Microsoft Project 2016

Lesson 2

Establishing Resources

Objectives

SKILLS	MATRIX SKILL
Establishing People Resources • Establishing Individual People Resources • Establishing Group Resources	Establish individual people resources Establish a resource that represents multiple people
Establishing Equipment Resources	Establish equipment resources
Establishing Material Resources	Establish material resources
Establishing Cost Resources	Establish cost resources
Establishing Resource Pay Rates • Entering Resource Cost Information	Enter resource cost information
Adjusting Resource Working Times • Establishing Nonworking Times • Establishing Specific Work Schedules	Establish nonworking times for an individual resource Establish a specific work schedule for a resource
Adding Resource Notes • Attaching a Note to a Resource	Attach a note to a resource

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Software Orientation

- Several views are available in Microsoft Project, including the Resource Sheet view, shown here.

- Project ***resources*** are the people, equipment, materials, and money used to complete the tasks in a project.

Establishing People Resources

- When you set up people resources in Microsoft Project, you are able to track who is available to work, the type of work they can do, and when they are available to do it.

- People resources can be in the form of individuals, individuals identified by their job function or title, or groups of individuals with a common skill.

- When entering people resource information, keep in mind two important aspects of these resources: availability and cost.

- **_Availability_** determines when and how much of a resource's time can be assigned to work on tasks.

- **_Cost_** refers to how much money will be needed to pay for the resources on a project.
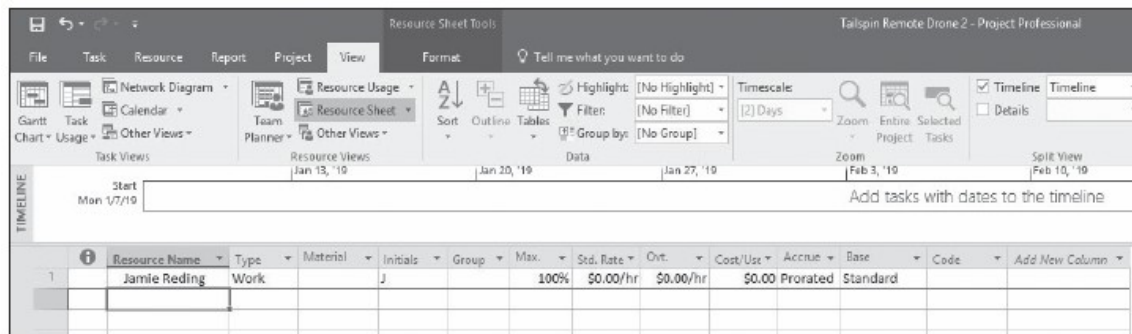
Establishing People Resources

- You will use three types of resources in Microsoft Project: work resources, material resources, and cost resources.

- ***Work resources*** are the people and equipment that do work to accomplish the tasks of the project. Work resources use time to accomplish tasks.

- Work resources can be in many different forms:

WORK RESOURCE	EXAMPLE
Individual people	Yan Li; Jeff Pike
Individual people identified by job title	Production lead; engineer
Groups of people with a common skill	Model technician; trainer
Equipment	Anemometer; digital recorder

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Step-by-Step: Establish Individual People Resources

- GET READY. Before you begin these steps, open *Tailspin Remote Drone 2M* from the data files for this lesson.

1. Click the View tab. In the Resource Views group, select Resource Sheet to open the Resource Sheet view.

2. In the Resource Sheet view, click the empty cell directly below the Resource Name column heading.

3. Key Jamie Reding and press Enter. Microsoft Project adds Jamie Reding as a work resource and automatically enters default information. Your screen should look similar to the figure below.

