Microsoft Project 2016

Lesson 3

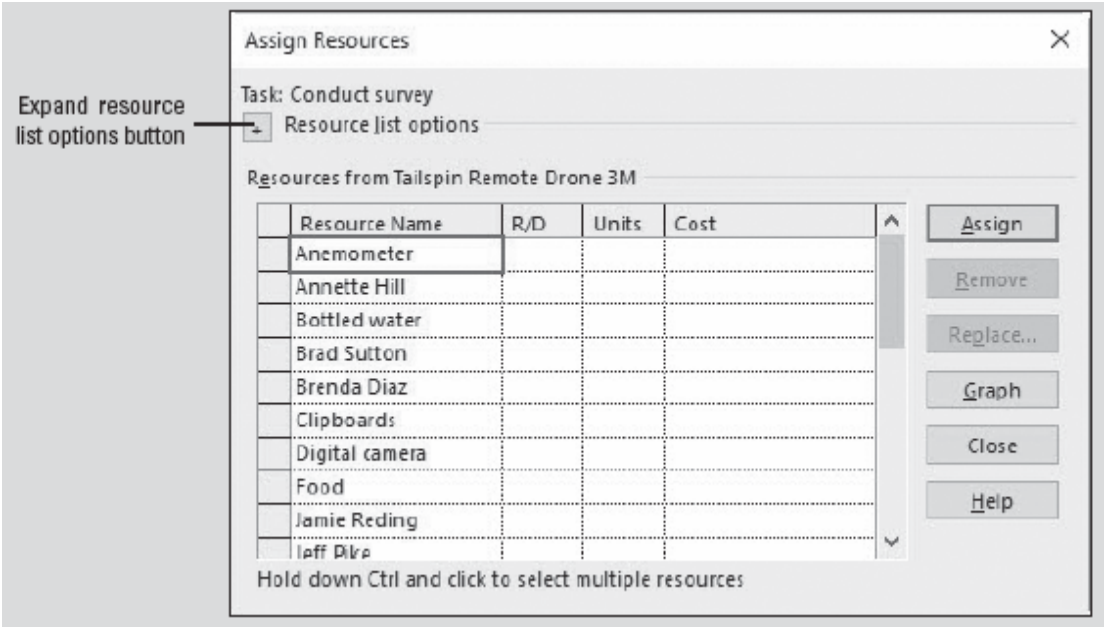
Resource and Task Assignments

Objectives

Skills	Matrix Skill
Assigning Work Resources to Tasks • Making Individual Resource Assignments • Assigning Multiple Resources Simultaneously	Make individual resource assignments Assign multiple resources simultaneously
Adding More Work Resource Assignments to Tasks • Using the Actions Tag to Change Project's Scheduling Behavior	Add additional work resources to a task Use the Actions tag to change Project's scheduling behavior
Assigning Material Resources to Tasks	Assign a material resource to a task
Assigning Cost Resources to Tasks	Assign a cost resource to a task

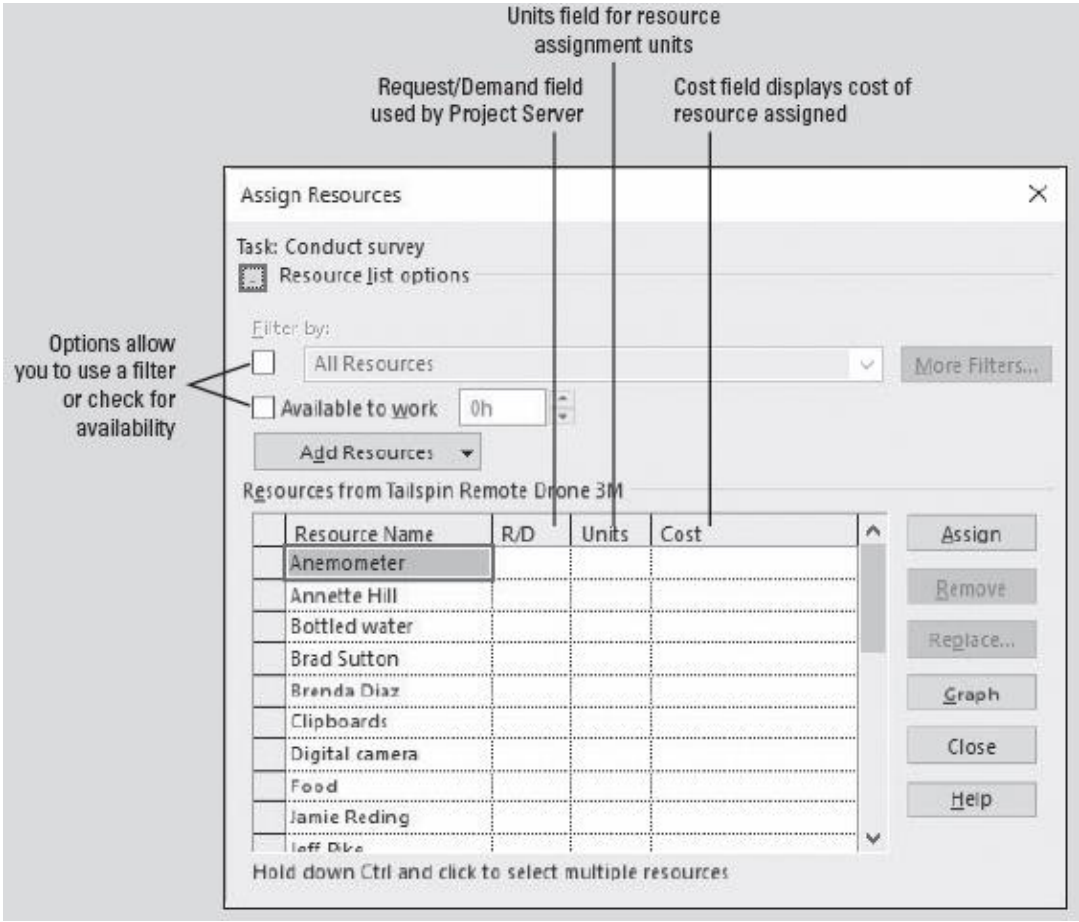
Software Orientation

- In Microsoft Project, you can assign resources to a task using the Assign Resources dialog box, shown here.
- You activate the Assign Resources dialog box via the Assign Resources button located in the Assignments group on the Resource ribbon.



Software Orientation

- The Assign Resources dialog box looks like the figure shown at right if the Resource List options are expanded.
- The figure on the previous slide shows the Assign Resources dialog box with the Resource List options collapsed.



Software Orientation

- You can expand the Resource List options in the Assign Resources dialog box by clicking on the button marked with a plus sign next to the Resource List options heading.
- You can collapse the expanded list by clicking the button, now marked with a minus sign, once again.
- In this lesson, you will use the Assign Resources dialog box and other methods to assign resources.

