

Course Orientation

40567A

Microsoft Excel associate 2019

Student version

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Introduction

Welcome to Excel Associate 2019. This 40-hour educator-led course helps you develop the knowledge and skills to improve your personal productivity by using Microsoft Excel 2019. It also helps you prepare for the associated Microsoft Office Specialist (MOS) certification exam, [MO-200: Microsoft Excel \(Excel and Excel 2019\)](#).

In this course, you'll learn to use Excel through scenario-based, hands-on lessons that emphasize practical outcomes. By learning how to use Excel while creating real-world results, you will be more personally productive and empowered.

Use the sections in this guide to orient yourself to the course:

- For basic facts about the course, refer to: [Goals](#).
- To learn about how the course is designed and what makes it unique, refer to: [Key course features](#).
- For a breakdown of the materials provided for the course, refer to: [Materials](#).
- Information on how the course supports MOS test preparation is included in [MOS exam objectives mapping](#).

Goals

This course helps you understand the powerful and useful tools available in Excel, and how you can use them to improve your productivity. You will learn about features and capabilities within Excel through real-world activities for a fictional company. By becoming adept at using the features of Excel, you'll improve the ways you organize ideas and information, gain valuable insights into the ways you can filter and present data, and create spreadsheets that clearly and effectively deliver targeted data and computations to your intended audiences.

By the end of the course, you'll be able to:

- Create, open, edit, and save workbooks; understand the interface; and navigate to workbook elements.
- Manage workbooks and worksheets, change the screen display, and customize the Quick Access Toolbar.
- Format cells and numbers, align and wrap content, add and remove cell styles, and merge cells.
- Format data as a table, work with table styles, create named tables, define range names, and filter and sort data.
- Create and display formulas, use references and common functions in formulas, and understand calculation operators and precedence.

- Get data from other sources, fix text formatting by using text functions, and insert hyperlinks to related information.
- Apply conditional formatting to data; create, edit, and format charts; create sparklines; and use the **Quick Analysis** feature to quickly analyze data.
- Configure a workbook's print settings and page setup, add and edit headers and footers, modify basic workbook properties, and inspect a workbook for compatibility and accessibility issues.

In addition to equipping you with the skills needed in a digital workplace, this course also prepares you for the MO-200: Microsoft Excel exam. The course materials specify where each MOS exam objective is addressed in the sequence of modules and lessons. In addition, the [MOS exam objectives mapping](#) section in this document lists the Excel MOS certification exam objectives by number, and where you can find course support for each objective.

Key course features

This section describes the unifying scenario, lesson elements, and other key course features that distinguish it from other courses and help provide a successful learning experience.

Unifying scenario: Munson's Pickles and Preserves Farm

In this course, you'll learn about the Munson's Pickles and Preserves Farm. Munson's is a fictitious family-owned agribusiness that started as a small farm market and has been in operation for three generations. As a student in this course, you are asked to pretend you've been granted a 1-year internship within the farm's marketing team. As a growing business, Munson's needs to transform the way it tracks crop harvesting, fruit and vegetable distribution, profits, and inventory.

The Munson's storyline helps demonstrate how real people and real companies use Excel. You'll learn tools and strategies via educator-led instruction and skill-building practices. You'll then apply that learning in exercises and activities via challenges and problems set in the fictitious scenario. Through Munson's stories and challenges, you'll work on authentic problems to add relevance, context, meaning, and connections to the power and usefulness of Excel.

The Munson's scenario additionally illustrates how businesses of every size and type are transforming the ways they operate, innovate, succeed, and grow using digital technology. Farms such as Munson's are an example of how small companies still use long-established business models, but have the capacity to let data and technology guide their future development.

For details on how you will interact with this scenario in each of the modules for this course, refer to the later section, [Detailed student experience: Working as an intern at Munson's](#).

Warm-up and Wrap-up questions

In this course you'll have Warm-up and Wrap-up questions. Warm-up questions set the stage for what you'll be learning, and connect past experiences to the current lesson. These questions also provide you with general guidance for choosing the level of a Try-it practice exercise (described later). For example, if you correctly answer all of a given lesson's Warm-up questions, you might choose to attempt the higher-level Try-its for the lesson. In contrast, if you have less success answering the Warm-up questions, you might find it more effective to try the lower-level Try-its.