Step-by-Step: Establish Individual People Resources

4. Enter the remaining resource names into the Resource Sheet:

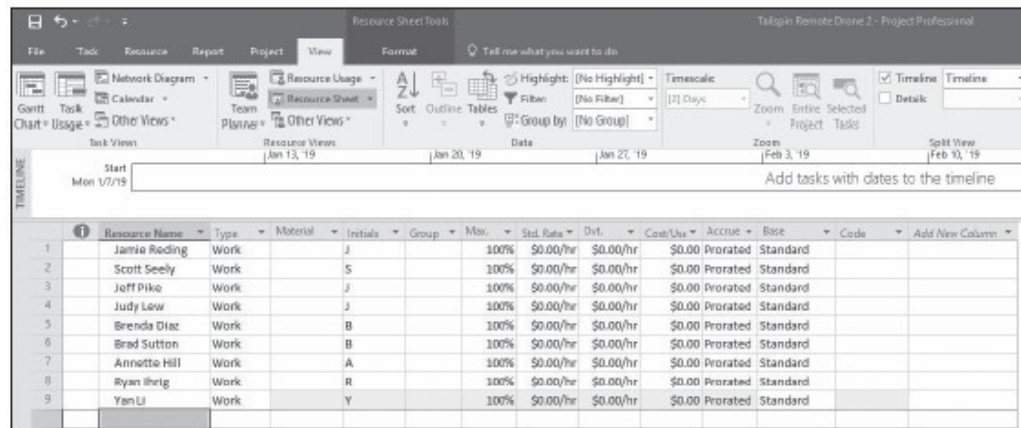|		
Scott Seely	Brenda Diaz	Ryan Ihrig
Jeff Pike	Brad Sutton	Yan Li
Judy L...	A...tt... Hill

5. SAVE the file as *Tailspin Remote Drone 2*.
- PAUSE. LEAVE Microsoft Project open for the next exercise.
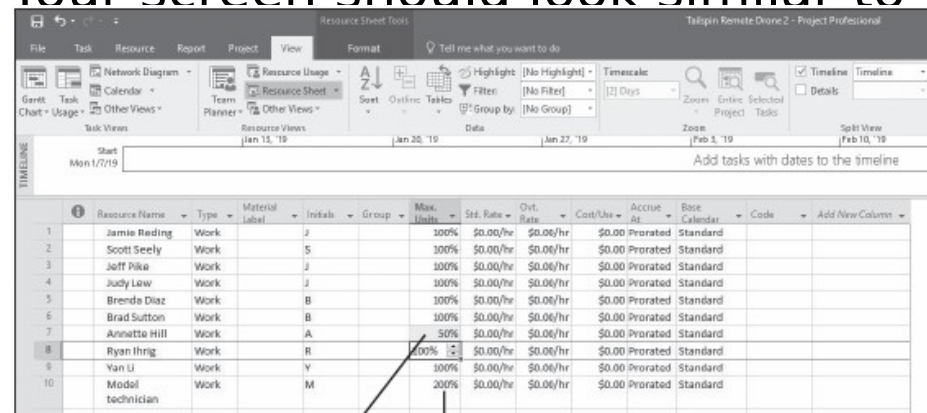
Step-by-Step: Establish a Resource That Represents Multiple People

- GET READY. USE the *Tailspin Remote Drone 2* project schedule you saved in the previous exercise.

1. Click the blank Resource Name field below the last resource, key Model technician, and then press Tab.

2. In the Type field, make sure that Work is selected. Press Tab four times to move to the Max. Units field.

   You might only see a portion of the field name. To see the entire field name, place the cursor on the bottom of the header row in the ID column (just above resource 1) and click and drag the row down.

- In the next step, you will configure maximum units. ***Maximum units*** refers to the maximum capacity of a resource to accomplish tasks. The default value for maximum units is 100%.

Step-by-Step: Establish a Resource That Represents Multiple People

3. In the Max. Units field for the Model technician, key or select 200% to indicate that you will have two model technicians devoting 100% of their working time to this project, and then press Enter.

4. Click the Max. Units field for Annette Hill, key or select 50%, and press Enter. Your screen should look similar to the figure below.

Annette Hill Max. Units set to 50%   Group resource set to 200%

5. SAVE the project schedule.

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

Establishing Equipment Resources

- Setting up equipment resources is very similar to setting up people resources. There are key differences, however, in the way equipment resources can be scheduled.

- Equipment resources tend to be more specialized than people resources. For example, a clipboard can't be used as a digital camera, but a model technician might be able to fill in as someone who may ask survey questions.

- Some equipment resources might work 24 hours a day, but most people resources work only 8 or 10 hours a day.

- It is helpful to track equipment resources when you need to schedule and track equipment costs, or when the equipment might be needed by multiple people at the same time.

