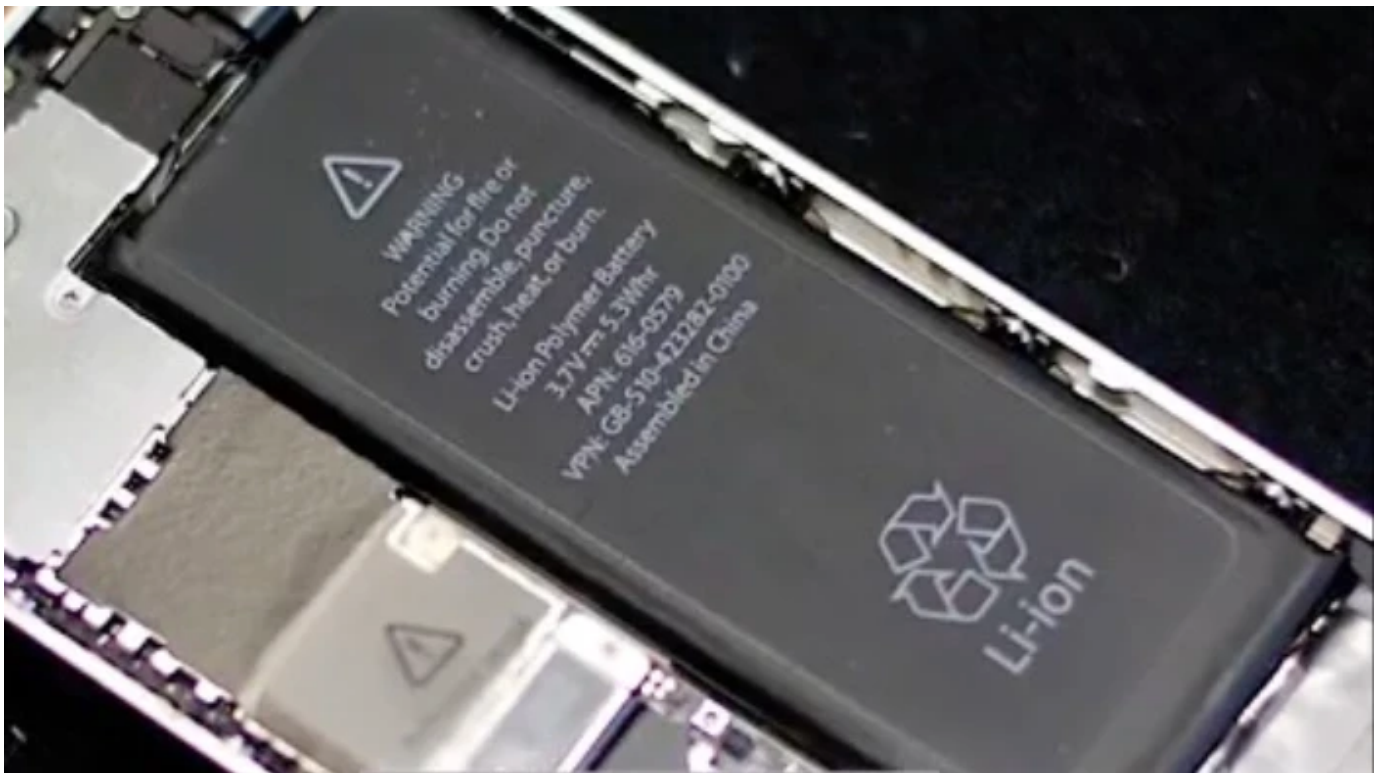

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The Periodic Table of iPhone Elements

Some of the minerals in your iPhone threaten both the environment and human rights.

By [Madison Margolin](#)

