilization. But to understand where the name "spreadsheet" came from and how the formats we use today were defined, we will not need to look back that far.

A common term in the world of accounting, the "spread sheet" (two words originally but one after the introduction of technology) is a long and wide sheet of paper. A single piece of spreadsheet paper has multiple columns and rows that define most business transactions as well as costs, income, and other financial information. Managers and directors review these numbers and notes to help them make more informed decisions.

Today, a digital spreadsheet still holds financial information but it can also store records of data like test scores, contact information, and much more. As for its appearance, it looks much the same as the original design that inspired it. Spreadsheets are made up of columns – each identified with a letter (A, B, C, etc.) or two (AA, AB, AC, etc.) – and numbered rows. The intersection of a row and column is a **cell**. Each cell is defined by a **cell reference** or more simply, its column and row – like C7 or J15.

As you navigate around a spreadsheet using the keyboard or your mouse, you can select one cell or many cells. When you select multiple cells, there isn't just one cell reference but one cell reference for each cell that you select. A group of selected cells is better defined as a cell range. A cell range is comprised of two cell references separated by a colon. The first cell reference is the top/left most cell and the last cell reference is the bottom/right most cell. For example, a cell range of A6:D20 would represent a rectangle selection of cells where the rectangle begins in cell A6 (top/left corner of the rectangle) and ends at D20 (bottom/right corner of the rectangle).

Opening a New Spreadsheet in Google Sheets

Before we go further, we should open your spreadsheet application and take a look at the tools and features available. Use the following steps to open a new Google Sheets spreadsheet:

1. Click the **Chrome** Web browser icon on your desktop.
2. Click the **Sign in** button in the top right corner of the screen and login to your Google account.
3. Click the **Google Apps** grid.
4. Click the Google Sheets icon. This will open a new, blank spreadsheet inside of a new tab in Chrome.

If you were already logged in to your Google Drive, you could have opened a new Google Sheets spreadsheet using the following steps:

1. Click the **New** button in the left panel of your Google Drive window.
2. Click **Google Sheets**.

Demonstration video

- Accessing Google Sheets

Google Sheets Toolbar Menus

Google Sheets displays the spreadsheet title across the top of the screen which by default is ***Untitled spreadsheet***. Beneath the title is a Toolbar menu bar. Each menu title – **File**, **Edit**, **View**, **Insert**, **Format**, **Data**, **Tools**, **Add-ons** and **Help** – contains commands that you will use as you work with your spreadsheet. Table 1-1 provides a list of commands available in each menu.

Table 1-1: Commands in the Google Sheets menus

Menu	Drop-Down Options
File	Share, New, Open, Rename, Make a Copy, Move to Trash, See Revision History, Spreadsheet Settings, Download as, Publish to Web, E-Mail Collaborators, Page Setup, Print
Edit	Undo, Redo, Cut, Copy, Paste, Paste Special, Find and Replace, Delete values, Delete row, Delete column, Clear notes
View	Freeze, Gridlines, Protected ranges, Formula bar, All formulas, Hidden sheets, Compact Controls, Full Screen
Insert	Row above, Row below, Column left, Column right, New sheet, Comment, Note, Function, Chart, Image, Link, Form, Drawing
Format	Number, Font size, Bold, Italics, Underline, Strikethrough, Align, Merge cells, Text wrapping, Conditional formatting, Clear formatting
Data	Sort sheet by Column A-Z, Sort sheet by Column Z-A, Sort range, Named ranges, Protected sheets and ranges, Filter, Filter views, Pivot table, Validation
Tools	Create a form, Script gallery, Script editor, Spelling, Enable autocomplete, Notification rules, Protect sheet, Personal dictionary
Add-ons	Get Add-ons, Manage Add-ons
Help	Sheets Help, Report a Problem, Report abuse/copyright, Function list, Keyboard Shortcuts

NOTE: *The Help menu contains a great resource for working in Sheets: a* ***Function list****. A function is used in a formula to perform a specific task, like SUM, AVERAGE, or COUNTIF. The Function list is a comprehensive list of every function available within the program. With each function definition will also be an explanation of the function components, examples of how to use the function, and links to related functions.*