Step-by-Step: Establish Equipment Resources

- GET READY. USE the *Tailspin Remote Drone 2* project schedule you saved in the previous exercise.

1. In the Resource Sheet, click the next empty cell in the Resource Name column.

2. Click the Resource tab. In the Properties group, click the Information button.

3. If it is not already displayed, click the General tab in the Resource Information dialog box.

4. In the Resource Name field, key Digital camera and then press Enter.

5. In the Type field, select Work from the drop-down menu. Your screen should look similar to the figure shown on the next slide.

Step-by-Step: Establish Equipment Resources

6. Click OK. The Resource Information dialog box closes and the resource has been added. Notice that Microsoft Project has automatically wrapped the text in the Resource Name field, and the Max. Units field is set to the default of 100%.

Step-by-Step: Establish Equipment Resources

7. In the Max. Units field for the digital camera, key 200, and then press Enter. This indicates that you will have two digital cameras available every workday.

8. Add the following additional equipment resources to the project schedule. Enter the information directly in Resource Sheet view. Select Work in the Type field for each resource.

Resource Name	Max. Units
Anemometer	100%
Safety tether	100%
Clipboards	800%
Large Conference Room	100%
Small Conference Room	300%

Your screen should look like the figure on the next slide.

Step-by-Step: Establish Equipment Resources

	ⓘ	Resource Name	Type	Material Label	Initials	Group	Max. Units	Std. Rate	Ovt. Rate	Cost/Use	Accrue At	Base Calendar	Code	Add New Column
1		Jamie Reding	Work		J		100%	$0.00/hr	$0.00/hr	$0.00	Prorated	Standard		
2		Scott Seely	Work		S		100%	$0.00/hr	$0.00/hr	$0.00	Prorated	Standard		
3		Jeff Pike	Work		J		100%	$0.00/hr	$0.00/hr	$0.00	Prorated	Standard		
4		Judy Lew	Work		J		100%	$0.00/hr	$0.00/hr	$0.00	Prorated	Standard		
5		Brenda Diaz	Work		B		100%	$0.00/hr	$0.00/hr	$0.00	Prorated	Standard		
6		Brad Sutton	Work		B		100%	$0.00/hr	$0.00/hr	$0.00	Prorated	Standard		
7		Annette Hill	Work		A		50%	$0.00/hr	$0.00/hr	$0.00	Prorated	Standard		
8		Ryan Ihrig	Work		R		100%	$0.00/hr	$0.00/hr	$0.00	Prorated	Standard		
9		Yan Li	Work		Y		100%	$0.00/hr	$0.00/hr	$0.00	Prorated	Standard		
10		Model technician	Work		M		200%	$0.00/hr	$0.00/hr	$0.00	Prorated	Standard		
11		Digital camera	Work		D		200%	$0.00/hr	$0.00/hr	$0.00	Prorated	Standard		
12		Anemometer	Work		A		100%	$0.00/hr	$0.00/hr	$0.00	Prorated	Standard		
13		Safety tether	Work		S		100%	$0.00/hr	$0.00/hr	$0.00	Prorated	Standard		
14		Clipboards	Work		C		800%	$0.00/hr	$0.00/hr	$0.00	Prorated	Standard		
15		Large Conference Room	Work		L		100%	$0.00/hr	$0.00/hr	$0.00	Prorated	Standard		
16		Small Conference Room	Work		S		300%	$0.00/hr	$0.00/hr	$0.00	Prorated	Standard		