Making Individual Resource Assignments

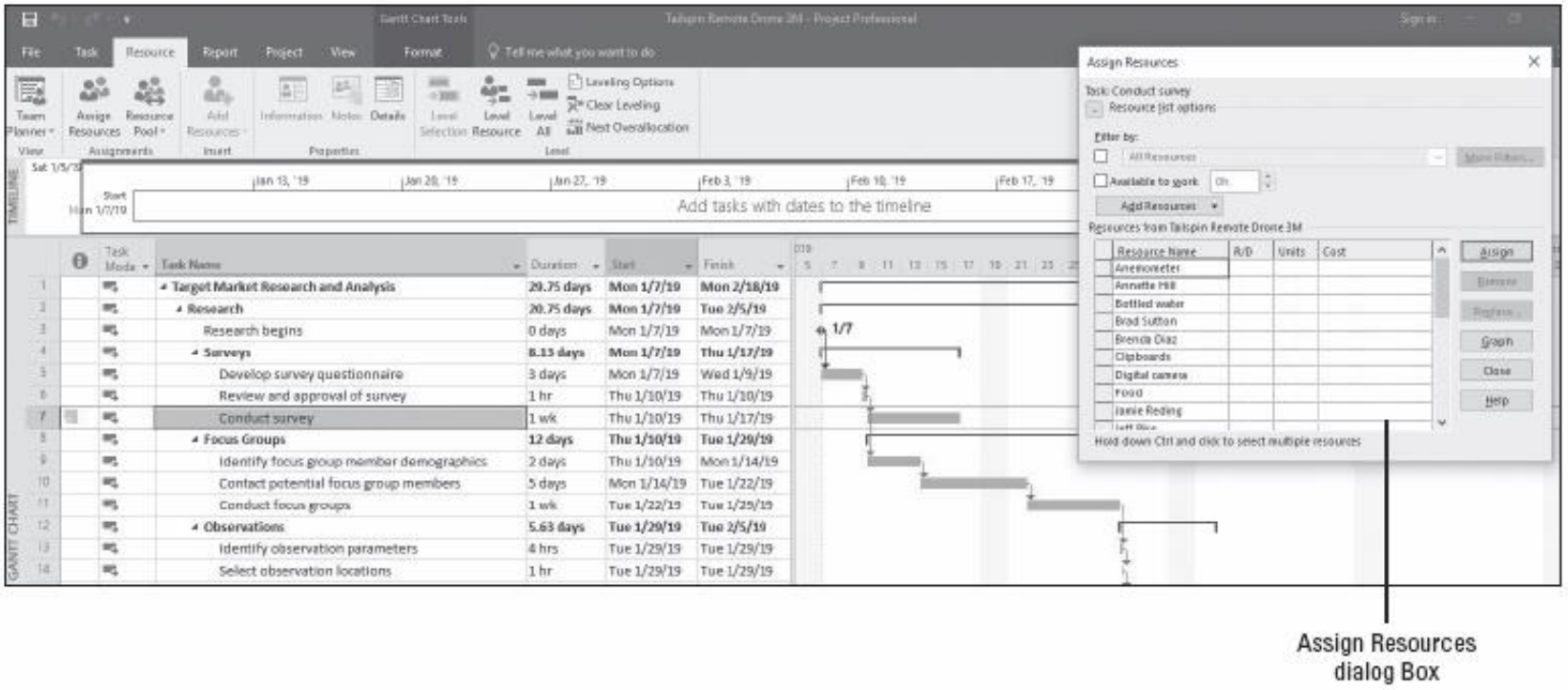
- Microsoft Project provides you with various options for assigning resources to tasks. You can assign individual resources to a task or multiple resources to a task at one time.
- Once assigned, you can track the resource working on the task. Microsoft Project also enables you to see whether or not resource assignments affect task duration.
- An ***assignment*** is the matching of a specific resource to a particular task, to either perform work or as a material or a cost.
- In the previous lessons, you mapped out tasks and resources for your project schedule. In the following exercise, you will learn how to assign work resources to the tasks they will perform.

Step-by-Step: Make Individual Resource Assignments

- GET READY. Before you begin these steps, open *Tailspin Remote Drone 3M* from the data files for this lesson. SAVE the file as *Tailspin Remote Drone 3*.

1. Click the Resource tab. In the Assignments group, click the Assign Resources button. The Assign Resources dialog box appears.
2. If the Assign Resources dialog box is covering the Task Name column, drag the dialog box into the middle of the screen. Your screen should look similar to the figure shown on the next slide.
3. In the Task Name column of the Gantt Chart view, click the name of task 5, Develop survey questionnaire.

