

# Unit 1 Recap

## Computer Properties

Go to your computer properties and figure out what CPU your computer has, how much RAM it has, how large the storage drive is, and how much of it is currently available. Find another computer (the tech room desktop or laptop, or ask another student if you can borrow theirs) and compare specs. What are the differences, and what do they mean in terms of performance?

## PC Shopping

Use [PCPartPicker](#) to come up with a hypothetical PC build, applying what you've learned in this unit so far. Imagine that this PC will be used for gaming and your budget is \$1,200. Use this as a guideline to help decide which parts to buy. Think about what features you'll need and which ones are unnecessary. Do some research on each part you choose. Benchmark sites like [PassMark](#) will probably be helpful. Show your hypothetical build to the tech coach and be prepared to explain your reasoning for each component of your build. Feel free to ask for help!

## File Formats

1. Find a photo on your computer and save it in multiple different image formats (JPEG, PNG, BMP, GIF). Observe the differences in quality, file size, and metadata between the different formats. Which format do you think is best for which purpose?
2. Find a folder with many files in it (for example, a folder full of photos.) Compress the files using different kinds of archive and compression software ([WinZip](#), [7-Zip](#), or [WinRAR](#)). Observe the differences in file size and compression ratio between the different software. Also try this for a single large file, such as a video file. Which software do you think is best suited for which purpose?

## Computer Slowdown

1. Open the Task Manager (if using Windows) or the Activity Monitor (if using macOS.) Take note of the CPU usage, memory usage, and disk usage percentages. Identify which programs are taking up the most resources.
2. Demonstrate how to end a process (be sure not to kill any critical system processes.)
3. Find your “startup apps” and disable any apps you don’t want running on startup. Show the tech coach at least one that you’ve disabled.
4. Run a virus scan and, if necessary, remove any malware or viruses that may be slowing down your computer.
5. Run the Defragment and Optimize Drives (Windows) or the Disk Utility tool (macOS) and check to see if your drive needs to be optimized.

After completing these steps, measure the performance of your computer using Task Manager or Activity Monitor to see if it has improved. If your memory usage is still consistently high or close to 100%, you may need to consider buying more RAM.