



13-inch White MacBook Care and Handling

Take good care of your computer
and it will take care of you.



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Getting to Know Your MacBook



Opening latch



Power button

The Startup Process

Your MacBook is designed so that you can start using it right away. To open your MacBook, locate the magnetic latch in the middle of the front side and gently lift up the display.

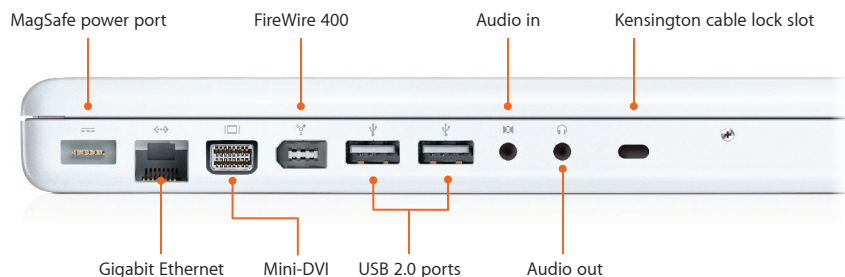
Adjust the screen to the best viewing angle, but be careful not to open it beyond the designed stopping point.

Now, press the power (⏻) button located in the upper-right corner of the keyboard.

You'll hear a tone, which indicates the computer is starting up. It may take as long as a minute before you see the next screen, so be patient. If the computer is already on when you press the power button, it will wake from sleep mode in a few seconds without the tone. You'll see a succession of screens as your computer starts up.

Ports on Your MacBook

The left side of your MacBook contains all the ports you'll need to connect peripherals like digital cameras, camcorders, printers, video projectors, science probes, an iPod, and so on. The following sections describe each port (from left to right).



MagSafe power port

To power your MacBook and charge the battery, plug your power adapter into a power outlet, then attach the MagSafe connector to this port. As the connector gets close to the port, you'll feel a magnetic pull drawing it in. This connector will safely release in the event of someone tripping on the power cord.

Gigabit Ethernet port

The Gigabit Ethernet port connects your MacBook to a wired network. For example, at home you can use the Gigabit Ethernet port to connect to a small network or a cable or DSL modem. Because your computer has an AirPort wireless networking card,¹ you might not use the Gigabit Ethernet port if a wireless network is set up at the school.



Mini DVI to DVI Adapter



Mini DVI to VGA Adapter



Mini DVI to Video Adapter



Apple USB Modem

Mini-DVI port

The Mini-DVI port allows you to connect an external display or projector to your MacBook using an adapter (sold separately). You can use the external display as your main workspace or to extend your desktop, or you can work in mirrored mode with a projector so you can view exactly what your audience sees.

- The *Mini DVI to DVI Adapter* lets you connect an advanced digital monitor that includes a DVI connector.
- The *Mini DVI to VGA Adapter* connects your MacBook to a standard analog monitor, projector, or LCD display that uses a VGA connector or cable.
- The *Mini DVI to Video Adapter* allows you to view your computer on devices such as TVs, VCRs, or overhead projectors with S-video or RCA (composite) connectors.

By default, your MacBook starts up in dual-display mode. Press the F7 key to switch between dual-display and mirrored modes.

FireWire 400 port

The FireWire port lets you easily connect and disconnect external high-speed devices, such as high-definition video (HDV) or digital video (DV) cameras and hard disks, without restarting your computer (this is known as “hot-swappable”). To unmount a FireWire device, drag the device icon to the Trash icon in the Dock at the bottom of your screen. The Trash icon becomes the Eject (⏏) icon when you drag the device icon over it.

USB 2.0 ports

The two USB 2.0 ports allow you to connect many types of external devices including printers, scanners, digital cameras, mice, keyboards, and flash drives. Once you connect the device, it’s ready to use. Some devices like flash drives must be unmounted from your desktop before they can be safely disconnected.