Step-by-Step: Make Individual Resource Assignments

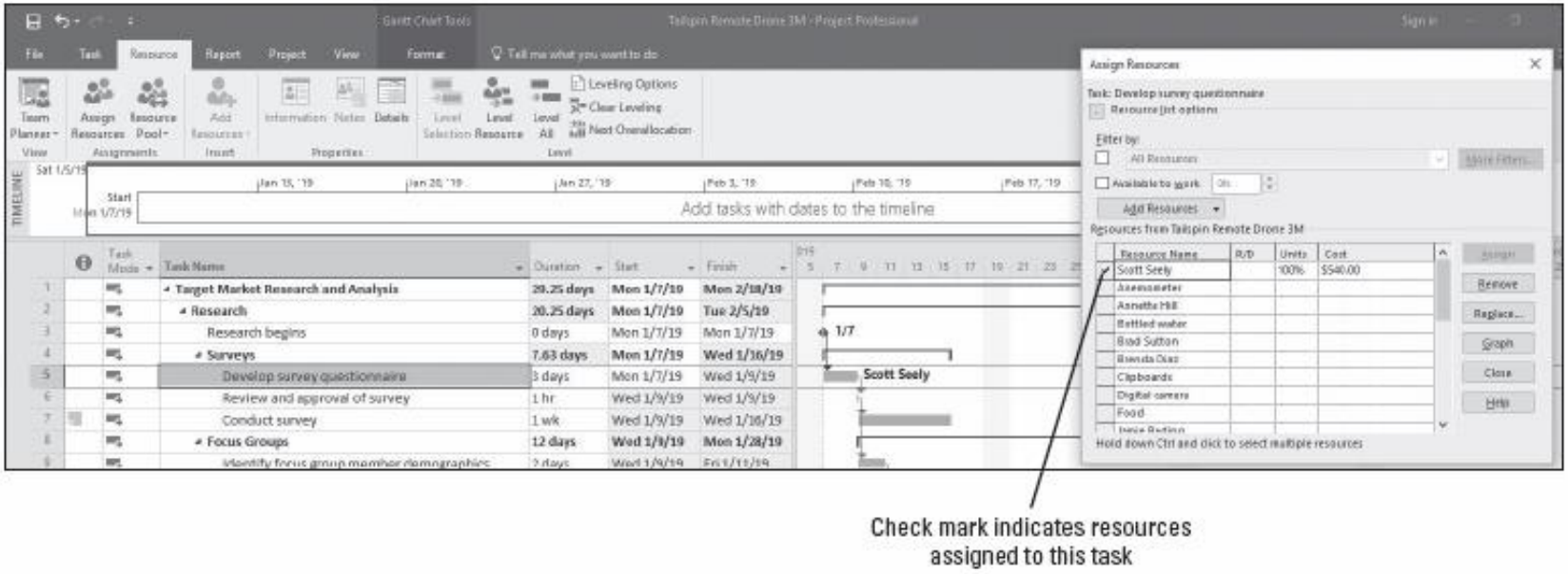


Step-by-Step: Make Individual Resource Assignments

4. In the Resource Name column of the Assign Resources dialog box, scroll down, click Scott Seely, and then click the Assign button. In the Assign Resources dialog box, a check mark appears next to Scott Seely's name, indicating that you have assigned him to the task of developing the survey questionnaire. Your screen should look similar to the figure shown on the next slide.
5. In the Task Name column, click the name of task 6, Review and approval of survey.
6. In the Assign Resources dialog box, click Jeff Pike and then click the Assign button. A check mark appears next to Jeff's name to show that you have assigned him to task 6.
7. SAVE the project schedule.

- PAUSE. LEAVE the project schedule open to use in the next exercise.

Step-by-Step: Make Individual Resource Assignments



Assigning Multiple Resources Simultaneously

- You have just assigned one resource to a task. In the following exercise, you will practice assigning multiple resources simultaneously to a task.
- You might have noticed that the duration of task number 7 changed from 1 week to 1.2 weeks when you assigned Scott and Judy to the task. Bear in mind that Microsoft Project uses the resource calendars to schedule tasks when resources are assigned. The duration is extended by .2 weeks (1 day) due to the fact that Scott works Monday thru Thursday. The start and finish dates of the task did not change, however. This is due to effort-driven scheduling being turned off. You will learn more about that later in this lesson.

Assigning Multiple Resources Simultaneously

- The capacity of a resource to work when you assign that resource to a task is measured in units. Units are recorded in the Max. Units field in the Resource Sheet view. One full-time resource has 100% (or 1.0) resource units.
- As you are assigning resources, be careful that you do not overallocate a resource, by assigning it more work than can be done within the normal work capacity of the resource.
- This might happen if you assign a resource to a task with more units than the resource has available. Another possibility is that you assign the resource to multiple tasks with schedules that overlap and with combined units that exceed those of the resource.

Step-by-Step: Assign Multiple Resources Simultaneously

- GET READY. Use the *Tailspin Remote Drone 3* project schedule you saved in the previous exercise.

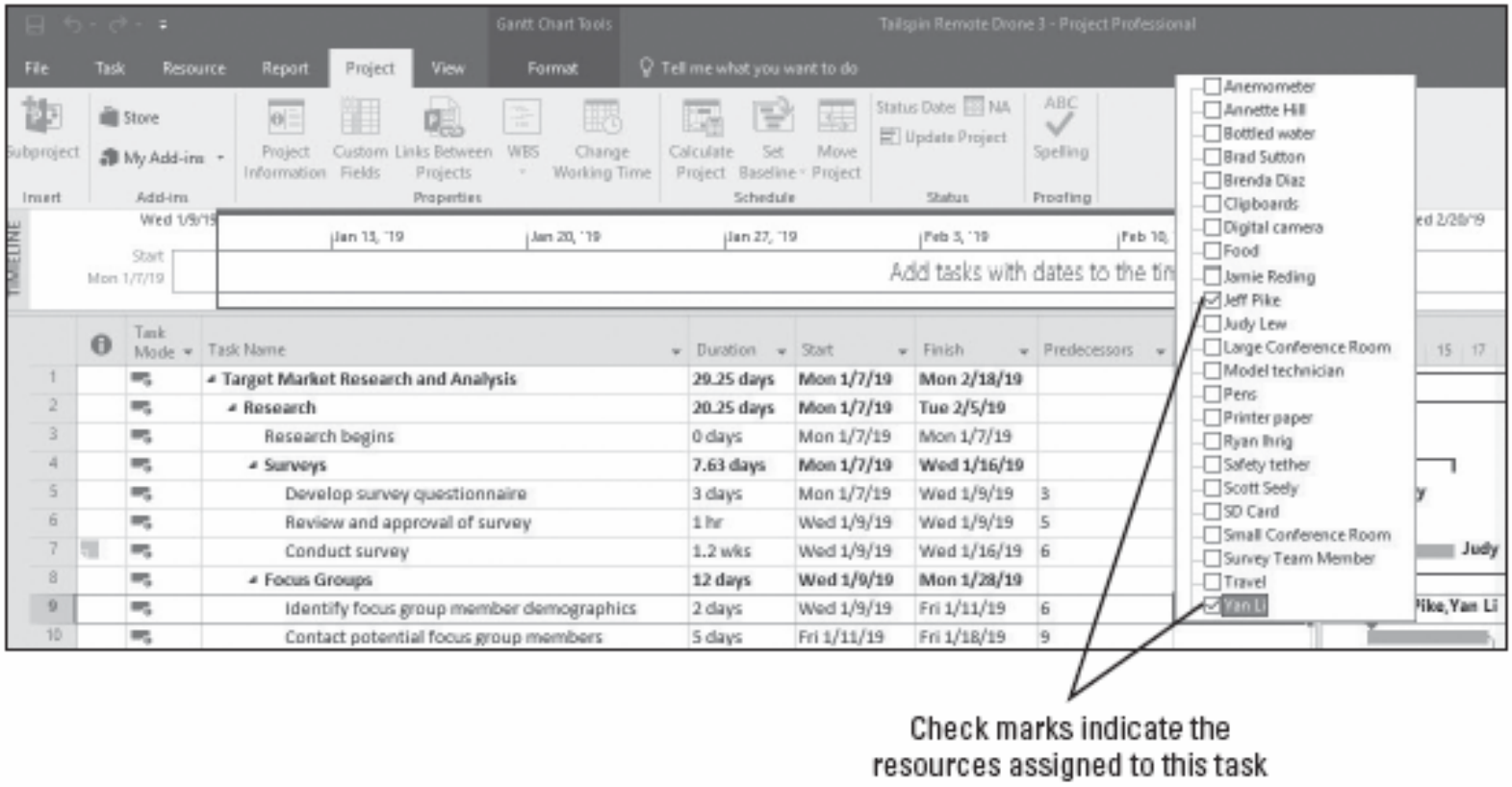
1. In the Task Name column, click the name of task 7, Conduct survey.
2. In the Assign Resources dialog box, scroll down and click the name cell for Scott Seely. Scroll up or down in the list until the name Judy Lew is visible. Hold down the Ctrl key and then click the name cell for Judy Lew.
3. Release the Ctrl key and then click the Assign button. Check marks appear next to the names of Scott Seely and Judy Lew, indicating you have assigned them both to task 7.
4. Close the Assign Resources dialog box.

