

- » Identifying your Mac model
- » Powering on and off
- » Getting to know your Mac

Chapter **1**

Starting to Use Your Mac

Apple offers several different kinds of Macs, and understanding how your Mac is different from the others can help you navigate this book more quickly, gathering the information you need and skipping the rest. Before you can use your Mac, you have to start it up — which makes perfect sense — so we tell you how to do that. Now, get ready for the counterintuitive part: After you have your Mac up and running, you can just leave it on.

In this chapter, we cover current Mac models and how they're different and alike, show you how to start and restart your Mac (and give you an idea of what goes on behind the scenes), and then tell you how to put it to sleep and shut it down completely. Sprinkled throughout this chapter is technical information about the various Mac models and what goes on inside that makes your Mac tick, but we make our explanations as clear and simple as possible. At the end of the chapter, we introduce you to Mac processors and show you how to find out precisely which features your Mac has.

Examining Different Mac Models

Apple's Macintosh computer — Mac for short — enjoys the reputation of being the easiest computer to use in the world. Macs are so dependable, durable, and beautifully designed that they incite techno-lust in gadget geeks like us and ordinary Joes alike. For those doubly good reasons, you probably won't buy a new Mac to replace your old one because you *have* to, but because you *want* to.

The Macintosh has been around since 1984, and since that time, Apple has produced a wide variety of Mac models. Although you can still find and use older Macs (although many are not compatible with the latest and greatest OS or applications), chances are, if you buy a newer Mac, it will fall into one of three categories:

- » **Desktop:** Mac mini or Mac Pro, which require a separate display (monitor), keyboard, and mouse or trackpad.
- » **All-in-one desktop:** iMac or iMac Pro, which house the display and computer in one unit and require a keyboard and mouse or trackpad.
- » **Notebook:** MacBook Air or MacBook Pro, which have built-in keyboards, trackpads that work like a mouse at the touch of your fingertips, and bright displays. A clamshell design lets you close and tote them in your backpack, messenger bag, or briefcase.

All the newest Mac models have at least one Thunderbolt/USB port to connect peripheral hardware, such as external drives and displays. They're also engineered for Wi-Fi and Bluetooth connections, which are used for data transfer and peripheral connectivity.



The Thunderbolt port, standard on all newer Macs, is a data-transfer protocol used to connect peripheral devices, such as displays, speakers, or hard drives. Thunderbolt transfers data faster than either USB or FireWire. The latest iteration, Thunderbolt 3, uses the same ports and connectors as the new version of USB (called USB-C).

Because most data transfer and storage happens online or with flash drives, optical disc drives (which play CDs and DVDs) have become almost obsolete and have been removed from all the Mac models sold today. If you still use CDs or DVDs, you can buy an external CD/DVD drive. You can also connect to an older computer on a network and access its optical disc drive.

Mac mini, Mac Pro, and iMac models use an external wireless or wired (usually USB) keyboard and a mouse or trackpad (sold separately from the mini and Pro). Apple's Magic Trackpad lets you use the multitouch gestures — such as swipe, pinch, and flick — to control the cursor and windows on whichever Mac desktop model you choose. If you use a trackpad, you don't need a mouse, but you can use both if you prefer.

By understanding the particular type of Mac that you have and its capabilities, you'll have a better idea of what your Mac can do. We highlight those capabilities in the sections that follow. No matter what the capabilities of your Mac are, chances are, it will work reliably for as long as you own it.

The Mac mini and Mac Pro

The biggest advantages desktop Macs (the Mac mini and Mac Pro) offer are that you can choose the type of display to use and place it anywhere you want on your desk — as long as you have a cable that can reach. The Mac mini, however, is small enough to hide under your desk or situate in a corner of your desktop.

The Mac mini started as a lower-priced version of the Mac, designed for people who wanted an inexpensive Mac for ordinary uses, such as word processing and writing, sending email, browsing the web, and playing video games. At the same time, it packs a fast Intel Core i3, i5 or i7 processor, with up to 64GB of memory, and between 128 gigabytes (GB) and 2 terabytes (TB) of storage, and an assortment of the latest ports and slots for audio, video, and USB connections — nothing to sneeze at. Alternatively, it can function as a terrific, cost-effective server for home or small-business networks. With the latest iterations of the Mac mini, everything has been updated to the latest hardware with power to manage industrial-strength tasks, including everything from home automation to sound and image editing (including artificial reality).