Wrap-up questions summarize the overall aim of the lesson to help you assimilate and reinforce what you've learned. These questions also provide a broader function of reminding you why the skills and knowledge you've gained will be helpful to you beyond the classroom door.

Try-it practice exercises

Try-it practice exercises follow a lesson's learning activity and give you the opportunity to practice what you've just learned. For example, having just learned about modifying the **Quick Access Toolbar**, you'll be invited to try adding commands to the toolbar by using the **Quick Access Toolbar** drop-down menu. Some Try-its exercises offer different complexity levels, so you can pick the one that matches your readiness or learning needs.

Cornerstone learning exercises

Cornerstone learning exercises are scored learning activities that occur as part of the final lesson in each module. They mimic MOS exam prompts to give you a sense of what the exam will be like. Learning objectives for Cornerstone learning exercises focus on the module's key skills and objectives, and address most, or sometimes all of the exam objectives for a module.

Capstone project

The Capstone project is the final learning activity included in the course. It provides the opportunity for you to apply and demonstrate what you've learned throughout the course by choosing a project that represents a personally meaningful or significant challenge. You choose how to approach the challenge and what you'll create using Excel that will contribute to the solution. You'll select from a menu of techniques and tools to employ in your projects to both demonstrate your mastery of selected objectives and demonstrate your ability to select techniques and tools that are most appropriate to communicate your solution ideas.

The Capstone project includes a performance assessment rubric. Use this tool to assess how you've applied what you've learned in the course to the challenge.

Concept videos

Concept videos are two-to-four-minute videos that don't map directly to a module or lesson in this course, but are foundational to understanding important relevant concepts. Using animations and a descriptive voice-over track, concept videos help you learn more about real-world environments where you can apply your learnings.

For example, one of the concept videos, [Data visualization](#), demonstrates how data can come to life for the intended audience when you use the data to create various kinds of charts.

The other concept videos are:

- [Creating for everyone](#). This video emphasizes the importance of inclusivity and accessibility in the communications you create.
- [Graphic design basics](#). This video introduces the fundamentals of graphic design, including sizing, aligning, and repeating graphic objects. It also covers best practices for using these concepts to enhance communication.
- [Organizing with databases](#). This video demonstrates how storing data in tables forms the basis for creating relational databases and can help you organize and track information.
- [Digital collaboration](#). This video familiarizes you with the capabilities in modern tools for collaborating with others, combining different strengths and work styles to generate the best possible outcomes.
- [Managing a busy schedule](#). This video helps you make the most of calendar tools to stay organized with your projects and manage your time effectively.

- [Making predictions with data](#). This video orients you to using basic data analysis by stating goals, gathering data, ensuring the data is usable, and using software tools to develop predictive models.

Learning cues

This course uses easily identifiable cues to help you find important pieces of information.

Icons

Three icons are repeated throughout the student materials to indicate important characteristics of the content being discussed.



This topic icon indicates that a lesson topic is mapped to at least one Microsoft Office certification exam objective.



This type of Try-it icon indicates that there are multiple Try-its available of varying complexity.



This type of Try-it icon indicates that the Try-it is a single activity designed for everyone regardless of previous experience or expertise.

Callouts

These brief page elements contain helpful additional information about the course. Because this course is designed for live access to [Office Help and Training](#) videos and articles, the links in callouts often link you with videos and other resources available in the Microsoft Office training center.

Additional information

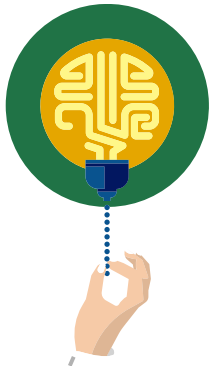
The Additional information callout provides links to content that pertains to knowledge or skills addressed in the topic and further topics of interest related to the scenario. The following example is an Additional information callout:

**Additional information**

For more information on MOS certification exams, visit [Microsoft Office Certification](#).

Did you know?