To unmount a flash device or external hard disk, drag the device icon to the Trash icon in the Dock. The Trash icon becomes the Eject (⏏) icon and the device is unmounted from your desktop when you release the trackpad or mouse button.

Audio ports

With the audio-in port, you can connect external microphones and other audio equipment. The audio-in port doesn’t provide power to a connected device, so you must use self-powered devices. The audio-out port allows you to connect headphones, external powered speakers, 5.1 surround sound speaker systems, and other sound output devices.

Kensington cable lock slot

The last port on the MacBook is the security slot. To protect your MacBook, you can purchase a security cable lock that can secure your computer to a desk or table.

Modem options

The MacBook doesn’t contain a built-in modem. However, you can use the Apple USB Modem (sold separately) to easily connect to the Internet using a dial-up service. The small, light cable connects to either USB port on your MacBook.

Other Hardware Features

iSight camera

The MacBook has a built-in iSight camera at the top of the display bezel. It's perfect for video conferencing with others using the included iChat AV application, or for making a movie or capturing a photo for a class project. The camera indicator light turns green when the camera is in use and turns off when it isn't.



Sudden Motion Sensor technology

Your MacBook is equipped with Sudden Motion Sensor technology, which helps protect the hard disk from damage if the computer is dropped or shaken. Sudden Motion Sensor protection doesn't affect hard disk performance during regular MacBook operation. Occasionally, unusually strong vibrations can activate the Sudden Motion Sensor technology when your MacBook is writing or reading data intensively (such as playing or recording video or audio). If you notice dropped video frames, freeze frames, or sound elements, make sure that your MacBook is in a stable environment without vibration or abrupt movement.

Important: You should avoid moving your MacBook while the hard disk is spinning to prevent potential damage and data loss.

MacBook trackpad

Use the trackpad to move the pointer and to scroll, tap, double-tap, and drag. How far the pointer moves onscreen is determined by how quickly you move your finger across the trackpad. To move the pointer a short distance, glide your finger slowly across the trackpad; the faster you move your finger, the farther the pointer goes. To fine-tune the tracking speed, go to the Apple () menu and choose System Preferences, click Keyboard & Mouse, and then click Trackpad.

To select an item on the MacBook's screen, position the pointer on the item's icon and press down anywhere on the trackpad. To open an item, double-click the item's icon by pressing down on the trackpad twice.

The MacBook trackpad can sense if you're using more than one finger. Drag two fingers across the trackpad to scroll vertically or horizontally in windows with scroll bars.

Secondary clicking, or right-clicking, lets you access shortcut menu commands by clicking an item with two fingers instead of one. You can turn this and other options on or off in the Trackpad pane of System Preferences.

You can also plug a USB mouse into either of the USB ports and configure it through the Keyboard & Mouse System Preferences pane.

Tips for using the trackpad

For best results with the trackpad:

- Use only one finger, except when implementing two-finger scrolling.
- Don't use a pen or any other object on the trackpad.
- Keep your fingers and the trackpad dry. If the trackpad becomes moist from humidity or condensation, gently wipe it with a clean cloth.
- Never use any kind of cleaning solution on the trackpad.



Adjusting Your Display and Cleaning the Screen



Adjusting Your MacBook Display

Your computer display is adjustable for optimal viewing. Adjust the angle of the display to minimize glare and reflections from overhead lights and windows. Don't force the display if you meet resistance. The display isn't meant to open past 130 degrees.

Use the brightness controls at the top of your keyboard (F1, F2) to increase or decrease the brightness of the screen.

Cleaning the MacBook Screen

To clean the screen, first shut down your MacBook, unplug the power adapter, and remove the battery. Then use the included cleaning cloth to wipe the screen. Dampen the cloth with water if necessary. Don't spray liquid directly on the screen.

Apple has tested a product called Klear Screen, made by Meridrew Enterprises (www.klearscreen.com), and has found it doesn't cause any harm to the plastics in the screen. This product may not be available worldwide. Information about products not manufactured by Apple is provided for information purposes only, and doesn't constitute Apple's recommendation or endorsement. Contact the manufacturer for additional information.