Step-by-Step: Assign Multiple Resources Simultaneously

5. Move the center divider to the right to allow the Resource Names column to be visible.
6. Click once on the Resource Names cell for task 9, Identify focus group member demographics. Then click the submenu arrow at the right of the cell.
7. In the drop-down list, select the Jeff Pike and Yan Li check boxes. Your screen should look similar to the figure shown on the next slide.
8. Press Enter.
9. SAVE the project schedule.

- PAUSE. LEAVE the project schedule open to use in the next exercise.

Step-by-Step: Assign Multiple Resources Simultaneously



Adding More Work Resource Assignments to Tasks

- Microsoft Project's default method of scheduling is considered non-effort-driven. This means that as you assign resources to a task, the duration remains constant and the work value is calculated.
- The most obvious effect of this scheduling method is that, as you add or remove resources, the work value changes and, therefore, the costs change.
- ***Work*** is the total amount of effort expended to complete a task. Microsoft Project calculates work using a ***work formula***:

  Work = Duration × Units.
- Although you have the option of entering and displaying work in different units, by default, work is expressed in hours.

Step-by-Step: Add Work Resources to a Task

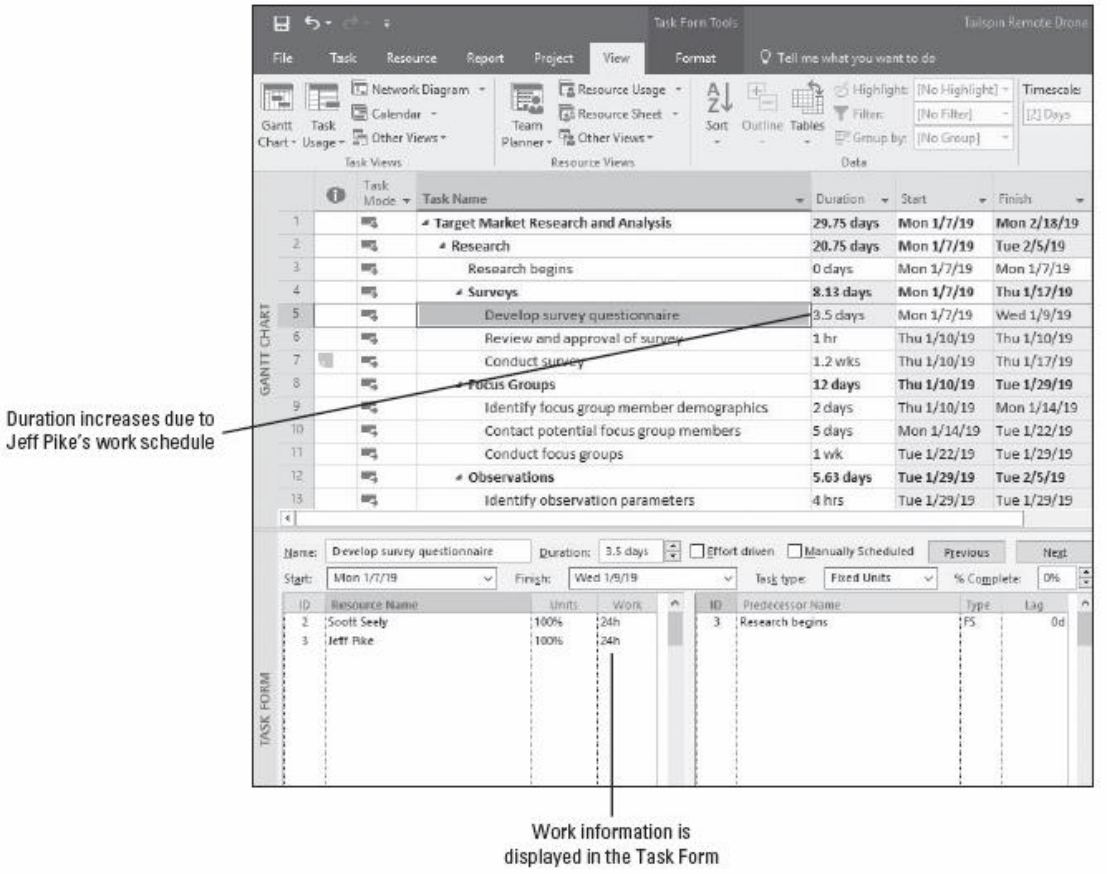
- GET READY. Use the *Tailspin Remote Drone 3* project schedule you saved in the previous exercise.

1. Click the View tab. On the ribbon, in the Split View group, select the Details check box. The Task Form view appears in the bottom part of your screen.
2. Click the name of task 5, Develop survey questionnaire. In the Task Form pane at the bottom of your screen, note the Work value of this task—24 hours.
3. In the Task Form view, click once on the first cell below Scott Seely's name. Click the submenu arrow at the right of this cell and then select Jeff Pike.

Step-by-Step: Add Work Resources to a Task

4. At the top of the Task Form, click OK. Microsoft Project assigns Jeff Pike to task 5. Your screen should look similar to the figure shown here.
5. SAVE the project schedule.

- PAUSE. LEAVE the project schedule open for the next exercise.

