# **Microsoft Excel 2019**

# **Module 5: Generating Reports from Multiple Worksheets and Workbooks**

# **A Guide to this Instructor’s Manual:**

We have designed this Instructor’s Manual to supplement and enhance your teaching experience through classroom activities and a cohesive module summary.

This document is organized chronologically, using the same headings in **blue** that you see in the textbook. Under each heading you will find (in order): Lecture Notes that summarize the section, Teacher Tips, Classroom Activities, and Lab Activities. Pay special attention to teaching tips and activities geared toward quizzing your students, enhancing their critical thinking skills, and encouraging experimentation within the software.

In addition to this Instructor’s Manual, our Instructor’s Resources also contains PowerPoint Presentations, Test Banks, and other supplements to aid in your teaching experience.

**Table of Contents**

|  |  |
| --- | --- |
| [Module Objectives](#Chapter_Objectives) | 1 |
| [Working with Multiple Worksheets](#_Working_with_Multiple)  [Viewing a Workbook in Multiple Windows](#_Viewing_a_Workbook)  [Working with Worksheet Groups](#_Working_with_Worksheet)  [Writing 3-D References](#_Writing_3-D_References)  [Linking to External Workbooks](#_EX_352_Linking)  [Creating Hyperlinks](#_Creating_Hyperlinks)  [Simplifying Formulas with Named Ranges](#_Simplifying_Formulas_with)  [Exploring Workbook Templates](#_Exploring_Workbook_Templates)  [End of Module Material](#_End_of_Tutorial_2) | 1  2  2  3  3  4  4  5  6 |

**Module Objectives**

Students will have mastered the material in this module when they can:

Section 5.1

* Copy worksheets between workbooks
* View a workbook in multiple windows
* Organize worksheets in a worksheet group
* Write a 3-D reference

Section 5.2

* Write an external reference
* Manage the security features of linked documents
* Create a hyperlink to a document source
* Link to an email address

Section 5.3

* Create and apply a named range
* Work with name scope
* Create a workbook template

**[Working with Multiple Worksheets](#FM2)**

LECTURE NOTES

* Demonstrate how to copy worksheets.

TEACHER TIP

A workbook can contain one or several worksheets. This feature gives you the ability to organize your data better. Many times a workbook has a massive amount of data. By dividing that data up into worksheets it is much more manageable and accessible. Often times, a worksheet at the front of the workbook will summarize the data on the rest of the worksheets. This provides an opportunity to view summarized data without having to look at the rest of the data unless you want to.

The fastest way to copy an entire worksheet or worksheet group is to press and hold the Ctrl key as you drag and drop the sheet tab to another location in the workbook. A number in parentheses is added to the copy’s sheet tab to distinguish it from the original worksheet.

CLASSROOM ACTIVITIES

1. Quick Quiz:

* What is the first step in copying worksheets to another workbook? (Answer: select the sheet tabs you want to copy)
* True/False. The fastest way to copy an entire worksheet to press and hold the Alt key as you drag and drop the sheet tab. (Answer: False)
* P&L stands for \_\_\_\_\_\_\_ and \_\_\_\_\_\_\_. (Answer: Profit, Loss)

**Viewing a Workbook in Multiple Windows**

LECTURE NOTES

* Discuss how to arrange multiple workbook windows
* Explain how to synchronize scrolling between windows

CLASSROOM ACTIVITIES

1. Quick Quiz:

* This layout option resizes the height and width of windows to fill the screen in both horizontal and vertical directions like floor tiles. (Answer: Tiled)
* This layout option expands the height of the windows to fill the screen and places them in a single row. (Answer: Vertical)
* This layout option expands the width of the windows to fill the screen and places them in a single column. (Answer: Horizontal)
* This layout option layers the windows in an overlapping stack. (Answer: Cascade)
* True or False: You can synchronize scrolling in two windows that are viewed side by side. (Answer: True)

**Working with Worksheet Groups**

LECTURE NOTES

* Demonstrate how to edit worksheet groups.
* Remind students how to ungroup a worksheet.
* Demonstrate how to print a worksheet group.