Using Your Optical Drive



Optical drive

The optical drive is located on the right side of the computer. It is a slot-loading drive mechanism and has no tray to eject. You can play multimedia on CD discs and music from audio CDs; play DVD movies; and write (“burn”) music, documents, and other digital files to CD-R and CD-RW discs, plus burn DVD movies and other information on writable DVD discs (DVD±R DL/DVD±RW/CD-RW).

Important: Because the drive is slot loading, you should insert only round 120mm (4.7-inch) discs. The drive doesn’t work with irregularly shaped discs, which could damage the drive if inserted.

Inserting a CD or DVD

To install or use software from a CD or DVD disc:

1. With the computer turned on, gently insert the disc (with the label facing up) into the drive slot until you feel the drive catch the disc and pull it in the rest of the way. You might need to insert the disc nearly all the way before the drive takes it.
2. The disc is ready to use when its icon appears on the desktop.

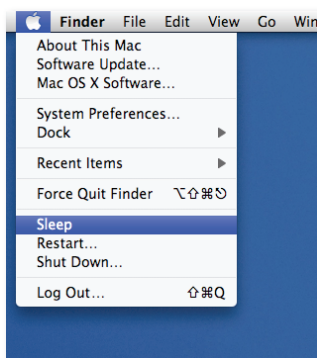
Ejecting a Disc

To eject a disc, do one of the following:

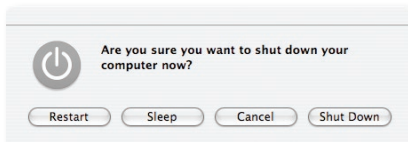
- Drag the disc icon to the Trash. The Trash icon will change to the Eject (⏏) icon.
- Select the disc icon, then press and hold the Eject (⏏) key on the keyboard until the disc ejects.

Allow the disc to fully eject before removing or reinserting it. If you can’t eject the disc, quit any applications that might be using the disc and try again. If that doesn’t work, restart the computer while holding down the trackpad.

Putting Your MacBook to Sleep or Shutting It Down



Choose Sleep under the Apple menu.



Press the power button and click Sleep in the dialog box that appears.

When you finish working on your MacBook, you can put it to sleep or shut it down.

Putting Your MacBook to Sleep

If you'll be away from your MacBook for only a short time, put it to sleep. When the computer is in sleep mode, you can quickly wake it and bypass the startup process. Your MacBook uses considerably less power when in sleep mode than when awake.

To put the computer to sleep, do one of the following:

- Close the display.
- Go to the Apple () menu and choose Sleep from the pull-down menu.
- Press the power (⏻) button and then click Sleep in the dialog box that appears.
- Go to the Apple menu and choose System Preferences, then click Energy Saver, and set a sleep timer.

The sleep LED on the right front of the MacBook will pulse to indicate that the unit is in sleep mode.

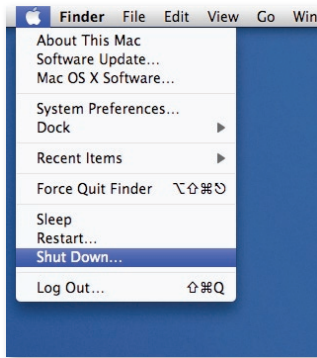
Important: Wait until the sleep indicator starts pulsing (indicating that the computer is in sleep mode and the hard disk has stopped spinning) before you move your MacBook. Moving your computer while the hard disk is spinning can damage the disk, causing loss of data or the inability to start up from the hard disk.

To wake your MacBook, do one of the following:

- If the display is closed, simply open it.
- If the display is already open, press the power button or any key on the keyboard.

Putting Your Display to Sleep

By default, your MacBook is set to put your display to sleep when the computer is inactive. The sleep LED glows continuously to indicate that the unit is in display sleep; the hard drive will still be spinning and all running applications remain active. You can easily change the length of time before your display goes to sleep in the Energy Saver pane of System Preferences.