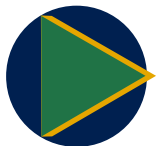
The Did you know? callout provides useful information that is not part of the core learning objective but is a handy tip to be kept in mind. The following example is a useful callout:

**Did you know?**

You can switch between the applications you currently have open on your computer by using the Alt+Tab keyboard shortcut.

Video

The Video callout provides references to useful videos that help increase efficiency in using the course learnings. The following example is a Video callout:

**Video**

To learn more about Microsoft 365, go to: [Discover what's possible with Microsoft 365](#)

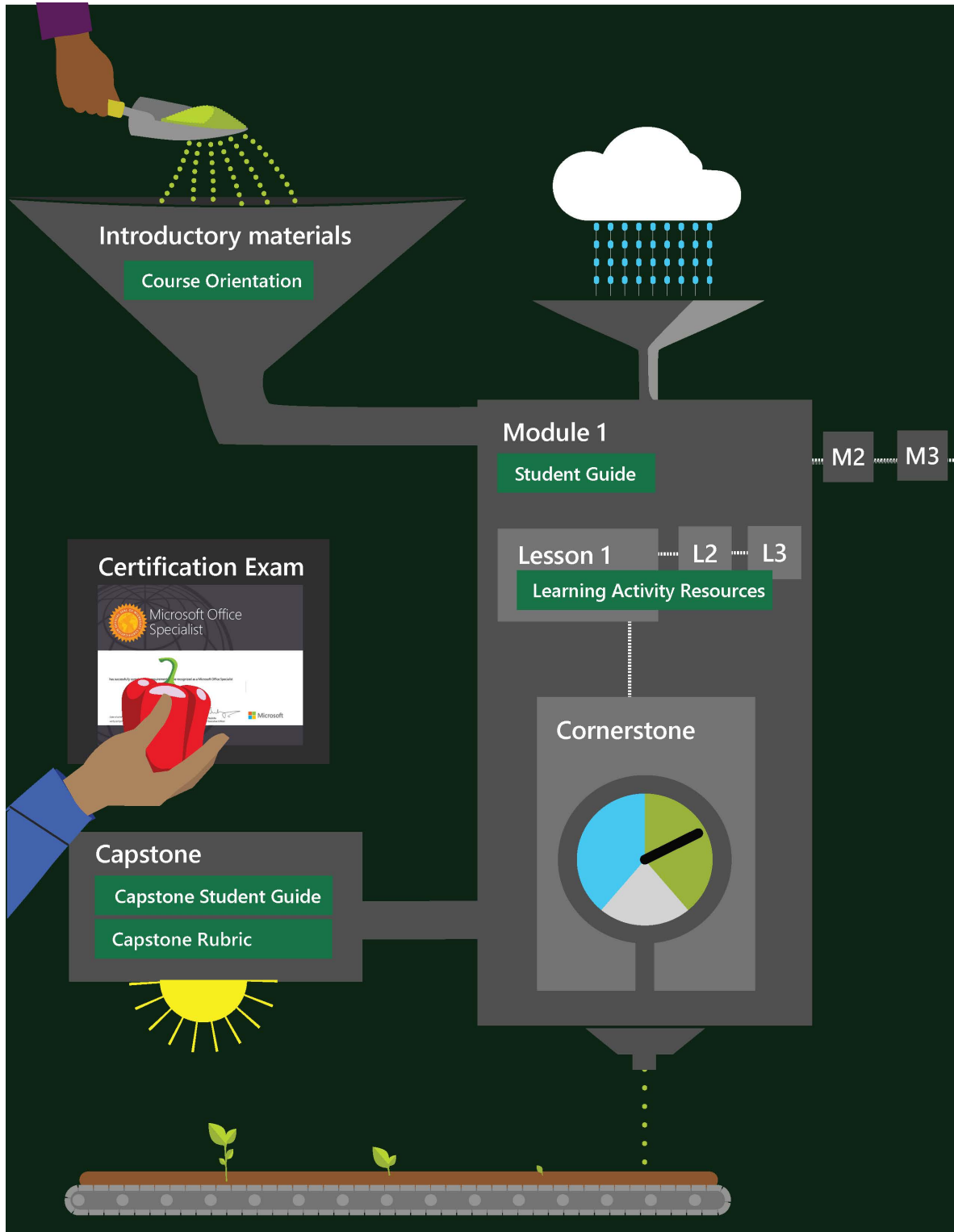
Materials

The following student materials are provided with this course.