Below the menu bar is a **Shortcut** toolbar. Each button is a shortcut to a command that is found in a menu. Hover your mouse over each button to see a description of its command. You may recognize some of the commands from other programs – like **Print**, **Undo**, **Redo**, **Paint format**, **Font**, **Font Size**, **Bold**, **Italics**, **Strikethrough**, **Font color**, **Insert Link** and **Comment**. The remaining shortcuts provide quick access to spreadsheet-specific formatting – like **Format as currency**, **Format as percent**, **Decrease**

Create a Spreadsheet

In this activity, you will use the skills you have learned to create a new spreadsheet.

1. Start the spreadsheet program of your choice.
2. Create a new spreadsheet and name it **Classroom Library-*[your first initial and last name]*** (for example, Classroom Library-jsmith).
3. Select cells **A1** and **B1** and merge them.
4. Insert the text ***Classroom Library*** into your merged cells, and make the text **bold**.
5. **Center-align** the text in your merged cells.
6. Insert the text ***Non-fiction*** into cell **A2**, and make the text **bold**.
7. Insert the text ***Fiction*** into cell **B2**, and make the text **bold**.
8. **Center-align** the text in cells **A2** and **B2**.
9. Change the format of cells **A2** and **B2** to **Plain Text.**
10. Visit your teacher's classroom library and record the number of fiction and non-fiction books.
11. Enter the number of non-fiction books into cell **A3**.
12. Insert the number of fiction books into cell **B3**.
13. Change the format of cells **A3** and **B3** to **Number.**

    Your completed spreadsheet should look similar to Figure A1-1.

	A	B
1	Classroom Library	
2	Non-Fiction	Fiction
3	25.00	13.00

Figure A1-1: Completed spreadsheet

14. Close your spreadsheet.

Formatting Spreadsheets

In this activity, you will use the skills you have learned to add borders and shading to a spreadsheet.

1. Start the spreadsheet program of your choice.
2. Open your **Mailing-*[your first initial and last name]*** file.
3. Select cells **A2** through **E2**.
4. Change the fill color of cells **A2** through **E2** to **cyan.**
5. Select cells **A3** through **E7**.
6. Change the fill color of cells **A3** through **E7** to a color of your choice.
7. Select cells **A1** through **E7**.
8. Click the **Borders**  tool located on the toolbar.
9. Click **All borders**  .

   Your completed spreadsheet should look similar to Figure A1-6.

	A	B	C	D	E
1	Corporate Mailing				
2	Company Name	Street Address	City	Zip Code	Phone Number
3	Apple Inc.	1 Infinite Loop	Cupertino, CA	95014	(408) 996-1010
4	Company B	3500 Skyline Boulevard	Tampa, FL	82485	(352) 585-9185
5	Company C	4200 Metro Parkway	Tempe, AZ	33454	(913) 897-6665
6	Company D	8080 Treeline Avenue	Boston, MA	45953	(635) 333-3535
7	Company E	1012 Palm Beach Lane	Cleveland, OH	21895	(213) 555-9696

Figure A1-6: Completed spreadsheet with formatting

Spreadsheet Matching

In this activity, you will review spreadsheet terminology. Write the letter of the correct term next to each definition.

1. _____ Labeled with letters within a spreadsheet; intersects with rows
2. _____ Provides assistance to users regarding how to use a spreadsheet program
3. _____ Combining two or more cells together to form one larger cell
4. _____ Refers to a group of cells within a spreadsheet
5. _____ A document that arranges data in a series of columns and rows
6. _____ Displays the name of a spreadsheet
7. _____ Individual rectangle within a spreadsheet
8. _____ Labeled with numbers within a spreadsheet; intersects with columns
9. _____ Location of a cell (for example, A3)
10. _____ Allows users to manually enter functions or formulas

a. Cell reference

b. Row

c. Formula bar

d. Column

e. Cell

f. Cell range

g. Merge

h. Spreadsheet

i. Help menu

j. Spreadsheet title

k. Workbook