Go to the Apple menu and choose Shut Down.

Shutting Down Your Computer

If you don't plan to use your computer for more than a day, it's best to shut it down.

To shut down your computer, do one of the following:

- Go to the Apple () menu and choose Shut Down from the pull-down menu.
- Press the power (⏻) button and then click Shut Down in the dialog box that appears.

When you shut down your MacBook, all applications quit (unlike in sleep mode, when applications can be running and documents can be open).

Important: Be sure your MacBook has shut down completely before you close the display, or it might not shut down properly. To determine if the shutdown is complete, make sure that you have a black screen, no active power light, and no fan or drive noise.



Press the power button and click Shut Down in the dialog box.

Powering Your MacBook



MagSafe connector



MagSafe Power Adapter

Using the MagSafe Power Adapter

Your MacBook comes with a MagSafe Power Adapter that connects magnetically to the charging port. The MagSafe power port gives you a trip-proof connection to safeguard your system and valuable data.

Warning: The MacBook power adapter port contains a magnet that can erase data on a credit card, iPod, or other device. To preserve your data, keep these and other magnetic media away from the MagSafe power port.

Be sure to fully charge your MacBook when you plug it in for the first time. The MagSafe charging port is located on the left side of the computer, the port closest to the back. When the power adapter is securely connected, an LED light glows on the MagSafe connector. An amber light indicates the battery is charging; green indicates the battery is fully charged.

It takes up to 4 hours to fully charge the battery for your MacBook. When the power adapter is attached, the battery recharges whether the computer is off, on, or in sleep mode. However, the battery charges more quickly if the computer is off or in sleep mode.

If you don't see a light glowing on the MagSafe connector, make sure it is seated properly and the adapter is plugged in. If the light still isn't glowing, unplug the adapter from the AC outlet for 60 seconds, then try it again. If the adapter works after this 60-second "rest," you might have a line noise issue with your power source that is causing the overvoltage protection feature to turn the adapter off.

The MagSafe Power Adapter may become very warm during normal use. Always put the power adapter directly into a power outlet or place it on the floor in a well-ventilated location. If you are using your MagSafe adapter in a poorly ventilated area or if it is covered by a blanket or other form of insulation, it may turn itself off to prevent damage from heating up. Unplug it; once the adapter cools down, it should function normally.

Using Your Battery

When the power adapter isn't connected, your computer draws power from its battery. The length of time that your MacBook can run on the battery depends on the applications you use and the external devices connected.

You can determine the charge left in the battery by looking at the battery-level indicator lights on the bottom of your MacBook. Press the button next to the lights, and the lights glow briefly to show how much charge is left. You can also check the charge this way with the battery out of the computer.

If only one indicator light is on, very little charge is left. If no lights illuminate, the battery is completely drained and the MacBook won't start up unless the power adapter is connected.

You can also check the amount of battery charge remaining by viewing the battery status icon in the menu bar on the MacBook desktop. If your battery charge runs low while you're working, attach the power adapter and let the battery recharge.

To replace a discharged battery with a charged one when your MacBook isn't connected to the power adapter, shut down your computer and swap out the battery following the steps below:

1. Shut down the computer. Disconnect any cords connected to the computer.
2. Turn the computer over.
3. Locate the battery latch on one side of the battery.
4. Use a coin to turn the latch a quarter-turn clockwise. The battery should pop up slightly.
5. Lift the battery out.

To install a new battery:

1. Place the right side of the battery into the battery compartment at an angle.
2. Gently press the left side of the battery down until it sits flat.
3. While holding the battery down, use a coin to turn the latch a quarter-turn counter-clockwise. The battery should lock into place.

Note: Once the new battery is inserted, you'll need to press the power button to start up the computer.