TEACHER TIP

A worksheet group is a collection of two or more worksheets. Sometimes students will want to work with the worksheets within a workbook as if they were a single unit. Worksheets can be combined together into a group. Grouping worksheets allows students to apply formulas across the worksheets in the group. Students can also apply formatting across worksheets in a group. This can allow them to work more efficiently by allowing them to make multiple changes through a single change.

Make sure students understand that when they group worksheets, any changes made to one worksheet will also be changed in any other worksheets in the group. This is a great way to apply formatting across worksheets. However, a common error is to delete a value or change a value in a worksheet not intending to have that change made in all the worksheets.

Remind students to remove the grouping before they begin to make individual worksheet changes.

CLASSROOM ACTIVITIES

1. Quick Quiz:

* True/False: When you edit cells in a worksheet group, the changes you make to one worksheet are automatically applied to the other worksheets in the group. (Answer: True)
* How do you ungroup worksheets? (Answer: Click the sheet tab of a worksheet that is not part of the group. If a worksheet group includes all of the sheets in a workbook, click any of the sheet tabs to ungroup the worksheets.)
* To print the grouped worksheets, first do what? (Answer: Group the sheets to be printed.)
* True/False: In a worksheet group, changing row heights, but not row widths, are automatically applied to all sheets. (Answer: False)
* True/False: Worksheet groups save time and improve consistency. (Answer: True)

**Writing 3-D References**

LECTURE NOTES

* Explain how to reference cells in other worksheets
* Show how to apply 3-D references to formulas and functions

TEACHER TIP

Students are familiar with the two-dimensional aspect of a worksheet (i.e., rows and columns). They can think of the collection of worksheets in a workbook as a third dimension. Students know that they can reference rows and columns in a worksheet, and can also reference cells in other worksheets. They can, therefore, have a reference in a worksheet that pertains to a cell in another worksheet.

CLASSROOM ACTIVITIES

1. Quick Quiz:

* What is a 3-D reference? (Answer: It refers to the same cell or range in multiple worksheets in the same workbook.)
* True/False: 3-D references can only be used within certain Excel formulas and functions. (Answer: False)
* True/False: Worksheet group references are based on the current order of worksheets in the workbook. (Answer: True)
* True/False: A 3-D reference can be used with MIN and MAX functions. (Answer: True)
* True/False: A 3-D reference cannot be used with COUNT and AVERAGE functions. (Answer: False)
* A \_\_\_\_\_\_\_\_ is a symbol that represents any character. (Answer: wildcard)

**Linking to External Workbooks**

LECTURE NOTES

* Explain how to create external references.
* Discuss how to update workbook links.
* Explain external references and security concerns.
* Discuss how to review links within a workbook.
* Show how to manage workbook links.

TEACHER TIP

Remind students that unlike with worksheets, there’s no such thing as a workbook group. You can only specify one workbook at a time.

CLASSROOM ACTIVITIES

1. Critical Thinking: Imagine a company that has salespersons throughout the country who record all their sales data in a workbook. If you are the sales manager, how could you use the concepts in this module to “pull it all together” so that you have summarized data from the individual workbooks? Do you think it would be best to pull all the data from the individual workbooks into a single workbook? Or do you think it would be better to keep the data in separate workbooks and then pull the summary information into a single workbook? Why do you come to this conclusion?
2. Quick Quiz:

* True/False. When you break a link using the Break Links command in the Edit Links dialog box, all the external reference formulas are converted to their most recent values. (Answer: True)
* References to cells in other workbooks are also known as \_\_\_\_\_\_\_\_\_\_\_ references. (Answer: external)
* How do you reference cells within a worksheet group of the source workbook? (Answer: place the workbook file name in brackets and then list the worksheet group and cell reference as you would in a 3-D reference)
* True/False: External references can be long and complicated. (Answer: True)
* True/False: When linking to external source documents, you do not have to worry about security issues. (Answer: False)

**Creating Hyperlinks**

LECTURE NOTES

* Demonstrate how to link to a location within a workbook.
* Demonstrate how to link to an email address.

TEACHER TIP

A hyperlink is a link to information within that file or another file. The hyperlinks are usually represented by colored words with underlines or images. Although hyperlinks are most often found on Web pages, they can also be placed in a worksheet and used to quickly jump to a specific cell or range within the active worksheet, another worksheet, another workbook, or to other files, such as a Word document or a PowerPoint presentation, or sites on the Web.