9. SAVE the project schedule.

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

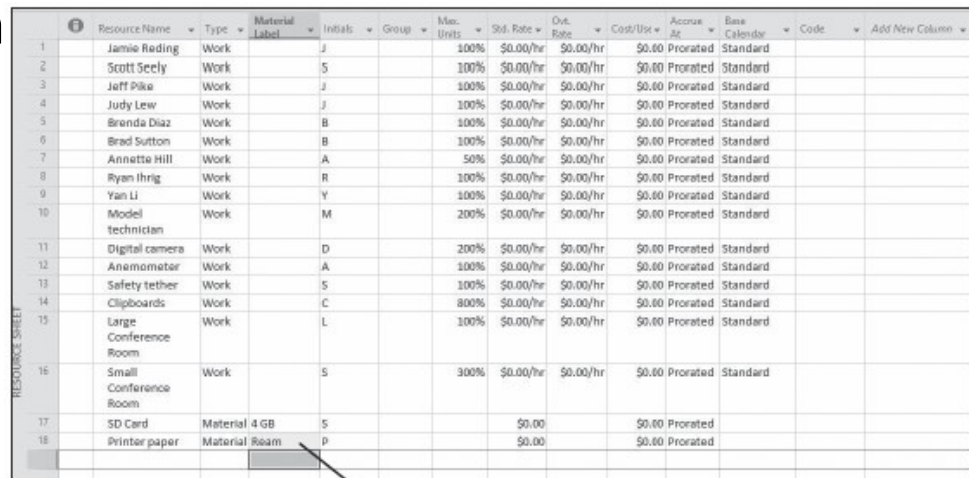# Establishing Material Resources

- Just as you established people and equipment resources in your project schedule, you can also set up material resources in Microsoft Project to track the rate of use of the particular resource and its related cost.

- **Material resources** are consumable items used up as the tasks in a project are completed.

- Unlike work resources, material resources have no effect on the total amount of work scheduled to be performed on a task.

- For the remote drone project, SD cards for the digital camera and paper are the consumable items that interest you the most.

Step-by-Step: Establish Material Resources

- GET READY. USE the *Tailspin Remote Drone 2* project schedule you saved in the previous exercise.

1. In the Resource Sheet, click the next empty cell in the Resource Name column.

2. Key SD card and press Tab.

3. In the Type field, click the arrow, select Material, and then press Tab.

4. In the Material Label field, key 4 GB and press Enter. This means you will use 4 gigabytes as the unit of measure to track consumption during the project.

5. Click the next empty cell in the Resource Name column.

6. Key Printer paper and press Tab.

Step-by-Step: Establish Material Resources

7. In the Type field, click the arrow, select Material, and press Tab.

8. In the Material Label field, key Ream and press Enter. Your screen sh

Material Label field is the unit of measure for the material resource

9. SAVE the project schedule.

- PAUSE. LEAVE the project schedule open for the next exercise.
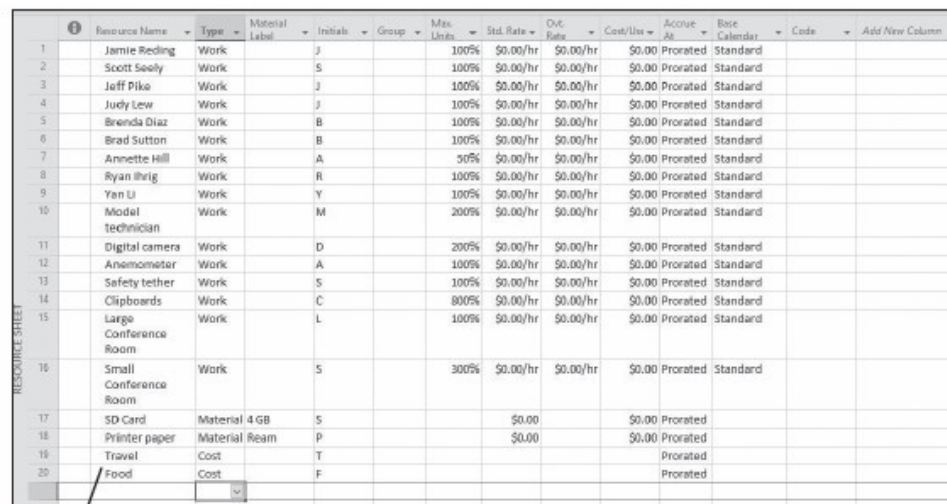
Establishing Cost Resources

- Cost resources are financial obligations to your project. A cost resource enables you to apply a cost to a task by assigning a cost item (such as travel) to that task.

- The cost resource has no relationship to the work assigned to the task, but assigning cost resources gives you more control when applying types of costs to tasks within your project.

- A **cost resource** is a resource that doesn't depend on the amount of work on a task or the duration of a task. Unlike fixed costs, you can apply as many cost resources to a task as necessary.

- In the following exercise, you will add cost resources to the Resource Sheet for your project.

Step-by-Step: Establish Cost Resources

- GET READY. USE the *Tailspin Remote Drone 2* project schedule you saved in the previous exercise.