The Mac Pro was completely remodeled and released in December 2013 with a new model coming in the fall of 2019. The 2013 version of this higher-priced professional-version Mac boasts ports to connect multiple monitors and lots of expandability for up to 64GB of memory and up to 1TB of flash storage, as well as greater graphics and processing capabilities with the latest Intel Xeon processor and dual graphics processors.

The iMac

The all-in-one design of the iMac is an evolutionary result of the original — 1984-era — Mac design. The iMac is available in two varieties — iMac 21 with a 21-inch monitor, and iMac 27 with a 27-inch monitor. Both models feature a built-in display, speakers, and FaceTime camera. The standard display is LED-backlit, but you can specify a Retina 4K display. You can configure up to 1TB of storage for an iMac 21 or 3TB of storage for an iMac 27. You choose flash storage instead of a hard drive, or a fusion drive, which combines a flash drive with a conventional hard drive, depending on your need for speed or space. On iMac models, you can connect external speakers and a second external display.

Recently, Apple launched a high-powered extension to the iMac line: iMac Pro. The iMac Pro is a powerhouse that features a more vibrant 5K Retina display, a faster processor, and more memory, with up to 4TB of storage.

The advantage of the iMac's all-in-one design is that you have everything you need in a single unit. The disadvantage is that if one part of your iMac fails (such

as the display or speaker), you can't easily replace the failed part, although in our experience, Apple responds quickly and professionally to problems with its products.

The MacBook Air and MacBook Pro

MacBook Air and MacBook Pro are the notebook members of the Mac family. All the MacBook models run on rechargeable battery packs or external power. If you need to take your Mac everywhere you go, you can choose from the ultralight MacBook Air or one of the MacBook Pro models.

Although both MacBook Air and MacBook Pro have full-size keyboards, neither includes the extra numeric keypad found on most external keyboards (but not on Apple's standard wireless keyboard) or on larger Windows notebooks. Also, instead of a mouse, the MacBook uses a built-in trackpad, which responds to all the multitouch gestures you can use to control the cursor and windows on your Mac.



TIP

If you find the keyboard or trackpad of your notebook Mac too clumsy to use, you can always plug an external keyboard and mouse into your notebook, or use a wireless keyboard and mouse.

The MacBook Air is a featherweight computer with a 1.66 GHz i5 processor, and can be configured with up to 1TB of flash storage and up to 16GB of memory.

The MacBook Pro models can be configured to include up to a 2.4 GHz 8-core i9 processor, up to 32GB of memory, and up to 4TB of flash storage. MacBook Pro computers now include a Touch Bar above the keyboard. It lets you tap icons that change as you work with your Mac so that the function button or tools that you need appear when you need them.

The MacBook Air comes with a 13-inch LED-backlit screen, and the MacBook Pro models come in two screen sizes: 13 inch and 15 inch.



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Apple's Retina display uses a liquid crystal display (LCD) with a pixel density of 227 pixels per inch (PPI). At this density, the human eye doesn't distinguish the individual pixels at a normal distance. All MacBook Pros have the Retina display, as do some iPad and iPhone models. The MacBook Air and other desktop models sport an LED-backlit screen.

Starting Your Mac

Here's the simple way to start your Mac — the way you'll probably use 99 percent of the time: Press the Power button.

Depending on the type of Mac you have, the Power button may be in back (Mac mini and iMac), front (Mac Pro), above the keyboard (MacBook Air and MacBook Pro), or at the right of the Touch Bar. Some Apple displays have a Power button that commands the computer it's connected to.



TIP

With the Touch Bar, you have Touch ID so that your touch turns on the Mac and logs you in as well.

A few seconds after you press the Power button, your Mac chimes to let you know that it's starting. (Techie types say *booting up*, a term derived from the phrase “to lift yourself up by the bootstraps.”)

The moment electricity courses through, your Mac's electronic brain immediately looks for instructions embedded inside a special read-only memory (ROM) chip. While your computer is reading these instructions (also known as *firmware*), it displays the Apple logo on the screen and a progress bar to let you know that the computer is working and hasn't forgotten about you.

The firmware instructions tell the computer to make sure that all its components are working; most often, they are. However, if some part of your computer (say, a memory chip) is defective, your computer will stop at this point.



WARNING

Unless you know something about repairing the physical parts of a Mac, this is the time to haul your Mac to the nearest Apple Store or authorized repair shop, call Apple Support (800-275-2273 in the United States), or go to <http://support.apple.com>.



REMEMBER

Sometimes a Mac may refuse to start correctly because of software problems. To fix software problems, check out Book 3, Chapter 6, which explains how to perform basic troubleshooting on a Mac.