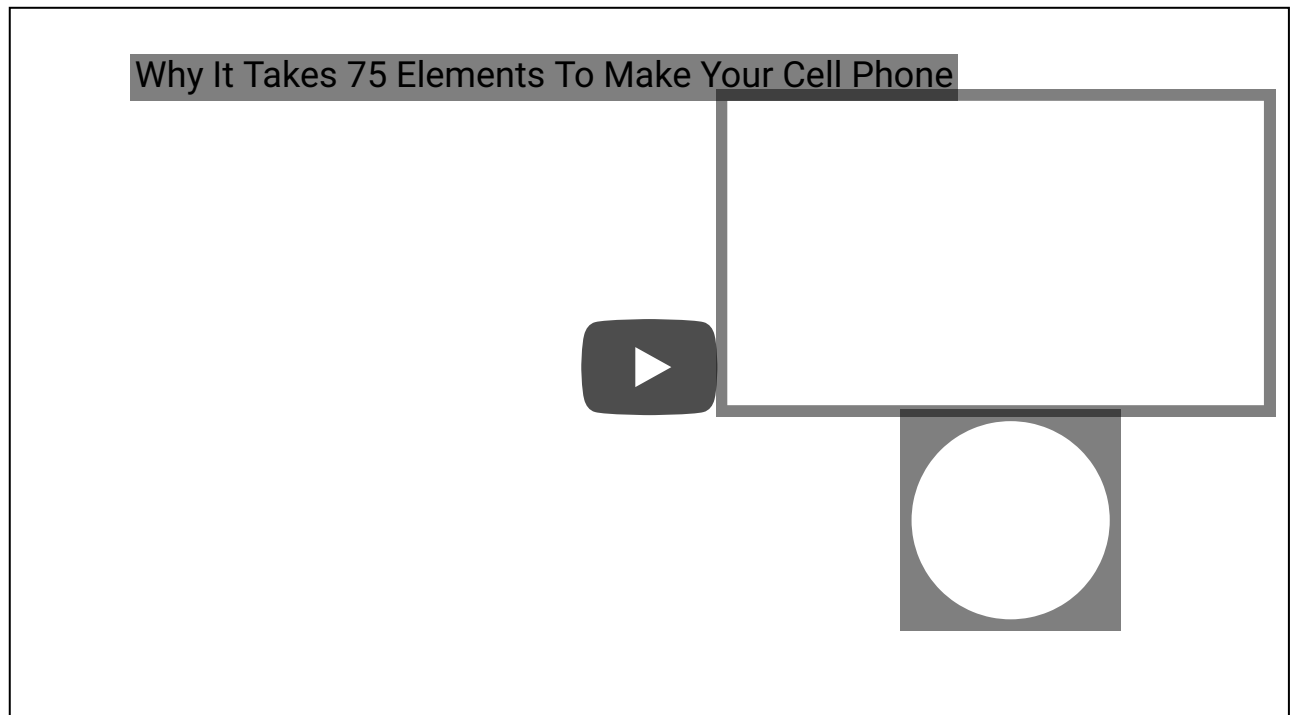
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Human life is comprised of about 30 of the 118 elements on the periodic table, but your iPhone needs 75 of them. According to this video from the educational YouTube channel DNews, iPhones (and other electronics) rely on a large number of non-renewable elements, many of which lack any functional substitutes.

For starters, silicon is used in transistors and, along with aluminum, potassium, and oxygen, also comprises the reinforced glass covering an iPhone's screen. Lithium is used in the phone's battery—and the batteries of many other electronics—while carbon, one of the most common elements, is found throughout the phone.

All of these above elements are fairly basic and uncontroversial, according to the video. However, the iPhone also relies on a number of rarer elements, many that are mined through environmentally or socially harmful practices.



Gold goes toward conductors, while tin is useful in the soldering process. In addition to not being very common, gold, tin, and tantalum are also "conflict minerals." That means, the companies that need these minerals to create electronics have to inevitably do business with global, poorly regulated mining outfits in countries with threatened human and environmental rights. Companies like Apple, however, according to the video, may be **trying** to source its minerals from less exploitive places.

In addition to the "conflict minerals," iPhones also require "rare earth minerals," which are found in small pockets around the world and often hard to mine. These minerals, including yttrium, terbium, europium and gadolinium, are also crucial to the development of the iPhone. They're used in the phone screen's display color, allow the vibrating units to vibrate, and make volume possible from the speakers.

| ***Read more: [Samsung's Galaxy Note 7 Recall Is an Environmental Tragedy](#)***

Most of these minerals are mined in China, where the millions of nearby residents are threatened by radioactive waste and other byproducts China's lax environmental laws have failed to police. Electronics companies, however, don't have a choice in regard to using these minerals, as it turns out, most do not have adequate substitutes.

So if it ever becomes environmentally or socially untenable to use any of these elements, electronics of the future will look, feel, and likely function much differently than they do today.

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