1. In the Resource Sheet, click the next empty cell in the Resource Name column.

2. Key Travel and press Tab.

3. In the Type field, click on the arrow and select Cost. The travel resource has now been established as a cost resource. Just as with a material resource, some fields are not available with a cost resource.

4. In the blank Resource Name field below Travel, key Food and press Tab.

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Step-by-Step: Establish Cost Resources

5. In the Type field, select Cost and press Enter. Your screen should look similar to the figure below.

Cost resources added
to Resource Sheet

6. SAVE the project schedule.

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

Establishing Resource Pay Rates

- Although you might not track costs on small or personal projects, managing cost information is a key part of the job description for most project managers.

- When you enter the cost information for resources, tracking the finances of a project becomes a more manageable task.

- In the real world, it is often difficult to get cost information for people resources because this information is usually considered confidential.

- As a project manager, it is important that you are aware of the limitations of your project schedule because of the information available to you, and that you communicate these limitations to your project team and management.

Establishing Resource Pay Rates

Knowing resource cost information will help you to take full advantage of the cost management features of Microsoft Project.

Some suggested methods of inserting rate costs without using actual pay rates are as follows:

- Use publicly available salary data, such as from the Federal Bureau of Labor and Statistics.

- Ask for an average salary rate from the accounting department for various skill sets (i.e., model maker, administrative, production lead).

Establishing Resource Pay Rates

As a project manager, tracking and managing cost information may be a significant part of your project responsibilities.

Understanding the cost details of your project will allow you to stay on top of such key information as:

- The expected total cost of the project
- Resource costs over the life of the project
- Possible cost savings from using one resource versus another
- The rate of spending in relation to the length of the project

These and other cost limits often drive the scope of your project and could become critical to project decisions that you will make.

Step-by-Step: Enter Resource Cost Information

- GET READY. USE the *Tailspin Remote Drone 2* project schedule you saved in the previous exercise.

1. In the Resource Sheet, click the Std. (Standard) Rate field for resource 1, Jamie Reding.

2. Key 1500/w and press Enter. Jamie's standard weekly rate of $1,500 appears in the Std. Rate column.

3. In the Std. Rate column for resource 2, Scott Seely, key 22.50/h and press Enter. Scott's standard hourly rate of $22.50 appears in the Std. Rate column.

Step-by-Step: Enter Resource Cost Information

4. Widen the Std. Rate column by moving the mouse pointer to the vertical divider line between the Std. Rate column and Ovt. Rate column. Double-click on the divider line. This is called Auto-fitting. Your screen should look similar to the figure below.

	ⓘ	Resource Name	Type	Material Label	Initials	Group	Max. Units	Std. Rate
1		Jamie Reding	Work		J		100%	$1,500.00/wk
2		Scott Seely	Work		S		100%	$22.50/hr
3		Jeff Pike	Work		J		100%	$0.00/hr
4		Judy Lew	Work		J		100%	$0.00/hr
5		Brenda Diaz	Work		B		100%	$0.00/hr