Important: If the battery is fully drained, when you plug in the computer's power cord and start up the computer, you may see an "X" over the battery status icon in the menu bar. If so, allow up to 5 minutes for the battery to come out of its low-power mode and begin accepting a charge again.

Battery life

A fully charged battery can provide up to 4.5 hours of use,² depending on application usage, network activity, and other system settings. When the computer is on, you can monitor the battery-charge level using the battery status icon in the menu bar.

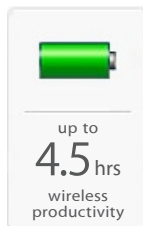
If the battery status icon in the Finder menu bar is set to show the percentage of charge, the battery sometimes won't show a full 100 percent charge when the power adapter is attached. This is normal; battery life is maximized if charging isn't cycled on and off when the charge capacity is between 93 and 100 percent. If you notice that your battery doesn't charge up to 100 percent, use your computer on battery power until the charge drops below 93 percent. Plug in your power adapter to charge the battery to 100 percent.

Depletion

A properly maintained Apple computer battery is designed to retain up to 80 percent of its original capacity after completing 300 full charge and discharge cycles. Typically you accumulate these full cycles across many partial discharge cycles, but the end result is that the length of time the battery can hold a charge is reduced. Battery depletion over time and with usage is normal and isn't considered a defect. You may choose to replace your battery when it no longer holds sufficient charge to meet your needs.

Standard maintenance

For proper maintenance of a lithium-based battery, it's important that the electrons get to move occasionally. Therefore, Apple doesn't recommend leaving your MacBook plugged in all the time. The ideal setup would be to run your computer with the battery at school, then plug in the battery at home to recharge. This keeps the battery juices flowing.



Tips for battery conservation

The amount of work time your battery can provide before you need to recharge depends on the applications and peripheral devices you're currently using, and the steps you take to conserve power while you work. For optimal conservation of battery power, do the following:

- Disconnect peripherals when you're not using them. Connected peripherals, such as printers and digital cameras, can draw power from your battery even when you're not using them.
- Quit applications that you aren't using.
- Turn off AirPort or Bluetooth when they aren't in use. (Use the AirPort and Bluetooth status icons in the menu bar. If these icons don't appear in the menu bar, you can turn them on in the Network and Bluetooth panes of System Preferences.)
- Eject CD and DVD discs when they aren't in use.
- Reduce screen brightness using the brightness controls (F1 and F2) on the computer's keyboard when the computer is being run on battery power.
- Set the hard disk to spin down after a short time. In the Energy Saver pane of System Preferences, select the checkbox labeled "Put the hard disk(s) to sleep when possible."
- Set your MacBook to go to sleep after 5 minutes of inactivity (or even less).

Battery storage

If you won't be using your computer for more than three months, here is a tip for storing the battery so it will be ready when you return.

Apple recommends that you remove and store the battery with a 50 percent charge. If you store a battery when it's fully discharged, it could fall into a deep discharge state, which renders it incapable of holding any charge. Conversely, if you store it fully charged for an extended period of time, the battery may experience some loss of battery capacity, meaning it will have a shorter life. When it's warm outside, store the ejected battery in an air-conditioned room or closet (ideally 71° F, or 22° C). If you store your computer for an extended period, recharge the battery to 50 percent every six months or so.

Battery troubleshooting 101 (intended for technical personnel)

If your MacBook operates normally when plugged into AC power (wall outlet), but doesn't operate using a battery, follow the steps below to verify whether the issue is with the battery or another component of the computer.

1. Ensure the battery is fully charged by using the proper power adapter for your computer. The connector on the power adapter will glow amber if the battery is accepting a charge. It may take up to 5 minutes for a fully drained battery to begin charging. If the power connector isn't glowing, there may be an issue with the power adapter or outlet.
2. Shut down the MacBook, then remove and reinstall the battery to ensure it is making good, solid contact.
3. Reset the System Management Controller (see next section).
4. Place the suspected bad battery in another unit to see if the problem follows the battery. If the battery still doesn't work, then replace it. If the battery does work in the other unit, then the issue must be with a component in the original computer.