Student materials	Description
Course Orientation, Student version	This document provides an introduction to the course. It describes goals, duration, and prerequisites, in addition to the key course features, the unifying Munson's Pickle and Preserves Farm scenario, and an explanation of how the course supports MOS exam objectives.
Student Guide	You'll have a Student Guide for each module, which provides: <ul style="list-style-type: none"> • An overview of the module and each lesson in it, including course learning objectives and corresponding MOS exam objectives. • Topic core content and additional reading links for you to use before or after class. • Instructions to participate in activities. • Instructions to complete Try-its. • Warm-up and Wrap-up questions. • Instructions to complete the Cornerstone.
Learning Activity Resource	The resources in the Learning Activity Resources folder include the starter and supporting files that you'll use to practice skills in activities, Try-its, and Cornerstones.
Capstone Student Guide	The Capstone Student Guide includes the following information: <ul style="list-style-type: none"> • An overview and introduction to the Capstone project. • Instructions on how to complete the project.
Capstone Rubric	The Capstone Rubric outlines the criteria for assessment of the Capstone project.

How it all fits together

The following infographic provides a high-level illustration of the course design, including the materials discussed in this guide.



MOS exam objectives mapping

This course has a direct mapping of its content to the objective domain for the MO-200: Microsoft Excel exam. For more details about MOS exam scope, visit: [Microsoft Office Certification](#)

Use the following table to find where in the course each MOS exam objective is taught.

MOS exam objectives	Module/Lesson
Skill: Manage worksheets and workbooks	
1.1 Import data into workbooks	
1.1.1 Import data from .txt files	Module 6, Lesson 1
1.1.2 Import data from .csv files	Module 6, Lesson 1
1.2 Navigate within workbooks	
1.2.1 Search for data within a workbook	Module 1, Lesson 3
1.2.2 Navigate to named cells, ranges, or workbook elements	Module 1, Lesson 3
1.2.3 Insert and remove hyperlinks	Module 6, Lesson 5
1.3 Format worksheets and workbooks	
1.3.1 Modify page setup	Module 7, Lesson 8
1.3.2 Adjust row height and column width	Module 2, Lesson 1
1.3.3 Customize headers and footers	Module 8, Lesson 2
1.4 Customize options and views	
1.4.1 Customize the Quick Access toolbar	Module 2, Lesson 3
1.4.2 Display and modify workbook content in different views	Module 2, Lesson 3
1.4.3 Freeze worksheet rows and columns	Module 2, Lesson 3

MOS exam objectives	Module/Lesson
1.4.4 Change window views	Module 2, Lesson 3
1.4.5 Modify basic workbook properties	Module 8, Lesson 3
1.4.6 Display formulas	Module 5, Lesson 1
1.5 Configure content for collaboration	
1.5.1 Set a print area	Module 7, Lesson 8
1.5.2 Save workbooks in alternative file formats	Module 1, Lesson 2
1.5.3 Configure print settings	Module 7, Lesson 8
1.5.4 Inspect workbooks for issues	Module 8, Lesson 3
Skill: Manage data cells and ranges	
2.1 Manipulate data in worksheets	
2.1.1 Paste data by using special paste options	Module 2, Lesson 2
2.1.2 Fill cells by using AutoFill	Module 1, Lesson 3
2.1.3 Insert or delete multiple columns or rows	Module 2, Lesson 1
2.1.4 Insert and delete cells	Module 2, Lesson 1
2.2 Format cells and ranges	
2.2.1 Merge and unmerge cells	Module 3, Lesson 2
2.2.2 Modify cell alignment, orientation, and indentation	Module 3, Lesson 2
2.2.3 Format cells by using Format Painter	Module 3, Lesson 1
2.2.4 Wrap text within cells	Module 3, Lesson 2
2.2.5 Apply number formats	Module 3, Lesson 1