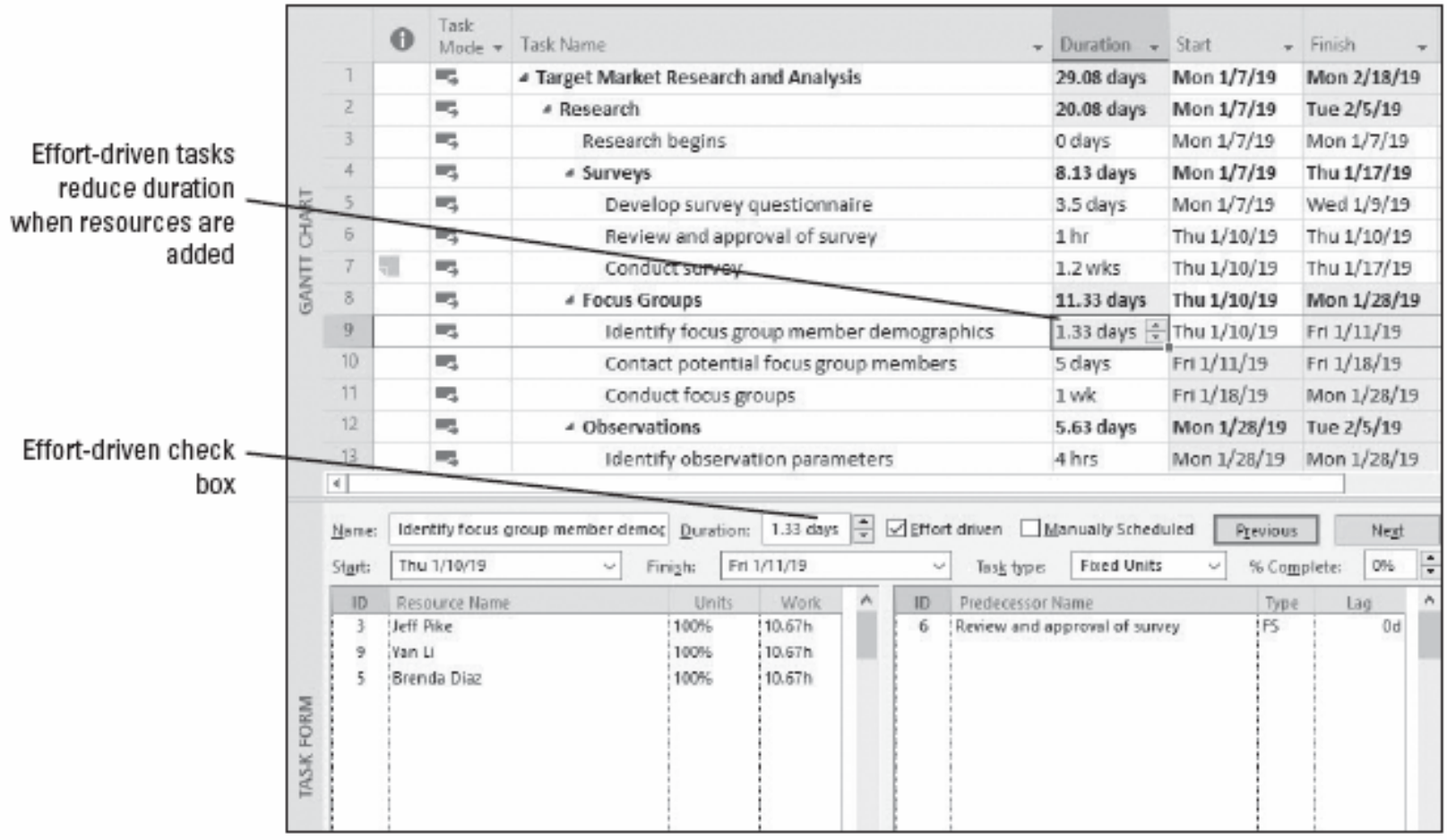


Step-by-Step: Add Work Resources to an Effort-Driven Task

- GET READY. Use the *Tailspin Remote Drone 3* project schedule you saved in the previous exercise.

1. Click on the name of task 9, Identify focus group member demographics. Jeff Pike and Yan Li are currently assigned to this task, total work is calculated at 32 hours (16 hours per resource), and the duration is 2 days. You'd like to assign an additional resource and reduce the task's duration.
2. In the Task Form screen, click the Effort driven check box.
3. Click once in the blank cell below Yan Li's name. From the drop-down menu, select Brenda Diaz. Then click OK at the upper portion of the Task Form screen. Your screen should look similar to the figure on the next slide.

Step-by-Step: Add Work Resources to an Effort-Driven Task



Step-by-Step: Add Work Resources to an Effort-Driven Task

4. Notice that the duration has been changed to 1.33 days and the total work (32 hours) has now been evenly distributed between Jeff Pike and Brenda Diaz. In this instance, you applied effort-driven scheduling, which tells Microsoft Project to hold the work value constant and change the duration when resources are added or removed.
5. SAVE the project schedule.

- PAUSE. LEAVE the project schedule open to use in the next exercise.

Using the Actions Tag to Change Project's Scheduling Behavior

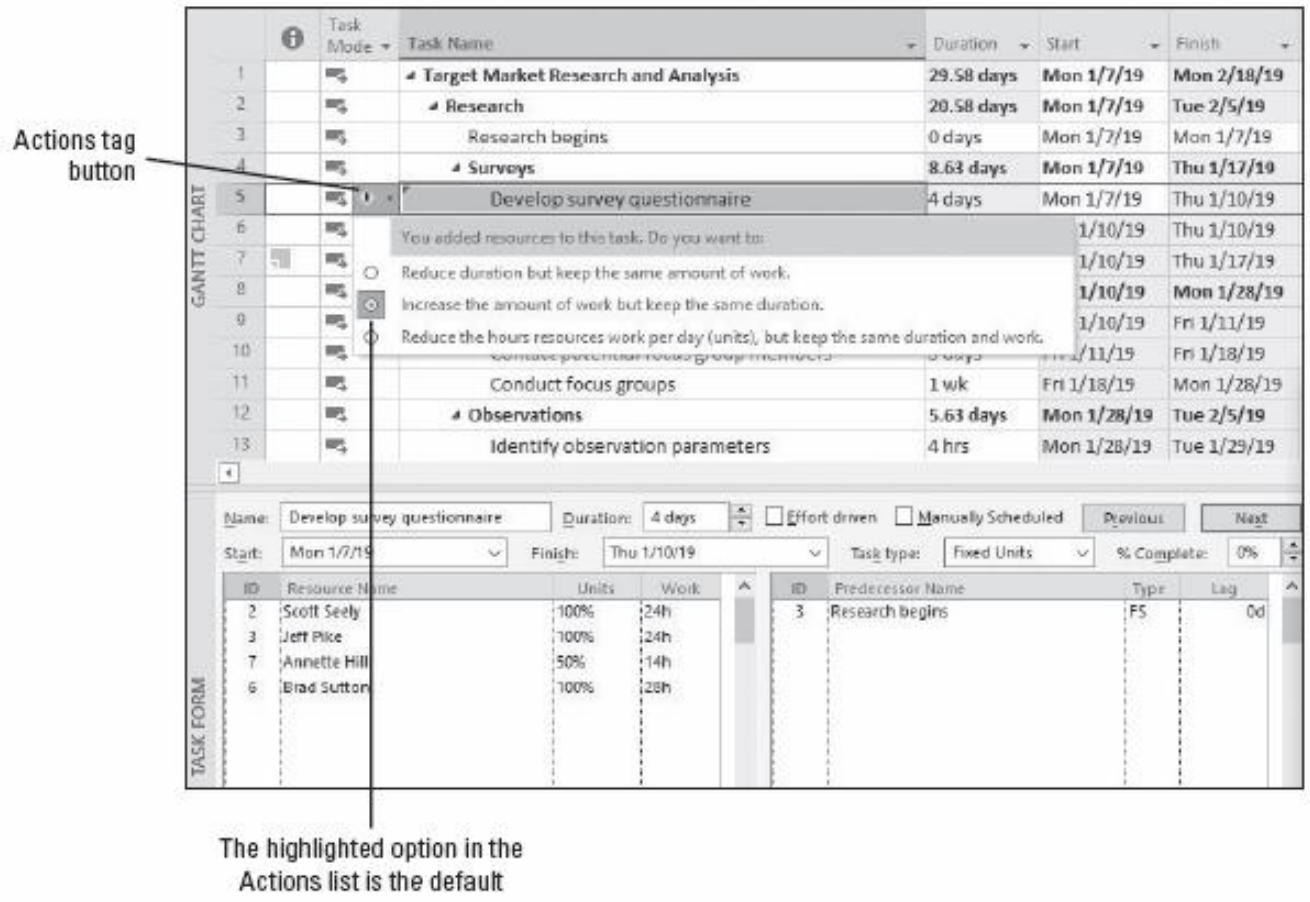
- Now that you have assigned resources to tasks that are both effort-driven and non-effort-driven, in the next exercise, you will learn how to use the Actions tag to change how Project behaves.
- An ***Actions tag*** is an indicator that signals the user of a change, additional information, formatting options, and so forth.
- In Project 2016, the Actions tag appears mainly when changes to units, duration, or work occurs. The Actions tag will appear only when certain methods are used to apply changes, such as adding resources with the Assign Resources dialog box. The Actions tag only remains available until you perform your next action.