Step-by-Step: Enter Resource Cost Information

5. Enter the standard pay rates for the remaining resources (see next slide for additional resources/rates to enter):

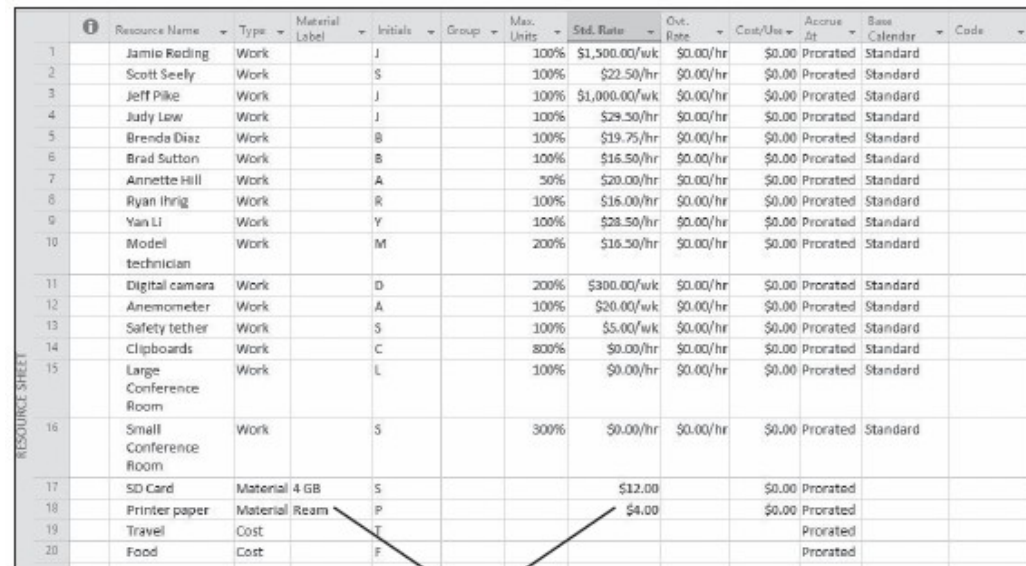| Resource Name	Standard Rate
Jeff Pike	1000/w
Judy Lew	29.50/h
Brenda Diaz	19.75/h
Brad Sutton	16.50/h
Annette Hill	20.00/h
Ryan Ihrig	16.00/h
Yan Li	28.50/h
Model technician	16.50/h

Step-by-Step: Enter Resource Cost Information

Continue entering the standard pay rates for the remaining resources:

Resource Name	Standard Rate
Digital camera	300/w
Anemometer	20/w
Safety tether	5/w
Clipboards	0
Large Conference Room	0
Small Conference Room	0
SD Card	12
Printer Paper	4

Step-by-Step: Enter Resource Cost Information

6. Your screen should look similar to the figure below.

Material resource cost will
be the per unit cost listed
in the Material Label field

7. SAVE the project schedule.

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

Adjusting Resource Working Times

- Microsoft Project 2016 uses resource working and nonworking times to schedule the tasks. You should define these times prior to assigning them to tasks.

- Resource working times apply only to people and equipment (work) resources—not to material resources.

- When you establish work resources in your project schedule, a **resource calendar** is automatically created for each resource to define the resource's working and nonworking time.

- The resource calendar provides default working times for an entire project for a particular resource. Typically, you will need to make changes to the individual resource calendars to reflect vacation, flex-time work schedules, or conference attendance.

Step-by-Step: Establish Nonworking Times for an Individual Work Resource

- GET READY. USE the *Tailspin Remote Drone 2* project schedule you saved in the previous exercise.

1. Click the Project tab and then click Change Working Time. The Change Working Time dialog box appears.

2. In the For Calendar box, select Jamie Reding. Jamie Reding's resource calendar appears in the Change Working Time dialog box.