After your computer determines that all components are working, the last set of instructions on the chip tells the computer, “Now that you know all your parts are working, load an operating system.”



When you unpack your Mac and turn it on for the very first time, it asks you to type your name and make up a password to create an account for using your Mac. You use this name and password in the following situations:

- » When you wake or restart your Mac, if you activate those types of privacy settings (see Book 3, Chapter 2)
- » When you install new apps or update the system software
- » When you change some settings in System Preferences
- » When you switch from one user to another, if you set up your Mac to work with multiple users (see Book 3, Chapter 2)

This username and password are different than your Apple ID, which you use for iCloud and making Music Store, App Store, and Apple Books purchases. You can learn about creating an Apple ID in Book 1, Chapter 3.

To guide you through the process of setting up a Mac for the first time, a special application called Setup Assistant runs, which asks for your time zone, the date, and whether you want to transfer files and applications from another Mac to your newer one. If you've just upgraded to a new Mac, you don't have to reinvent the wheel and set up everything again. You can migrate settings from your old Mac to your new Mac.

Normally, you need to run through this initial procedure only once, but you also have to perform it if you reinstall your operating system (OS). We explain reinstalling the OS in Book 3, Chapter 6. The most important part of this initial procedure is remembering the password you choose because you'll need it to log in to your account, change some of the settings in System Preferences, or install new software.

An *operating system* is the program that controls your computer and is almost always stored on your computer's built-in hard drive (rather than on an external drive). On the Mac, the operating system is named macOS (pronounced *mac oh ess*) and is followed by a version number, such as 10.14.



Apple code-names each version of macOS. The current version is macOS Catalina 10.15. Early versions of macOS were named after big cats, such as Mountain Lion, Snow Leopard, and Jaguar. Now, they're named after places in California.

After the operating system loads and you log in, you can start using your computer to run other applications to do things such as design a poster, send an email, browse the web, calculate your yearly budget, or play a game — you know, all the cool things you bought your Mac for in the first place.

Turning Off Your Mac

You can choose one of three different ways — sleep, shut down, or restart — to turn off your Mac (or let it rest a bit). In this section, we explain when and why you would want to use each option and, of course, how.

Putting your Mac to sleep

If you're taking a short break from working on your Mac, you don't have to always turn it off and then turn it back on again when you want to use it. To conserve energy, put your Mac to sleep instead of leaving it running while you're away. When you put your Mac to sleep, it shuts down almost every power-draining component of your Mac and draws only a teensy trickle of power. The great part, though, is that you can instantly wake it up by touching the keyboard, clicking the mouse, swiping the trackpad, or opening the lid (if you use a MacBook Air or MacBook Pro). Presto change-o! Your Mac immediately returns to the same state you left it in, without making you wait to power on as if it were completely shut down.

To put your Mac to sleep, you can go manual or automatic:

- » **Manual:** If someone walks into your office and you want to hide that secret project you're working on, you may want to put your Mac to sleep manually.
- » **Automatic:** So you don't have to remember to put your Mac to sleep when you stop using it (to take a phone call or go out to lunch) you can adjust your Mac's settings so that it automatically falls asleep after a certain amount of time.



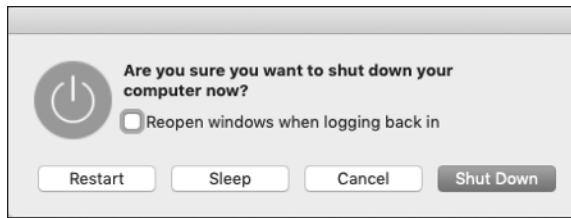
WARNING

If your Mac is doing a task, such as sending an email or downloading a file, let it finish the task before putting it to sleep.

To put your Mac to sleep manually, choose one of the following actions:

- » **Choose  Sleep.** The  menu is in the upper-left corner of the screen.
- » **Press and hold the Power button.** (If you're having trouble finding your way around the keyboard, see Book 1, Chapter 2.) Then, when a dialog appears, as shown in Figure 1-1, click the Sleep button (or press the S key on your Mac's keyboard). **Note:** This does not work on models with Touch ID.
- » **Press Option++Power Button.** This puts your Mac to sleep instantly without a dialog appearing. This is a useful option if you're shopping online for your wife's anniversary present and she walks into the room.

FIGURE 1-1:
Put your
computer to sleep.