Step-by-Step: Use the Actions Tag to Change Project's Scheduling Behavior

- GET READY. Use the *Tailspin Remote Drone 3* project schedule you saved in the previous exercise.

1. In the Gantt chart portion of the view, click on the name of task 5, Develop survey questionnaire. You'd like to assign an additional resource and reduce the task's duration.
2. Click the Resource tab. In the Assignments group, click the Assign Resources button. The Assign Resources dialog box appears.
3. In the Resource Name column, click Annette Hill. Hold down the Ctrl key and then locate and click Brad Sutton. Release the Ctrl key.
4. Click the Assign button. These two resources are added to the task. An Actions tag appears to the left of the Task Name column.
5. Click the Actions tag button. A list of options regarding how you want to handle this additional resource is displayed. Your screen should look similar to the figure on the next slide.

Step-by-Step: Use the Actions Tag to Change Project's Scheduling Behavior



Step-by-Step: Use the Actions Tag to Change Project's Scheduling Behavior

6. Select Reduce duration but keep the same amount of work.
7. Click the name of task 7, Conduct survey. Notice in the Task Form screen that the Effort driven check box is not checked for this task. Take note of the work data in the Task Form pane (80 hours total).
8. In the Resource Name column of the Assign Resources dialog box, click Annette Hill.
9. Scroll down until Ryan Ihrig's name is visible. Hold down Ctrl and click Ryan Ihrig. Release the Ctrl key and then click the Assign button. Microsoft Project assigns Annette and Ryan to the task.

Step-by-Step: Use the Actions Tag to Change Project's Scheduling Behavior

Because this task is using the default settings, Microsoft Project increases the total work value and keeps the task duration constant. However, you have determined that this task does not require a full-time effort because these two additional resources will take over some of the administrative functions.

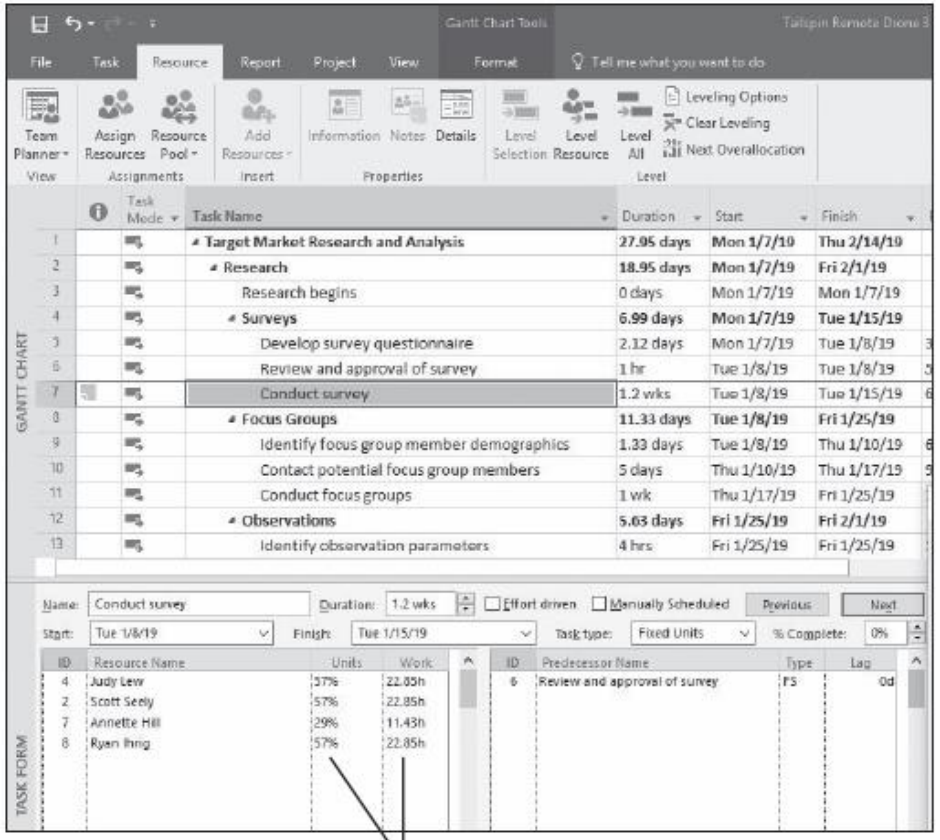
10. Click the Actions tag button. Select Reduce the hours resources work per day (units), but keep the same duration and work. Your screen should look similar to the figure shown on the next slide.

    Microsoft Project calculates the work values for each resource, keeps the task's duration at 1.2 weeks, and adjusts the units for each resource.

Step-by-Step: Use the Actions Tag to Change Project's Scheduling Behavior

11. Click the Close button in the Assign Resources dialog box.
12. SAVE the project schedule.

- PAUSE. LEAVE the project schedule open to use in the next exercise.