3. Slide the button next to the calendar until the calendar is on January 2019.

4. Select the dates January 14 and 15.

5. In the first Name field on the Exceptions tab, key Vacation Days.

Step-by-Step: Establish Nonworking Times for an Individual Work Resource

6. Press Enter. Your screen should look similar to the figure shown here.

7. Click OK to close the Change Working Time dialog box.

8. SAVE the project schedule.

• PAUSE. LEAVE the project schedule open for the next exercise.
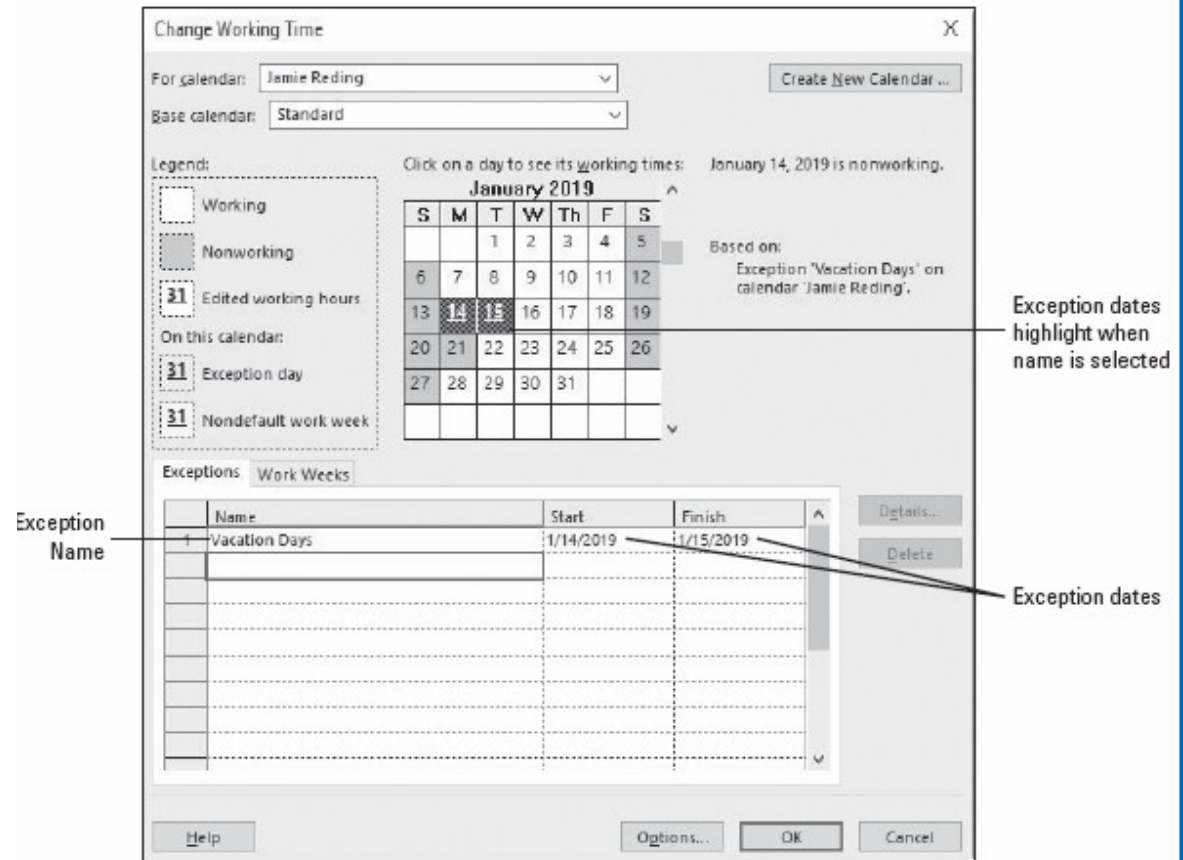
Establishing Specific Work Schedules

- In addition to specifying exception times for resources, you can set up a specific work schedule for any given resource.

- If you need to edit several resource calendars in the same way (to handle a flex-time schedule or night shift, for example), you might find it easier to assign a different base calendar to this group of resources.

- A *base calendar* can be used as a task calendar, a project calendar, or a resource calendar and specifies default working and nonworking times.

- Assigning a different base calendar is quicker than editing each individual resource calendar and it allows you to make future project-wide changes to a single base calendar (rather than editing each resource calendar again).

Establishing Specific Work Schedules

- You can change a resource's base calendar by opening the Change Working Time dialog box from the Tools menu. In the For Calendar box, select the desired resource and then in the Base Calendar box, select the desired base calendar.

- For a group of resources that will be using the same calendar, you can change the calendar directly in the Base Calendar column of the Entry table in the Resource Sheet view.

- Microsoft Project includes three base calendars: Standard, 24 Hours, and Night Shift. You can customize these or use them as a basis for your own base calendar.

Step-by-Step: Establish a Specific Work Schedule for a Resource

- GET READY. USE the *Tailspin Remote Drone 2* project schedule you saved in the previous exercise.

1. Click the Project ribbon and then click Change Working Time to open the Change Working Time dialog box.

2. In the For Calendar: box, select Scott Seely.

3. Click the Work Weeks tab.

4. Click the Details button. The Details dialog box appears.

5. In the Select Day(s): box, click and drag to select Monday through Thursday.

6. Select the Set day(s) to these specific working times radio button.

Step-by-Step: Establish a Specific Work Schedule for a Resource

7. On line 1 of the Working Times box, click the 8:00am box and key 7am.

8. On line 2 of the Working Times box, click the 5:00pm box and key 6pm.

9. Press Enter to set your changes. Your screen should look similar to the figure below.

Step-by-Step: Establish a Specific Work Schedule for a Resource

10. In the Select Day(s): box, click Friday.

11. Select the Set days to nonworking time radio button.

12. Click OK to close the Details dialog box. Microsoft Project can now schedule Scott Seely to work as early as 7:00 a.m. and as late as 6:00 p.m. on Monday through Thursday, but it will not schedule him to work on Friday.