MOS exam objectives	Module/Lesson
2.2.6 Apply cell formats from the Format Cells dialog box	Module 3, Lesson 1 Module 3, Lesson 2
2.2.7 Apply cell styles	Module 3, Lesson 3
2.2.8 Clear cell formatting	Module 3, Lesson 3
2.3 Define and reference named ranges	
2.3.1 Define a named range	Module 4, Lesson 3
2.3.2 Name a table	Module 4, Lesson 3
2.4 Summarize data visually	
2.4.1 Insert Sparklines	Module 7, Lesson 6
2.4.2 Apply built-in conditional formatting	Module 7, Lesson 1
2.4.3 Remove conditional formatting	Module 7, Lesson 1
Skill: Manage tables and table data	
3.1 Create and format tables	
3.1.1 Create Excel tables from cell ranges	Module 4, Lesson 1
3.1.2 Apply table styles	Module 4, Lesson 1
3.1.3 Convert tables to cell ranges	Module 4, Lesson 1
3.2 Modify tables	
3.2.1 Add or remove table rows and columns	Module 4, Lesson 2
3.2.2 Configure table style options	Module 4, Lesson 2 Module 4, Lesson 4
3.2.3 Insert and configure total rows	Module 4, Lesson 2

MOS exam objectives	Module/Lesson
3.3 Filter and sort table data	
3.3.1 Filter records	Module 4, Lesson 4
3.3.2 Sort data by multiple columns	Module 4, Lesson 4
Skill: Perform operations by using formulas and functions	
4.1 Insert references	
4.1.1 Insert relative, absolute, and mixed references	Module 5, Lesson 2
4.1.2 Reference named ranges and named tables in formulas	Module 5, Lesson 2
4.2 Calculate and transform data	
4.2.1 Perform calculations by using the AVERAGE(), MAX(), MIN(), and SUM() functions	Module 5, Lesson 3
4.2.2 Count cells by using the COUNT(), COUNTA(), and COUNTBLANK() functions	Module 5, Lesson 4
4.2.3 Perform conditional operations by using the IF() function	Module 5, Lesson 5
4.3 Format and modify text	
4.3.1 Format text by using the RIGHT(), LEFT(), and MID() functions	Module 6, Lesson 2
4.3.2 Format text by using the UPPER(), LOWER(), and LEN() functions	Module 6, Lesson 3
4.3.3 Format text by using the CONCAT() and TEXTJOIN() functions	Module 6, Lesson 4
Skill: Manage charts	
5.1 Create charts	
5.1.1 Create charts	Module 7, Lesson 2

MOS exam objectives	Module/Lesson
5.1.2 Create chart sheets	Module 7, Lesson 2
5.2 Modify charts	
5.2.1 Add data series to charts	Module 7, Lesson 3
5.2.2 Switch between rows and columns in source data	Module 7, Lesson 3
5.2.3 Add and modify chart elements	Module 7, Lesson 4
5.3 Format charts	
5.3.1 Apply chart layouts	Module 7, Lesson 5
5.3.2 Apply chart styles	Module 7, Lesson 5
5.3.3 Add alternative text to charts for accessibility	Module 7, Lesson 2



Additional information

For more information on MOS certification, go to: [Microsoft Office Certification](#)

Detailed student experience: Working as an intern at Munson's

The following sections explain how you will encounter the Munson's Pickles and Preserves storyline as part of this course, and how it is the basis for the Cornerstone activity for each module.

About Munson's

Over the decades, Munson's has grown from its original enterprise of growing and preserving vegetables to an agribusiness with more than 50 employees and worldwide markets. The farm now includes a variety of agriculture-related enterprises and is host to numerous community events.

While still operating in the same small, fertile valley growing high-quality produce for foodservice and local markets, Munson's has become known for their dedication to operating with sound business practices and advanced agricultural technology.

Munson's partners with a local vocational school to offer a trade internship program at their farm. As a student studying in this program, you have started a one-year internship and will be helping various farm teams by creating and updating communications and documentation specific to the programs and projects they manage.

Module 1: Introduction

You've been working as an intern within the finance team of a farming operation. The finance team is currently working on converting as much paperwork as they can to digital. You've been working with a sales analyst for the past year. Several inexperienced interns will be starting soon, and they have no prior Excel experience. You've been tasked with teaching the interns Excel basics that will allow them to assist you with inputting the sales and personnel data. You've used Excel only a few times and you know that you don't have enough knowledge to teach the interns everything they'll need to know to be able to do their jobs. To get prepared, you're going back to the basics to make sure you have the skills you'll need to train the interns.

