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Introduction

Simple Projects for Microsoft Excel is an activity book created to accommodate teachers who would like to utilize the *Microsoft Excel* spreadsheet application with their middle school curriculum. Each lab is student-friendly and requires no prior knowledge or experiences with *Excel*.

The projects in this book are arranged into three sections by subject area. Each lab provides you with the overall purpose of the lesson, materials required, detailed step-by-step procedures, and informative pictures. The activities are designed for use in a computer lab setting. A forty-five minute session should be enough for you to introduce, implement, and discuss each lesson. Because these projects have been successfully used in the classroom, you can feel confident introducing *Microsoft Excel* to your students.

Do not feel limited by the subject area that is included in each lesson. Although each lesson contains specific subject matter, all labs in this book can be easily adapted to fit your specific lesson plans. *Simple Projects for Microsoft Excel* is another way for you to confidently incorporate technology in the classroom.

These lessons have been written with reference to the features of *Microsoft Excel 97* for Windows. Many of the same tools, features, and instructions apply to other versions with only slight variations.

Understanding the Instructions

As you read through this book, there will be times that you are given specific instructions to follow. You might have to select an item from the menu bar, you might have to type in a specific word or name, or you might need to choose a specific button by clicking on the mouse. Use this guide for the following directions:

Instruction	What It Means
BOLD CAPITALS	Select this pulldown menu from the Menu Bar.
<i>Bold Italics</i>	Make this selection from the pulldown menu.
Bold	Choose this button, tool, or key.
<i>(filename)</i>	Type this word or sentence, or this is the name of a file.

Learning Objectives

In the activities presented in *Simple Projects for Excel*, students will:

- create a new spreadsheet document.
- define the following terms: columns, rows, and cells.
- identify the specific address of a selected cell.
- adjust the width of a selected column.
- enter data into a specific cell.
- change the style, color, and size of the font in a specific cell.
- adjust the alignment of data in a specific cell.
- create a column chart using data entered into a spreadsheet.
- label a chart's axes.
- create a title for a chart.
- utilize a graphic to represent a unit displayed in a chart.
- utilize different colors to represent data displayed on a chart.
- create a custom line-column chart with a secondary y-axis.
- create a 3-D bubble chart.
- alter the grid lines displayed on a chart.
- alter the legend that is displayed on a chart.

Learning Objectives *(cont.)*

- alter the color and gradient of data displayed in a bubble chart.
- utilize the auto fill spreadsheet function.
- create an area chart using data entered into a spreadsheet.
- format a cell to display numbers with one decimal point.
- create spreadsheet formulas within a cell.
- create a spreadsheet formula that calculates an average within a selected column of cells.
- format a cell to display numbers as currency.
- insert a pre-programmed function into a selected cell.
- create two separate charts from data entered on the same spreadsheet.
- display two charts on the same spreadsheet.
- create an exploded pie chart using specific data.
- format cells to display numbers as percentages.
- format cells to display numbers with commas.
- create a doughnut chart using specific data.

Lab #1 Average Length of Daylight

This Project

Each student will create a spreadsheet that tracks the changes in the length of daylight throughout the year. This data will be used to create a bar graph.

Materials

- Day1 template from the CD-ROM (optional)
- sun.jpg graphic from the CD-ROM

Before the Computer

- Discuss the length of daylight throughout the year with your class. Ask your class if they know when the shortest and longest days of the year occur.
- The shortest days of the year occur during winter, when it gets dark very early. The longest days occur during summer, when it remains light outside late into the evening.
- Discuss the reasons for day length changes with your class (optional). This is caused by the earth's tilted axis, which either reduces or increases the exposure of the North American continent to the sun.
- Explain to your students that they will be creating a spreadsheet that will display these changes in daylight.

A. Create a Spreadsheet

1. Open a new workbook document in *Excel*.
2. Click in cell A1. Type the label (*Month*). Change the style of this label to **Bold**. To do this, highlight the cell and click on the **Bold** button (**B**) on the toolbar. After you type this label, press the **Return** or **Enter** key on your keyboard. This will take you to the cell below.
3. In cell A2, type the word (*January*). Continue to fill in the cells of column A with the rest of the months of the year.
4. Click in cell A4. Change the label to read (*March 20th*).
5. Next, click in cell A7, where you should change the label to read (*June 21st*).
6. Click in cell A10 and change the label to (*September 22nd*). Also change the label in cell A13 to read (*December 21st*).

Lab 1 *(cont.)*

7. Change the styles of the labels in cells A4, A7, A10, and A13 to Bold, and center all of the labels in the cells. To center the labels, highlight cells A1-A13 and click on the **Center** button on the toolbar.
8. Adjust the column width so the labels are all readable. This is done by moving your cursor up to the line separating column A and B. The cursor will change to a line with two arrows pointing outwards. ➔ Once this occurs, click and hold your mouse button down, as you drag the line until all of the text shows.

	A	B
1	Month	
2	January	
3	February	
4	March 20th	
5	April	
6	May	
7	June 21st	
8	July	
9	August	
10	September 22nd	
11	October	
12	November	
13	December 21st	

9. Click in cell B1. Type the words (*Daylight Hours*). Change the style of this label to Bold, then press **Return** or **Enter** to move to cell B2.
10. In cell B2 type in the hours of daylight for January in its decimal form. The data for each month can be found on the following page or in the Day1 template file found on the CD-ROM.