- » **Press ⌘+Option+Eject.** If your MacBook doesn't have a disc drive, it doesn't have an Eject key, so this option doesn't work. This option also doesn't work on models with Touch ID.
- » **If you have a MacBook, just close its lid.** When a MacBook is sleeping, you can safely move it without worrying about jarring the built-in hard drive that spins most of the time your MacBook is awake and in use.

To put your Mac to sleep automatically, you set the amount of time your Mac sits idle before it goes to sleep. Which sleep options you see depend on what type of Mac you're using:

- » **Desktops:** On desktop Macs, you can adjust when your Mac puts the display to sleep and when it puts the computer to sleep.
- » **Notebooks:** Your Mac knows whether it's using battery power or the power adapter, and you can adjust when the display and computer sleep in both instances.

Follow these steps to adjust how your computer sleeps automatically:

- 1. Choose  System Preferences, and then click the Energy Saver icon that looks like a light bulb.**

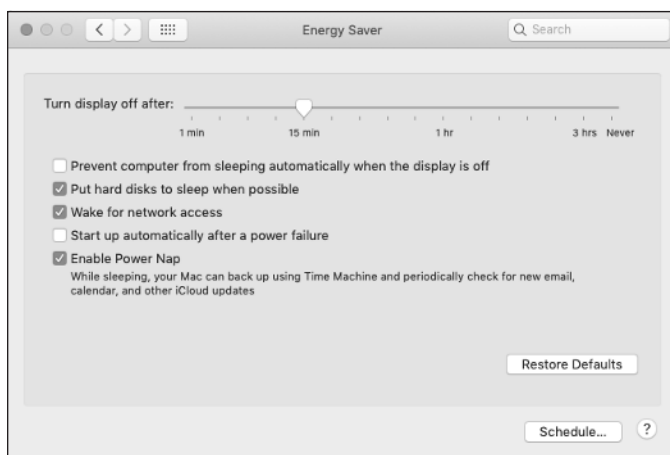
The Energy Saver window appears, as shown in Figure 1-2. If you have a MacBook, you'll see separate tabs with appropriate information for when you're using the battery or power adapter.

When powered by the battery, you may want your Mac to go to sleep after a short time (say, 5 minutes) to make the battery charge last longer. Then, when your Mac is connected to a power source, you could set it longer: say, after 15 minutes.

- 2. Drag the Turn Display Off After slider to the amount of time you want your Mac to sit idle before it goes to sleep.**

The exact time is shown above the timescale (on the right) as you move the slider.

FIGURE 1-2:
Use the Energy
Saver System
Preferences to
put your Mac on
a sleep schedule.



TIP

This setting puts the hard drive to sleep. You may want to set a longer time interval for Computer Sleep than for Display Sleep (the following step) because it takes your Mac slightly longer to wake from Computer Sleep than Display Sleep.

3. Drag the Turn Display Off After slider to the amount of time you want your Mac to sit idle before the screen saver plays.

This setting puts the display to sleep. A *screen saver* is an image that appears when your Mac is inactive after the time interval you set here. It hides whatever you were working on from peering eyes when you're away from your Mac. You can find out how to choose a special image for your screen saver and set a password for it in Book 1, Chapter 6.



TIP

If you perform tasks such as downloading large files, select the Prevent Computer from Sleeping When Display Is Off check box and set a time interval to turn the display off. This way, your Mac continues to do the task at hand even though the display is sleeping.

4. (For MacBook) Select the Show Battery Status in Menu Bar check box (in the lower-left corner).

This displays an icon at the top of your Mac's screen indicating how much charge is left on your battery.

5. (Optional) Select the check boxes next to the other options to set when your Mac goes to sleep or wakes.

For instance, if you access your Mac remotely, select the Wake for Wi-Fi Network Access check box so your Mac will wake when you try to retrieve files and data from your Mac.

Select Enable Power Nap so your Mac continues to perform some functions while it's sleeping. When Power Nap is on, your Mac receives incoming email, automatically updates any apps you share with other devices (such as Contacts, Calendar, and Notes), and performs Time Machine backups.

The MacBook has two Power Nap settings: one for Battery and one for Power Adapter. By default, Power Nap is on when your Mac is connected to a power source but off when running on the battery. To change either, click the Battery or Power Adapter tab and select, or deselect, the Power Nap check box. When you use Power Nap in Battery mode, the activities are limited to receiving email and updating shared data.

To see if your Mac model supports Power Nap, visit <http://support.apple.com> and search for *about power nap*.

6. (Optional) Click the Schedule button and adjust those settings as desired.