Resetting the System Management Controller (intended for technical personnel)

The System Management Controller (SMC) is an integrated circuit (computer chip) located on the logic board of the computer. As the name implies, it is responsible for power management of the computer. It controls backlighting, hard disk spin down, sleep and wake, some charging aspects, trackpad control, and some input/output as it relates to the computer sleeping.

Over time, the settings in the System Management Controller may become unusable, which can result in operational anomalies with the computer. Examples include not turning on, not waking from sleep, not charging the battery, or not recognizing the power adapter.

Resetting the SMC isn't intended for resolution of a stall or situation in which the computer is unresponsive. An SMC reset should not be necessary except as a last resort, in cases where a hardware issue with the power management system is suspected. The process resets the hardware power management functions.

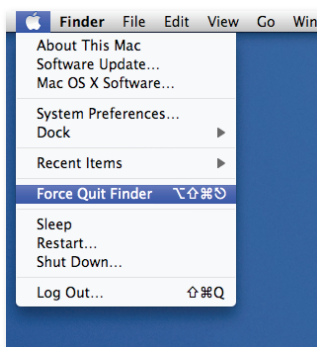
For most situations, a restart is sufficient. If the computer has stopped responding, try the following steps, one at a time. Run a test after each step to see if it has worked; if so, you needn't go on to any of the others. You should reset the SMC only if you've tried all three of these options and the computer still isn't working.

1. Force quit (⌘-Option-Escape).
2. Restart (⌘-Control-Power).
3. Force shut down (press the power button for 10 seconds).

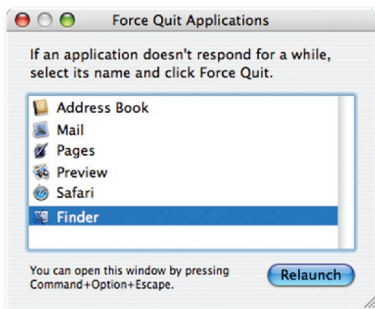
Perform an SMC reset on the computer only if none of the above steps resolves the situation. For MacBook computers, you can reset the SMC by doing the following:

1. If the computer is on, shut it down.
2. Disconnect the power adapter and remove the computer's battery.
3. Press and hold the power button for 5 seconds and then release.
4. Reconnect the battery and power adapter.
5. Press the power button to restart the computer.

Solving Simple Problems



Force Quit menu



Force Quit Applications dialog

When an Application Doesn't Respond

Once in a while, an application you see onscreen might freeze. You can quit a frozen application without restarting your computer, which may allow you to save your work in other open applications.

To force an application to quit:

1. Under the Apple () menu, choose Force Quit or use the keyboard shortcut (⌘-Option-Escape). The Force Quit Applications window appears with the application selected.
2. Click Force Quit. The application quits, leaving all other applications open.

When Your Computer Doesn't Respond

If your computer doesn't respond and you want to restart it, press Command, Control, and the power button at the same time (this is known as a "soft reset"). The computer should restart automatically. If that doesn't work, hold down the power button for 10 seconds (this is known as a "hard reset"). You'll then have to release the power button and press it again to restart your MacBook. Any newly created files or unsaved changes will be lost if you restart your computer with either a soft reset or a hard reset. That's why it's important to save your files often while working on your computer.

Getting Answers from Mac Help

Much more information about using your MacBook is available in Mac Help on your computer. To get Mac Help:

1. Click the Finder icon in the Dock (the bar of icons along the edge of the screen).
2. Click Help in the menu bar.
3. Type a question in the search box or select Mac Help to open the Mac Help application.

Caring for Your MacBook

A guide for students

The MacBook is well built and a great tool for learning, but it is a computer and, like any piece of electronic equipment, it needs to be treated with care. You can do several things to make sure that your MacBook is trouble-free and lasts a long time.

