



People dig for gold underground. Why can't I find gold wherever I dig?

Why Can't I Find Gold in My Backyard?

Wouldn't it be great if we could just dig a hole and find gold? Gold is one kind of natural resource—that means anything from nature that humans rely on to meet our needs. Some important natural resources include sunlight, water, wind, soil, forests, wildlife, fossil fuels, and rocks and minerals (such as gold). People dig underground for many natural resources, like fossil fuels, rocks, and minerals. Why can't we dig up these resources just anywhere at all? Why can't I find gold if I go digging in my backyard?

One important reason has to do with the way natural resources are formed. These resources build up through natural processes that may happen over millions of years. Different processes form different types of resources. For example,

gold and other metals tend to build up in places where there has been volcanic activity. Fossil fuels tend to build up in places where biotic matter settled long ago at the bottoms of ancient oceans. Soil tends to build up in places where rocks are being weathered and deposited as sediment.

Because the processes that form these resources happen in different places, resources are found in different places. Some areas are rich in certain resources and not others. Some resources are very rare and hard to find anywhere at all. In order to figure out where resources can be found, geologists work hard to understand the natural processes that form different resources.

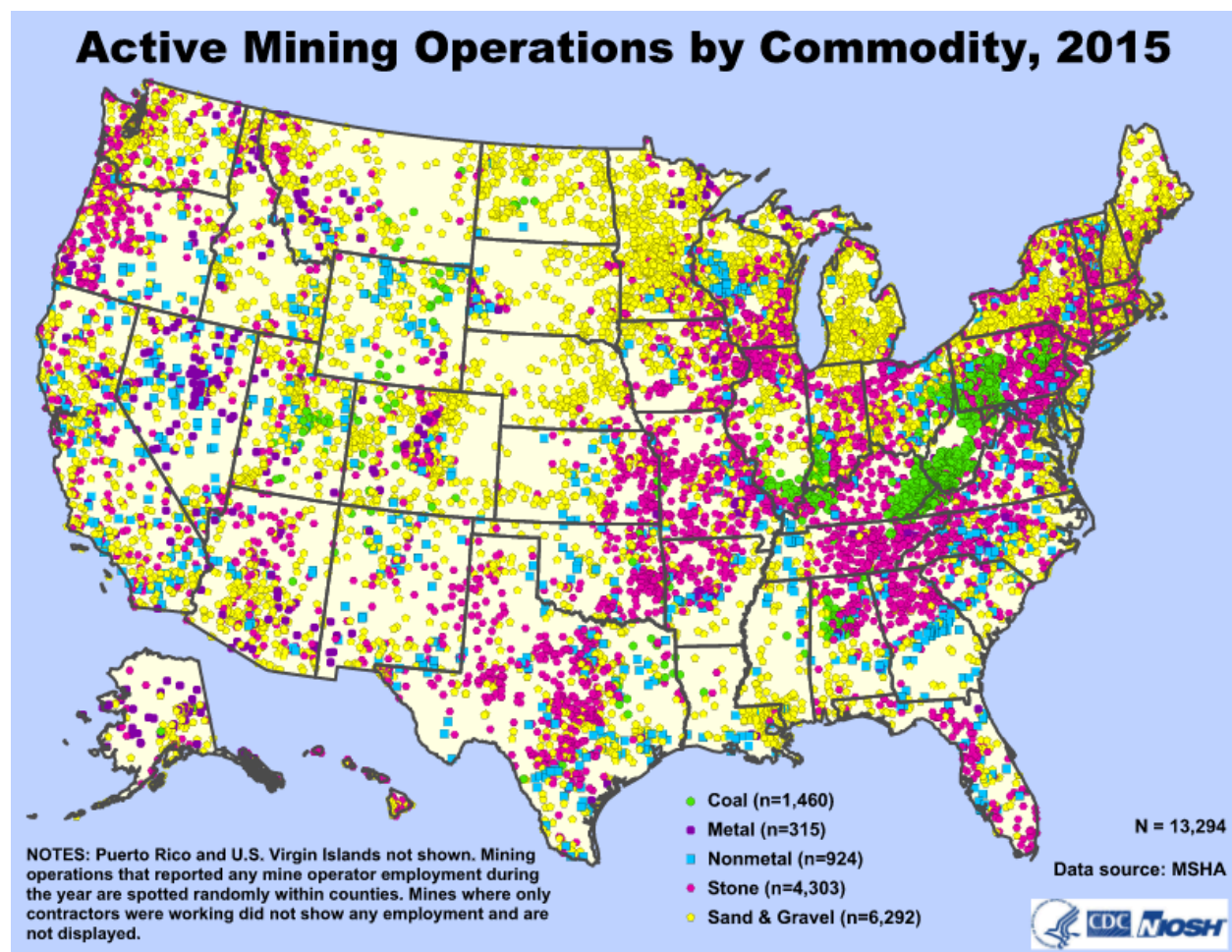
Another important reason why resources can be found in some places and not in others is that people have been using these resources and moving them around. Even if there were gold in my backyard, once I dug it all up I wouldn't be able to dig up any more. That's because gold is a non-renewable resource. Many natural resources are non-renewable—that means people are using them up much faster than they can be replaced by natural processes. Gold and other metals are non-renewable resources. So are coal, oil, and natural gas. The processes that form these resources happen over millions of years. When we use non-renewable resources like fossil fuels, they can't be replaced.

Other resources are renewable—that means they can be replaced naturally. Some examples of renewable resources are sunlight, water, trees and other plants, oxygen, and wind. Renewable resources are constantly being recycled by natural processes that happen relatively quickly. When we use freshwater for drinking, more freshwater will fall from the sky as rain or snow. When we cut down a few trees in a forest, more trees can grow to take their place.

As long as we use renewable resources responsibly, we don't have to worry about them ever running out. However, we have to be careful even with renewable resources. A forest is a

renewable resource, as long as people don't cut too many trees down at once. If people cut down the whole forest at once, it will take many years to grow back—and it may never grow back with all the different plants and animals it once had. A resource is only renewable as long as it can be replaced faster than people are using it up.

Sunlight is one resource that is always renewable. You can use sunlight to generate electricity or grow plants. You can do that every day, all day, for the rest of your life, and you'll never change the amount of sunlight that is coming to Earth from the sun. Golden sunlight is one kind of "gold" that I can find in my backyard, and it's a renewable resource that can never run out!



This map shows the places where people are mining for different natural resources. You can see that the mining for certain resources is concentrated in certain areas.