A pane opens that lets you schedule the days and times you want your Mac to start or wake up and go to sleep. This is convenient if you don't want to accidentally leave your Mac on when you leave your home or office or you do want to find it awake and waiting for you when you arrive.

7. Save your setting by choosing System Preferences ⇨ Quit System Preferences or clicking the Close (red) button in the upper-left corner of the Energy Saver dialog box.

To wake a sleeping desktop or all-in-one Mac or a MacBook with the lid open, click the mouse button or tap any key. To keep from accidentally typing any characters into a currently running application, press a noncharacter key, such as Shift or an arrow key. To wake your closed and sleeping MacBook, just open its lid. You can wake a sleeping MacBook with the lid open by swiping the trackpad or pressing any key.



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Depending on which Mac model you own, you may notice a built-in combination power/sleep indicator light that softly pulses like a firefly when your Mac is sleeping. On the MacBook Pro, the power/sleep indicator light is on the front edge below the right wrist rest. On the Mac mini, the indicator light is in the lower-right corner. No such light is anywhere on the iMac or the latest MacBook Air, which appear to be totally in the dark when they're asleep.

Shutting down your Mac

When you shut down your Mac, open applications are automatically closed, Internet and network connections are disconnected, and logged-in users are logged out. It may take a few minutes for your Mac to shut down. You know your Mac is shut down completely when the screen is black, the hard drive and fan are silent,

and there are no blinking lights anywhere. Here are a few circumstances when you'd want to shut down your Mac:



TIP

» **Taking an extended break:** When you won't be using it for an extended length of time. Turning your Mac completely off can extend its useful life, waste less energy, and save you a few bucks on your yearly energy expense.

» **Traveling:** When you're traveling with your Mac and putting your MacBook Air, MacBook Pro, or Mac mini in your wheeled carry-on bag.

Putting your Mac to sleep is fine if you're carrying your MacBook in a laptop bag or backpack. If you're going through a security line in an airport or other location, sleep is actually exactly what you want so that when the inspector checks your computer, one touch will bring it to life. Security guards may ask you to turn on a computer that is turned off.

» **Repairing hardware:** If you own a Mac that is user serviceable, and you want to open the computer to install a new battery, additional memory, or a video graphics card.

» **Restarting:** To resolve weird situations, such as unresponsive or slow-running applications, because your Mac runs a number of behind-the-scenes file-system housekeeping chores every time you start it. (See the next section for instructions.)

Here are the ways to shut down your Mac:



TIP

» **Choose  Shut Down.** A confirmation dialog appears (as shown in Figure 1-3) asking whether you're sure you want to shut down.

Select the Reopen Windows When Logging Back In check box if you want everything you're working on to open when you turn on your Mac the next time.

Click the Shut Down button (or Cancel if you change your mind). If you don't click either option, your Mac will shut down automatically after 1 minute.

» **Press and hold the Power button.** When a dialog appears (refer to Figure 1-1), click the Shut Down button or press the Return key.



FIGURE 1-3:
Click Shut Down
to turn off your
computer.



WARNING

Make sure that your MacBook Air or MacBook Pro is completely shut down before closing the lid, or it may not shut down properly. Even more problematic, it may not start up properly when you next try to turn it on.



TIP

To shut down without seeing those bothersome dialogs, do this: Hold the Option key and then choose  ⇧ Shut Down. This bypasses the confirmation prompt asking whether you're sure that you want to shut down.



WARNING

You have one more option for shutting down your Mac, but proceed with caution. Press and hold +Control and then press the Power button to perform a *force shutdown*, which forces all running applications to shut down immediately. However, this route should never be your first choice when shutting down. Use a force shutdown as your last resort only if your Mac — your *Mac*, not just a stubborn application — is unresponsive and appears to have frozen. If a single application is freezing or acting flaky, force-quit (close) that single application instead of shutting down your entire computer. (See Book 3, Chapter 6 for information about how to force-quit a single application.) Performing a force shutdown can cause you to lose any changes you've made since the last time you saved them, so use force shutdown only as a last resort.

Restarting your Mac

Sometimes your Mac can act sluggish, or applications may fail to run. If that happens, you can shut down and immediately restart your Mac, which essentially clears your computer's memory and starts it fresh.

To restart your computer, you have three choices:

- » **Press the Power button.** Then, when a dialog appears, click the Restart button (refer to Figure 1-1) or press the R key.
- » **Choose  ⇧ Restart.**
- » **Press Control++Eject.**

When you restart your computer, your Mac closes all running applications; you have the chance, though, to save any files you're working on. After you choose to save any files, those applications are closed, and then your Mac will shut down and boot up again.