Units and Work information recalculated after selecting the Actions option to reduce hours per day

Using the Actions Tag to Change Project's Scheduling Behavior

- Using ***effort-driven scheduling***, Microsoft Project maintains a work amount as the total effort required to perform a task until you change it. Project performs the work calculation at the first work resource assignment, regardless of the number of resources assigned. The table shows an example using the same task duration and different approaches of assigning the same resources.

ASSIGNING A SINGLE RESOURCE THEN ADDING TWO RESOURCES	ASSIGNING TWO RESOURCES THEN ADDING A SINGLE RESOURCE
Task Duration: 6 days (8-hour days) Task Work: 0 hrs (no resources have been assigned yet)	Task Duration: 6 days (8-hour days) Task Work: 0 hrs (no resources have been assigned yet)
At the first single resource assignment (100% Max Units): Task Duration: 6 days Task Work: 48 Hours	At the first assignment of two resources (100% Max Units): Task Duration: 6 days Task Work: 96 Hours
If you assign two additional resources (100% Max. Units): Task Duration: 2 Days Task Work: 48 Hours	If you assign an additional resource (100% Max. Units): Task Duration: 4 Days Task Work: 96 Hours

Using the Actions Tag to Change Project's Scheduling Behavior

- If you have one resource working full-time on a task, the amount of work will match the duration. If your resource is not working full-time, or if you assign more than one resource to a task, then work and duration will not be equal.
- You can now see the benefit of creating task relationships rather than setting start or finish dates. Because effort-driven scheduling results in decreased task durations, Microsoft Project adjusts the start dates of successor tasks that did not have a constraint such as a start or finish date.
- Remember that effort-driven scheduling adjusts task duration only if you add or delete resources from a task. Whether or not to use effort-driven scheduling is a topic for discussion with your organization. It has both benefits and risks.

Assigning Material Resources to Tasks

When you assign a material resource to a task, there are two ways in which you can handle their consumption and cost:

- Assign a fixed unit quantity of the material resource. This is what you did in the preceding exercise. Microsoft Project then multiplied the unit cost of the resource by the number of units to calculate the total cost.
- Assign a variable rate quantity of the material resource. For example, if two cases of bottled water will be used per day, you would enter 2/day as the assignment unit. Microsoft Project will adjust the quantity and cost of the resource as the duration of the task changes. You will assign a material resource using this method in a later lesson.

Step-by-Step: Assign a Material Resource to a Task

- GET READY. Use the *Tailspin Remote Drone 3* project schedule you saved in the previous exercise.

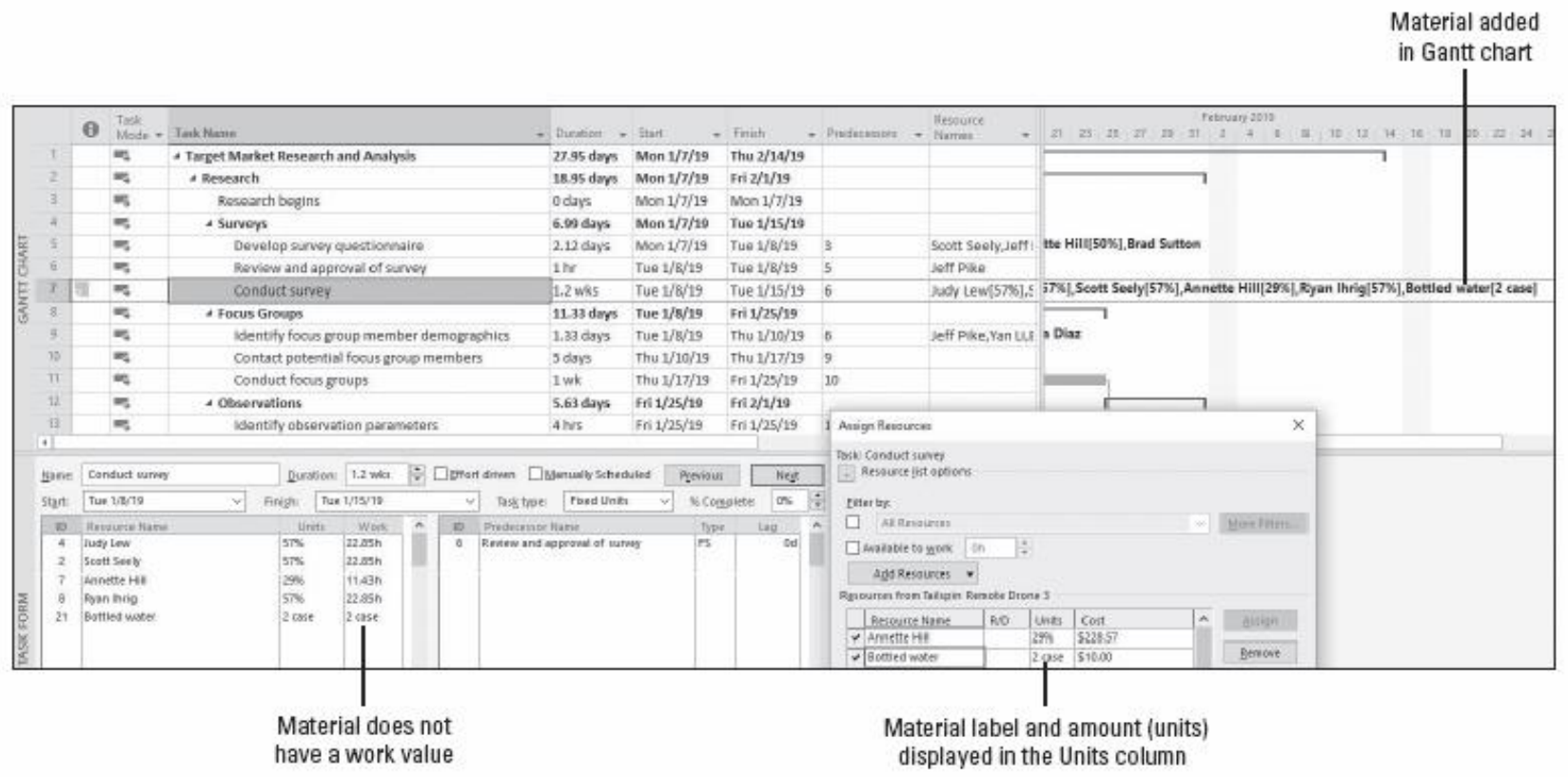
1. In the Task Name column, click the name of task 7, Conduct survey.
2. Click the Resource tab. In the Assignments group, click the Assign Resources button. The Assign Resources dialog box appears.
3. In the Assign Resources dialog box, click once in the Units field for the Bottled water. Key 2 and then click the Assign button.

