

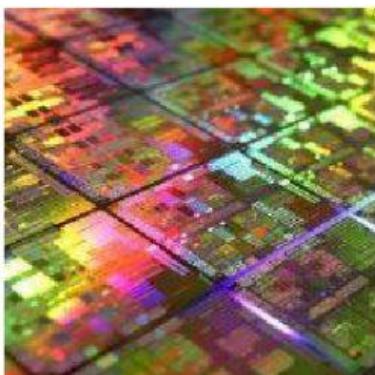
# How computers are made

1) Read the first part of text and complete it with the words from this list:

*aluminum oxide      companies      complete      contaminants      device      glass  
installation      manual      metal      operating system      raw,  
recycled      silicon      smartphones      specialize in      testing*

Your computer is made up of a fantastic array of different materials, including steel, \_\_\_\_\_, silica sand, iron ore, gold, bauxite and a lot of others. All \_\_\_\_\_ materials have to come from somewhere, such as mines.

Once the raw materials are gathered, they're transported to a factory, where individual computer parts are made. One factory might \_\_\_\_\_ RAM chips; another makes top-quality CPUs.



CPUs are made mostly of crystalline \_\_\_\_\_, which can be sourced from common sand. First, that silicon must be purified. Then it is formed into wafers, which are simply thin sheets of crystalline material. Next the wafer is cleaned with chemicals to ensure there are no \_\_\_\_\_. And finally, it is precisely cut into the many individual chips, or CPUs, which will eventually provide the power for your computer.

Your computer

also requires significant amounts of aluminum. This \_\_\_\_\_ is great for devices such as laptops and \_\_\_\_\_. In order to obtain aluminum, we have to mine for bauxite, which is then converted into \_\_\_\_\_ through an energy-intensive process.



Manufacturers could reduce the energy needed to make one laptop, for example, by around 90 percent if they would use only \_\_\_\_\_ aluminum. However, in the United States, only about 30 percent of aluminum is recycled, meaning there's not enough of this material for various \_\_\_\_\_ that want to use it.

**2) Read the second part of the text and fill in the words which you didn't use in the first part.**

*aluminum oxide, companies, complete, contaminants, device, glass, installation, manual, metal, operating system, raw, recycled, silicon, smartphones, specialize in, testing*

After raw materials are built into finished components, the computer is far from \_\_\_\_\_ . Someone must put all of those components together in a finished product that can be shipped to consumers or to a shop.

A lot of this process is automated, but there's still a lot of \_\_\_\_\_ labor required to assemble both individual parts and final working computers.

The completed computer then travels to the software \_\_\_\_\_ area. Most companies pre-load an \_\_\_\_\_ , along with other basic software onto the hard drive. Once the installation process is complete, the machine undergoes automated \_\_\_\_\_ to ensure that all of its parts are present and working correctly. Then the product is boxed and shipped to its destination.

All that is a lot of work for a \_\_\_\_\_ that has an expected lifespan of perhaps 18 months to two years.



**3) Match the words to make terms used in the text:**

assemble	sand
convert	for
expected	process
installation	parts
iron	in
mine	into
operating	testing
raw	lifespan
silica	ore
specialize	system
undergo	materials