CLASSROOM ACTIVITIES

1. Quick Quiz:

* A(n) \_\_\_\_\_\_\_ is a link in a file. (Answer: hyperlink)
* True/False. To use a hyperlink, you click anywhere inside the cell that contains the link. (Answer: False)
* Name five resources that a hyperlink can be connected to. (Answer: Websites; files on your computer in Word documents, PowerPoint presentations, text files, and PDF documents; cells and cell ranges within the current workbook; email addresses; new documents created specifically as the source of the hyperlink.)

**Simplifying Formulas with Named Ranges**

LECTURE NOTES

* Define a named range.
* Explain how to use named ranges in formulas.
* Discuss how to determine the scope of named ranges.
* Show how to use defined names in existing formulas.

CLASSROOM ACTIVITIES

1. Quick Quiz:

* True or False: A named range can refer to any cell or cell range within a workbook. (Answer: True)
* True or False: The least productive way to define a named range is to select a range and enter the name in the Name box. (Answer: False)
* True or False: The name you use for a range should be short, meaningful, and descriptive. (Answer: True)
* By default, Excel treats named ranges as \_\_\_\_\_\_\_\_\_\_ cell references. (Answer: absolute)
* \_\_\_\_\_\_ scope is used to avoid name conflicts that would occur when the same name is duplicated across multiple worksheets. (Answer: Local)
* True or False: You can use the Apply Names command for worksheet groups. (Answer: False)

**[Exploring Workbook Templates](#FM2)**

LECTURE NOTES

* Demonstrate how to set up a workbook template.
* Show how to create a workbook based on a template.

TEACHER TIP

In business, people often create workbooks that have common elements such as invoices, an expense statement, a balance sheet, or many other day-to-day operations workbooks. Using a template makes this process much easier because the elements are already in place and all students do is fill them in.

A custom template is a workbook template you create that is ready to run with the formulas for all calculations included as well as all formatting.

CLASSROOM ACTIVITIES

1. Quick Quiz:

* True/False. You can create a workbook with all the formulas and formatting you need and then save it as a template on which you can base other workbooks. (Answer: True)
* True/False: There are three ways to create a workbook based on a template. (Answer: False)

1. Class Discussion: A custom template is a workbook template you create that is ready to run with the formulas for all calculations included as well as all formatting. Can you think of uses for creating a custom template?
2. Class Discussion: There are many advantages of using a template to create multiple workbooks with the same features. Describe the advantages.

LAB ACTIVITY

Divide the class into as many groups as there are categories of templates (this could vary depending on what templates are available on your system). Have each group open one of the template categories and select a template. When they open the template, have the groups discuss a situation where they might use one of these templates. Have the groups enter some “dummy” data into the template. The groups should evaluate how well their assigned template met their needs. Also, they should answer whether the template was easy to use. After several minutes, bring the class back together and let each group share what they worked on.

**End of Module Material**

* **Review Assignments:** Review Assignments provide students with additional practice of the skills they learned in the module using the same module case, with which they are already familiar. These assignments are designed as straight practice and do not include anything of an exploratory nature.
* **Case Problems:** A typical NP module has four Case Problems following the Review Assignments. Short modules can have fewer Case Problems (or none at all); other modules may have five Case Problems. The Case Problems provide further hands-on assessment of the skills and topics presented in the module, but with new case scenarios. There are five types of Case Problems:
* **Apply**. In this type of Case Problem, students apply the skills that they have learned in the module to solve a new problem.
* **Create**. In a Create Case Problem, students are either shown the end result (such as a finished Word document) and asked to create the document based on the figure provided, or, students are asked to create something from scratch in a more free-form manner.
* **Challenge**. A Challenge Case Problem involves one or more Explore steps. These steps challenge students by having them go beyond what was covered in the module, either with guidance in the step or by using online Help as directed.
* **Research**. A Research Case Problem requires students to find information on the Internet to help solve a problem or to include in the file they are creating.
* **Troubleshoot**. In this type of Case Problem, certain steps of the exercise require students to identify and correct errors that are intentionally placed in the files. Completing these steps helps to promote problem solving and critical thinking.

[Top of Document](#_Excel_2007)