THE ART OF NOTEBOOK MAINTENANCE

Ten things you may not know about protecting your notebook.

Edward Diaz

Administration has just informed you that your school will adopt a notebook computer program. They have given you a significant bonus and explained that you are responsible for getting the program up and running. Then reality creeps in. Soon a bunch of fourth-graders will receive machines worth thousands of dollars, and they will be expected to take good care of them. This is where you break into a cold sweat and forget why you pushed for the one-to-one program to begin with.

At first, I, too, lost sleep worrying about notebooks in students' hands. Then I realized this is not an insurmountable task. Students can take care of their notebooks; many are more cautious than some teachers. All you need is a bit of faith and a lot of training to teach students how to handle their notebooks.

At St. Philip's Episcopal School in Coral Gables, Fla., students are required to buy a standard, preselected notebook. But the school's technology department is responsible for helping students with upkeep and equipment safety. We educate our students on notebook maintenance during a special assembly that we call "Open-the-Box Day." During this event, we review the functions of the new notebooks, the school's acceptable-use policy and the consequences for notebook irresponsibility.

Most students (and teachers) are unaware of the dangers of notebook abuse or how to keep them safe. But if users understand 10 maintenance pitfalls and administer proper care, their notebooks should continue to perform like new after three years of conscientious use.

BATTERY LIFE AND DEATH

The lifespan of lithium-ion batteries depends on temperature and the state of charge. When battery capacity is lost, these two factors are to blame.

Source: batteryuniversity.com

Overcharging wears down batteries

1 Charge the notebook only when necessary. Charging all the time causes a significant decline in battery life.

Draining the power from the battery keeps it in good working order. For most models, start charging when the battery indicates 20 percent or less power left. Make good use of any power management software that comes with the notebook. This can help with getting more usage time from a single charge.

Abrupt shutdowns can cause hard-drive errors

2 Patience is a virtue; it can save you from damaging the notebook. When shutting down any computer, do not hold the power button down. The shutdown process is delicate; interruptions can cause hard-drive errors or worse failure. Be patient. Let the notebook do its thing.

Dust leads to overheating

3 Keep the notebook free of dust and crumbs. Dust can cause a notebook to overheat. Use a can of compressed air to blow dust away from ports and the keyboard. Wash hands before touching the keyboard to avoid dirty or sticky keys. Invest in a microfiber cloth to clean the LCD screen.

Handling the LCD screen can leave permanent marks

4 Don't grab or touch the screen; it can cause serious problems. First, the screen gets covered with fingerprints, which leads back to Tip 3. If enough pressure is applied, the liquid crystals can be damaged, leaving permanent marks. Keep in mind that the LCD screen is the most expensive part of the notebook, so be extra careful with it.

Portables risk losing data

5 Stored data is the notebook's most important commodity. A good rule of thumb: Protect valuable data by backing it up to a CD or DVD. Any hard drive (the notebook's most sensitive part) can go bad — through no fault of the user — at any time and without warning. Back up, back up, back up work you cannot live without.

Fragmented files slow down performance

6 As modern file systems are used and as files are deleted and created, the total free space in the notebook's memory splits into smaller, noncontiguous blocks. Eventually, newly created files and extended old files can no longer reside in a single, contiguous block. They scatter across the system. This degrades performance because multiple seek operations are required to access one fragmented file.

3,000 viruses threaten notebooks daily

7 Protect against viruses. The notebook user must make sure virus definitions are up-to-date. Create an automatic update system, using the virus program so that the notebook is almost always protected.

Excessive heat leads to hardware damage

8 Notebooks need cool environments. Any computer runs at a high temperature. Protect it from higher temperatures than it is accustomed to. Leaving a notebook in a hot car, for example, can lead to hardware damage. Read the manual for recommended storage temperatures. My rule is simple: If you won't leave your pet there, then don't leave your notebook.

Unapproved software can lead to network trouble

9 The easiest way to damage software on a notebook is to download or install programs not approved by your school. As the acceptable-use policy states, "You cannot add software to your notebook without express permission from a classroom teacher or technology director." Likewise, remove any applications not being used to save disk space and prevent the notebook from slowing down.

Critical updates keep notebooks safe

10 Check for updates from software vendors from time to time. Software vendors release critical updates to help their software run more smoothly.

Administrators Should Take an Active Role

Accidents will happen. It's our job to make sure we have done everything in our power to avoid 99.9 percent of them.

Before purchasing notebooks, fully understand the manufacturer's warranty. Know what is covered and what is not. Most warranties are short-lived and exclude big-ticket items such as LCD screens. Make sure any warranty includes coverage for accidental damage during the notebook's life.

Ask the manufacturer if theft and loss insurance are available. Offer this as an accessory to parents purchasing notebooks. Explain to them that replacing stolen or lost notebooks is their responsibility. Paying a deductible is much better than paying the full retail price.

Involve Students in Decision-making

Students assume more responsibility for their notebooks when they are involved in the selection and setup processes. If you have not yet chosen your notebook model, allow students to help with the decision. The final determination is yours, but inviting students to provide input gives them a sense of ownership, which lends itself to greater dependability than if they were left out of the selection loop.

Beginning a notebook program can seem daunting at first. Do your research. Plan and prepare for the big event. Involve the students. Notebook-train them. Remember, a little education stretches a long way in preventing catastrophes. Have faith in your students that they will succeed. Hammer your advice into their eager heads until their notebook manners and good judgment become automatic.

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