Understanding Mac Processors

The *processor* acts as the brain of your Mac. A computer is only as powerful as the processor inside. Generally, the newer your computer, the newer and more powerful its processor and the faster it will run.



REMEMBER

The type of processor in your Mac can determine the applications (also known as *apps* or *software*) your Mac can run. Before you buy any software, make sure that it can run on your computer.

To identify the type of processor used in your Mac, choose About This Mac. An About This Mac window appears, listing your processor (see Figure 1-4).

FIGURE 1-4:
The About This
Mac window
identifies the
processor used in
your Mac.



The Intel family of processors includes (from slowest to fastest) the Core Solo, Core Duo, Core 2 Duo, dual-core i3, dual-core i5, quad-core i7, and quad- and six-core Xeon. Every processor runs at a specific speed, so, for example, a 2.0 gigahertz (GHz) Core 2 Duo processor is slower than a 2.4 GHz Core 2 Duo processor. If understanding processor types and gigahertz confuses you, just remember that the most expensive computer within a product line is usually the fastest.

Talk to your friendly Apple reseller to get suggestions for which Mac to buy. Or talk or chat online with someone at the Apple Store (<http://store.apple.com>). The tasks you plan to do with your Mac determine the processor speed that will meet your needs. For example, if you plan to mostly write books, surf the web, and use productivity apps like Calendar and Contacts, a low-end processor is probably sufficient. If, instead, you're a video editor or game developer, you want the fastest processor you can afford.

Click each tab at the top of the About This Mac window to open panes that show more information about your Mac: Overview, Displays, Storage (shown in Figure 1-5), and Memory. These tabs provide information about your Mac in clear, well-designed graphics (this is Apple, after all). For example, in Figure 1-5, you see a Mac with the built-in Flash Storage that is standard on some Macs; you also see an external disk drive, which is subdivided into two sections (Backup and Current). The different types of files are color-coded.



FIGURE 1-5: The Storage pane of the About This Mac window tells you how your Mac's storage is being used.



TIP

Click the Support tab for links to the Help Center and user manuals. Click the Service tab to access links to information about your Mac's warranty and AppleCare protection.

Exploring Your Mac's Inner Workings

By looking at your Mac, you can tell whether it's an all-in-one design (iMac), a notebook (MacBook Air or MacBook Pro), or a desktop unit that lacks a built-in screen (Mac mini or Mac Pro). However, looking at the outside of your Mac can't tell you the parts used on the inside or the details regarding what your Mac is capable of. You may need to look at the hardware information in the System Report window when you want to know about the health of your MacBook's battery or the type of graphics card in your Mac Pro.

To identify the parts and capabilities of your Mac, follow these steps:

- 1. Choose About This Mac.**

The About This Mac window appears.

2. Click System Report.

The System Report window appears.

3. Click the disclosure triangle to the left of the Hardware option in the category pane on the left (as shown in Figure 1-6) to view a list of hardware items.

FIGURE 1-6:
The System
Report
identifies the type
and capabilities
of the hardware
in your Mac.



If the list of hardware items (such as Bluetooth, Memory, and USB) already appears under the Hardware category, skip this step.

Clicking a disclosure triangle toggles to open or close a list of options.

You can also click the disclosure triangle next to Network or Software in the category pane on the left to see information about networks you're connected to or software installed on your Mac. (You can learn more about networking your Mac in Book 3, Chapter 3; we tell you how to install software in Book 1, Chapter 5; and we cover uninstalling software in Book 1, Chapter 5.)

4. Click a hardware item, such as Audio, Disc Burning, or Memory.

The right pane of the System Report window displays the capabilities of your chosen hardware.



REMEMBER

Don't worry if the information displayed in the System Report window doesn't make much sense to you. The main idea here is to identify a quick way to find out about the capabilities of your Mac, which can be especially helpful if you have a problem in the future and a technician asks for information about your computer.

5. When you finish scouting the contents of the System Report window, you can simply close it (click the red circle in the upper-left corner) to return to About This Mac.

To close both System Report and About This Mac, choose System Information ⇨ Quit System Information or Press cmd+Q.



TIP

When you're running System Information, you can choose File ⇨ Print to print it out for future reference or choose File ⇨ Send to Apple to send it to Apple for support. (If you're talking to Apple Support, you may be asked to do this.)