Step-by-Step: Assign a Material Resource to a Task

4. If the Assign Resources dialog box is covering the scroll bars for the Gantt bar portion of your screen, drag the dialog box into the middle of the screen.
5. Scroll the Gantt bar portion of your screen so that the right end of the bar for task 7 is visible. You will use 2 cases of bottled water while conducting the survey.

   Remember that bottled water is a material resource and cannot do work, so assigning it to a task does not affect the task's duration. Your screen should look similar to the figure on the next slide.

Step-by-Step: Assign a Material Resource to a Task



Step-by-Step: Assign a Material Resource to a Task

6. In the Assign Resources dialog box, click Close.
7. SAVE the project schedule.

- PAUSE. LEAVE the project schedule open to use in the next exercise.

Assigning Cost Resources to Tasks

- A cost resource is another type of resource that you can assign to a task.
- A cost resource represents a financial obligation to your project.
- Once you assign the cost resource to the task, you can then assign the cost for the resource.
- In the following exercise, you will assign cost resources to two different tasks.

Step-by-Step: Assign a Cost Resource to a Task

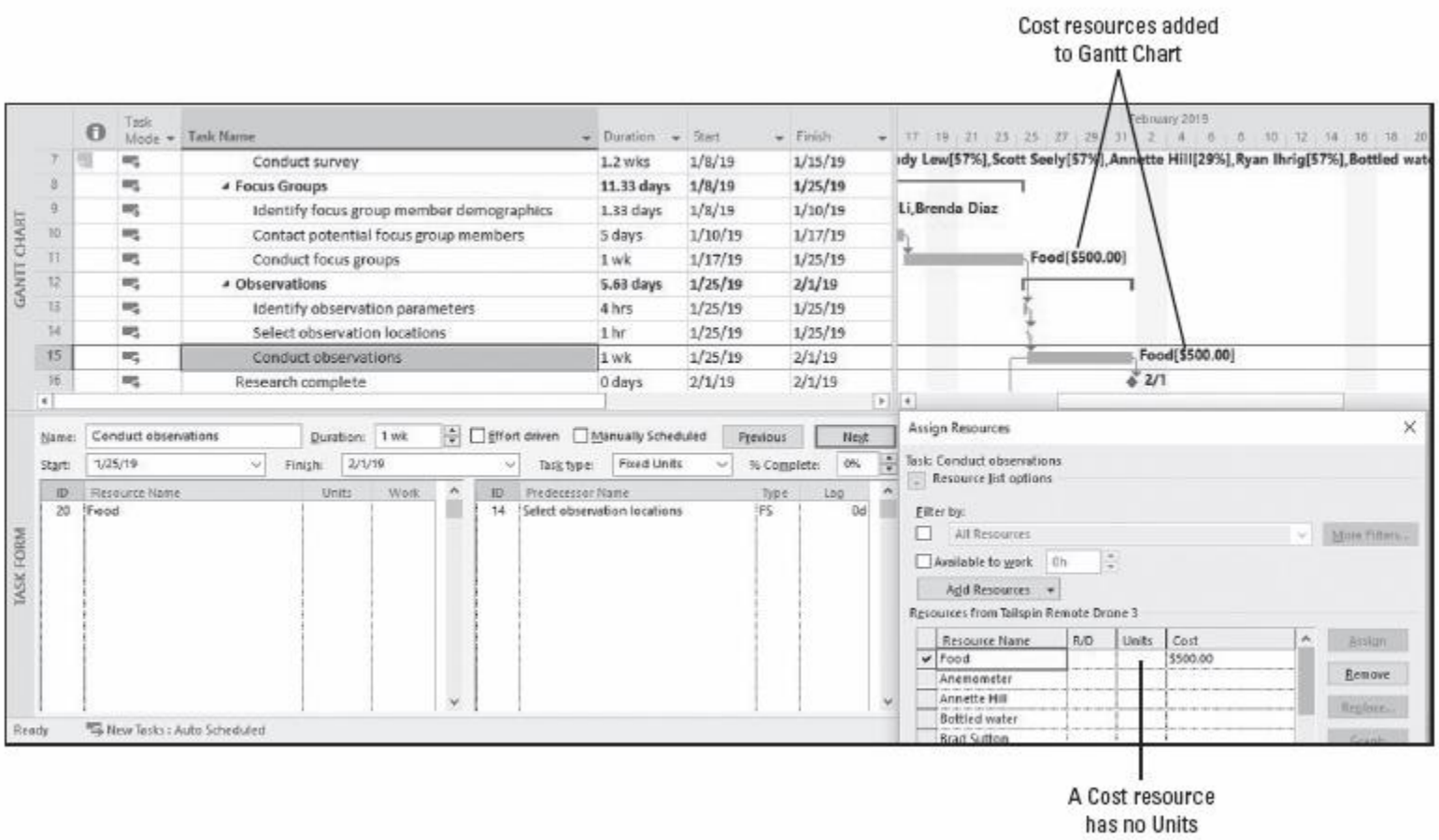
- GET READY. USE the *Tailspin Remote Drone 3* project schedule you saved in the previous exercise.

1. On the Resource tab, in the Assignments group, click the Assign Resources button. The Assign Resources dialog box appears.
2. Scroll up or down in the Gantt view and in the Task Name column, click the name of task 11, Conduct focus groups.
3. In the Resource Name column of the Assign Resources dialog box, click Food and then click the Assign button.

Step-by-Step: Assign a Cost Resource to a Task

4. In the Cost column for the Food resource, key 500 and press Enter. During the focus groups activity, $500 of food will be used to feed the people who will participate in the focus group.
5. Click the name of task 15, Conduct observations.
6. In the Resource Name column of the Assign Resources dialog box, click Food and then click the Assign button.
7. In the Cost column for the Food resource, key 500 and press Enter. Your screen should look like the figure on the next slide.

Step-by-Step: Assign a Cost Resource to a Task



Step-by-Step: Assign a Cost Resource to a Task

8. In the Assign Resources dialog box, click Close.
9. SAVE and CLOSE the *Tailspin Remote Drone 3* file.

- PAUSE. If you are continuing to the next lesson, keep Microsoft Project open. If you are not continuing to additional lessons, CLOSE Microsoft Project.

Skill Summary

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Assigning Work Resources to Tasks • Making Individual Resource Assignments • Assigning Multiple Resources Simultaneously	Make individual resource assignments Assign multiple resources simultaneously
Adding More Work Resource Assignments to Tasks • Using the Actions Tag to Change Project's Scheduling Behavior	Add additional work resources to a task Use the Actions tag to change Project's scheduling behavior
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