Module 2: Managing worksheets and workbooks

Munson's Pickles and Preserves Farm has several honeybee apiaries that they lend to area farms for crop pollination. They have been tracking the movement of the hives in workbooks.

You've inherited beekeeping workbooks from a colleague that track the locations, dates, and other associated information about the hives. They are a mess! The workbook, its worksheets, their columns, rows, and cells are inconsistent in size and format. It's your job to tidy these up for easier viewing and structure consistency. In a brief perusal of the document you've noted that:

- Columns and rows need to be resized.
- Information needs to be copied and moved from one area to another while keeping the associated formatting.
- Panes need to be frozen for easier viewing across many rows and columns.
- Data needs to be repositioned.

Module 3: Formatting cells

Munson's Pickles and Preserves Farm is a popular destination for school trips, family agricultural tourism, and youth summer camps.

A member of the events management team has shown you several fantastic Microsoft Word documents for the upcoming events. These Word documents were designed following the Munson's Pickles and Preserves Farm Style Guide, a document that provides the branding guidelines for all documents created for the farm.

The internship students, including you, have been asked to help ensure that the events management team's existing Excel workbooks follow the Munson's Pickles and Preserves Farm Style Guide. Munson's Workbook Style Challenge for the interns is on!

In the worksheets provided for this module, you must apply formatting to the cells and cell contents, align content in a cell, merge cells, wrap text in a cell, and apply cell styles. Don't worry if you don't know what all that means. We'll cover each step as we go along.

Module 4: Managing tables and range data

Munson's Pickles and Preserves Farm distributes their harvested crops to many local and regional outlets, including grocery stores, restaurants, farmers markets, and their own onsite farm stand.

Distribution data is captured in workbooks, but workbooks are not set up for filtering and sorting the harvest yield, distribution routes, wholesale pricing, retail pricing, and more.

You have been asked to sort out the disorderly data. Your first task is to create the tables that capture information such as harvest yield, distribution locations, wholesale prices, etc. The tables allow you to quickly filter, sort, and find specific information. Because time is precious, and production on the farm doesn't stand still, you need to get this done quickly.

Module 5: Using formulas and functions

Munson's Pickles and Preserves Farm's weeklong Fall Festival event has ended. To prepare for a post-event review meeting, you have been asked to summarize the number of visitors and determine the sales revenue for the farm event. You have a workbook containing a worksheet with data logged during the event.

Module 6: Getting and transforming data

Munson's Pickles and Preserves currently has a customer list containing customer names, addresses, and phone numbers in a document file. They need all the information within that file placed into an Excel workbook. You have been given the task to place the customer information into the Excel workbook. How would you attempt this task?

Come up with your own ideas on how to complete this task. Be prepared to discuss your ideas with a partner and then with the rest of the class.

Module 7: Visualizing data

Munson's Pickles and Preserves is in an extremely favorable climate for solar energy production. Last year Munson's invested in a solar array to provide electricity for all operations. The solar array has been a huge part of the farm's digital transformation, and is an exciting project for everyone to witness. Everyone at the farm is proud of the initiative to move to a renewable source of electricity, and they've all been anxious to know what the data says about the endeavor. In fact, it seems like the entire community wants to know how well the solar project is going!

A colleague has been collecting as much data as possible related to the solar array and overall electricity consumption on the farm. He is enthusiastic to share with everyone that the solar array has made a big difference, but he is having a hard time understanding the data, let alone explaining it—it really just looks like a bunch of numbers! Knowing that you're getting pretty good at Excel, he wants your help to create visualizations for all this data about solar energy production, consumption, and costs. You'll need to add some conditional formatting, charts, and sparklines to help make the data clear.

Module 8: Preparing to print and checking for issues

The farm would like to start using drones to track crop health. Eventually, the data from the drones will help make the farm much more productive. But the initial development cost is high. To help with the costs, farm management executives will meet with a potential investor next week. Because you've gained so much Excel experience during your internship so far, they'd like your help in finalizing a couple of important workbooks to print and present to the investor.