Moving Your MacBook

One of the best features of your MacBook is how small and lightweight it is. This makes it easy to take your homework, reports, presentations, photos, and music wherever you go. When moving your computer, you should do a few simple things to protect it:

- Close the lid gently from the center and wait for the sleep light to pulse before moving the computer.
- Be careful not to leave pencils or pens on the keyboard when closing your MacBook.
- Don't use your computer as a folder to store papers.
- Keep your MacBook in your backpack or carrying case when you aren't using it, and remember that it's in there. Don't drop the case on the floor, use it as a backrest on the bus, put heavy books on it, or cram it in your locker.
- Keep your computer away from dampness or wet weather, such as rain, snow, and fog.
- Keep your MacBook away from extreme heat or cold. Leaving it in an unventilated car or in the sun could damage it. If your computer has been exposed to cold conditions for a long period of time, let it warm up to room temperature before you use it.
- When you're not using the power adapter, wrap the power cord loosely around the adapter's built-in "wings."
- Remember, hard drives don't like to be bounced around, and screens will break if enough pressure is applied to them.



Using and Taking Care of Your MacBook

- Set up your computer on a stable work surface.
- Keep your computer away from water or other liquids, such as fountains, sinks, bathtubs, and so on.
- Don't eat or drink while using your computer.
- When attaching the power adapter to the MacBook, make sure the cord isn't pulled too tight; it should be a little loose.
- Don't insert things, especially metal, into any openings of your MacBook.

- Keep your computer away from sand and water. As portable as the MacBook is, don't take it to the beach.
- Be patient. Sometimes computers take a few seconds to think—so don't start pounding on the keys if your computer doesn't respond right away.
- Plug in your computer when you get home from school so your battery will be fully charged for the next day.

Cleaning Your MacBook

Follow these rules when cleaning the outside of your computer:

1. Shut down your MacBook, unplug the power adapter, and remove the battery.
2. Use a damp, soft, lint-free cloth to clean the outside of the computer (dampen the cloth with water only). Don't allow any moisture to get in the openings.
3. Don't spray liquid directly on the computer.

To clean the MacBook screen, do the following:

1. Shut down your MacBook, unplug the power adapter, and remove the battery.
2. Dampen a clean, soft, lint-free cloth with water and gently wipe the screen. Never spray liquid directly on the screen. It may drip inside the display and cause damage.

You can also use a mild glass cleaner that contains no alcohol or ammonia. Most office supply stores sell cleaning kits specifically designed for computer screens.

Using Cables

- Any cables that you connect to your computer should line up straight with the port they are connecting to. When disconnecting, grab the plug, not the cord, and pull it straight out. To disconnect the power adapter from your MacBook, grab the connector and tilt it up, down, or to one side.
- If your battery isn't charging, don't wiggle the power cord back and forth. Try removing the connector then reattaching it. A battery that is completely run down may take up to 5 minutes to begin charging. If the battery still doesn't work, contact your teacher or computer support person at your school.
- Be careful not to move the computer abruptly when cables are attached.

Preventing Theft and Breakage

Take proper care to make sure your computer doesn't get broken or stolen. Your school has rules to ensure proper use and care of computers. Be sure to familiarize yourself with these rules.

The Apple limited warranty or AppleCare Protection Plan provides coverage for defects in materials and workmanship. However, damage resulting from any external cause, such as an accidental drop or spill, isn't covered by Apple. Refer to your school's policy to find out how to report and handle these types of damage.

¹AirPort Extreme Wi-Fi wireless networking (based on IEEE 802.11n draft specification); IEEE 802.11a/b/g compatible. ²Testing conducted by Apple in January 2009 using preproduction 2.0GHz Intel Core 2 Duo-based MacBook units. Battery life depends on configuration and use. See www.apple.com/batteries for more information. The wireless productivity test measures battery life by wirelessly browsing various websites and editing text in a word processing document with display brightness set to 50 percent.