13. Click on any Friday in the Change Working time dialog box. Note that these days are set to nonworking time.

14. Click on any one day of the week, Monday–Thursday. Note the working times for these days. Your screen should look similar to the figure on the next slide.

Step-by-Step: Establish a Specific Work Schedule for a Resource

15. Click OK to close the Change Working Time dialog box.

16. SAVE the project schedule.

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

Adding Resource Notes

- At times, you might want to provide the details regarding how (and why) a resource is scheduled a certain way.

- You can add this additional information about a resource by attaching a **resource note**.

- In the following exercise, you will learn how to attach a scheduling note to a resource in Project 2016.

Step-by-Step: Attach a Note to a Resource

- GET READY. USE the *Tailspin Remote Drone 2* project schedule you saved in the previous exercise. Make sure you are still in the Resource Sheet view of the *Tailspin Remote Drone 2* file.

1. In the Resource Name column, select the name of the resource 1, Jamie Reding.

2. On the ribbon, click the Resource tab. In the Properties command group, click the Resource Notes button. The Resource Information dialog box appears with the Notes tab visible.

3. In the Notes box, key Jamie on vacation Jan 14 and 15; available for consult at home if necessary and click OK. A notes indicator appears in the Indicators column.

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Step-by-Step: Attach a Note to a Resource

4. Point to the notes indicator in the Resource Sheet. Your screen should look like the figure below.
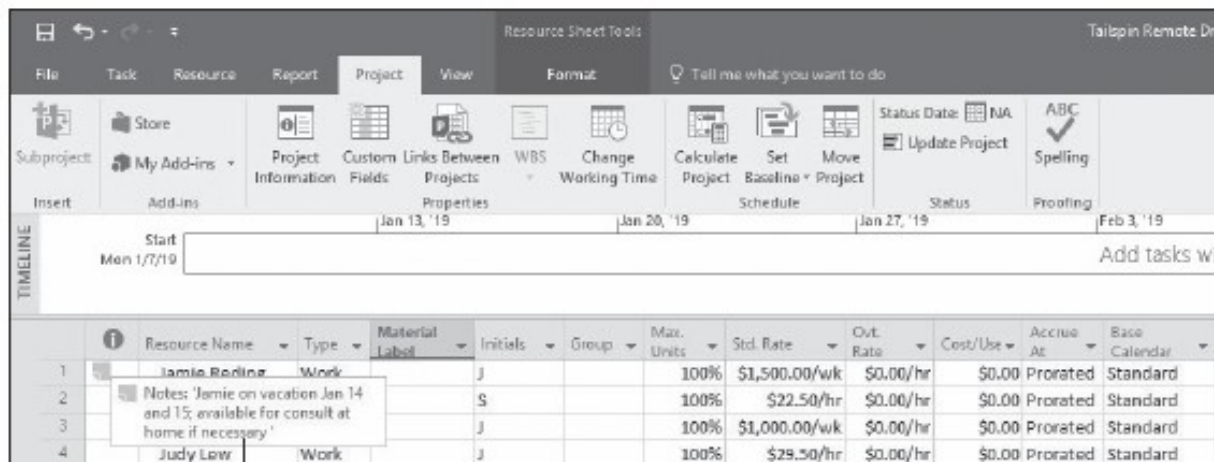
When hovering over the notes indicator the notes show as a ScreenTip

5. SAVE and CLOSE the *Tailspin Remote Drone 2* file.

Skill Summary

SKILLS	MATRIX SKILL
Establishing People Resources • Establishing Individual People Resources • Establishing Group Resources	Establish individual people resources Establish a resource that represents multiple people
Establishing Equipment Resources	Establish equipment resources
Establishing Material Resources	Establish material resources
Establishing Cost Resources	Establish cost resources
Establishing Resource Pay Rates • Entering Resource Cost Information	Enter resource cost information
Adjusting Resource Working Times • Establishing Nonworking Times • Establishing Specific Work Schedules	Establish nonworking times for an individual resource Establish a specific work schedule for a resource
Adding Resource Notes • Attaching a Note to a Resource	Attach a note to a resource