

Coal is different from other rocks. All other rocks are made from minerals. Coal is organic— it's made from decayed plants.



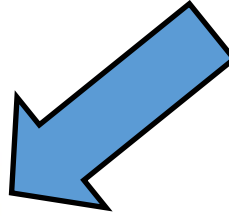
The story of coal begins 300 million years ago.
That's a long time ago...
a really really really long time ago!

BEFORE

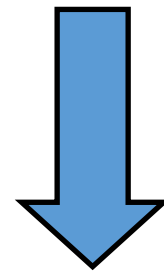


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So long ago that Earth looked like this.



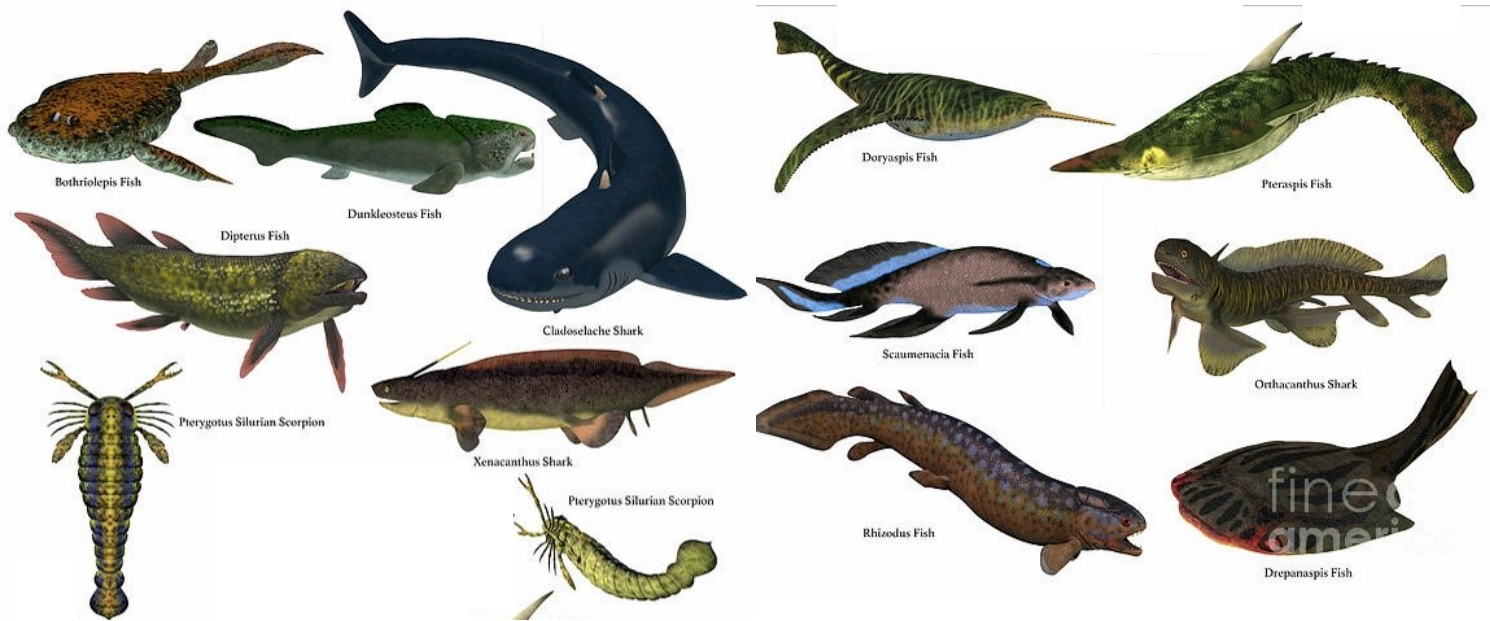
Not like this.



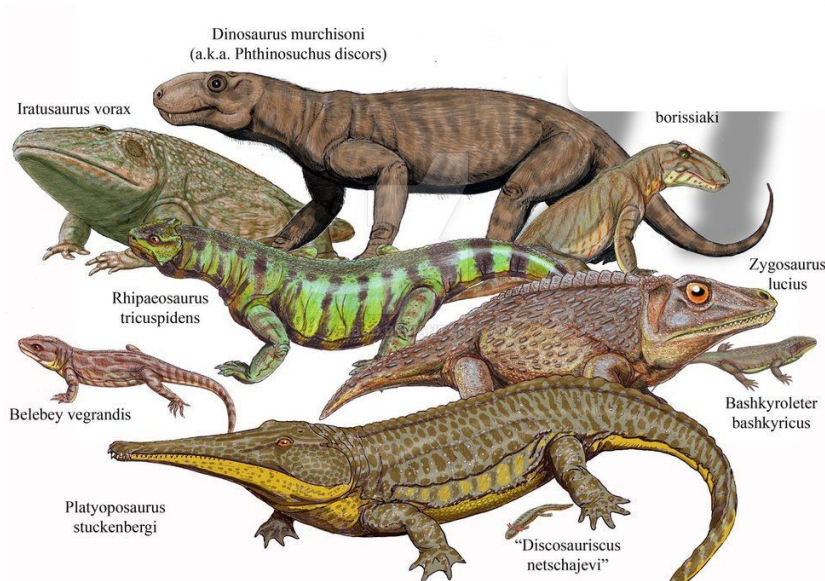
AFTER



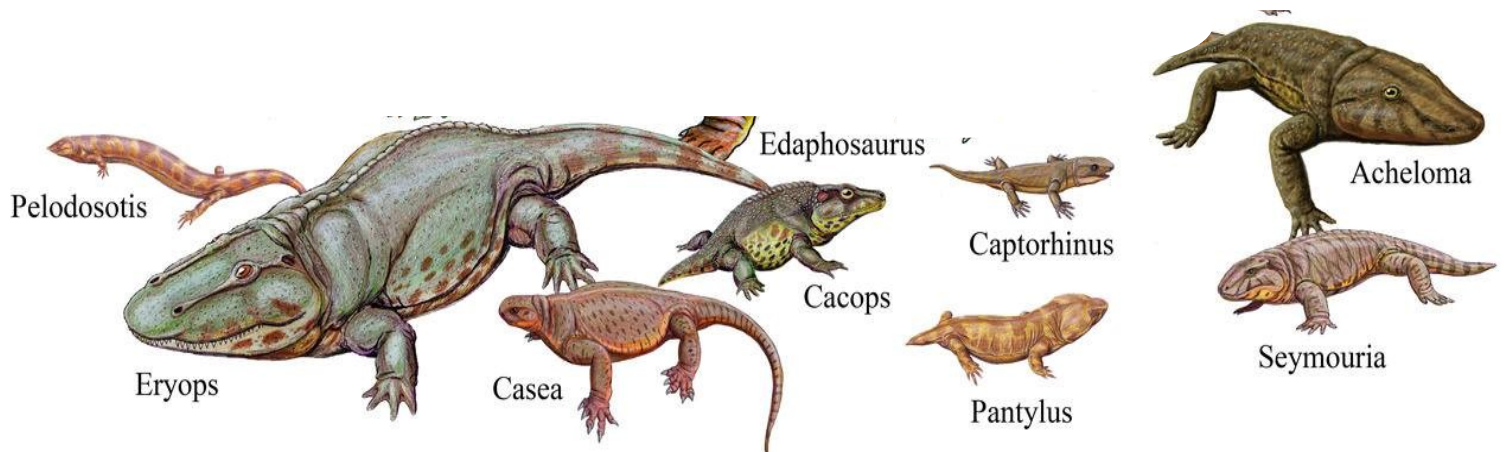
Instead of having seven continents, there was one massive landmass, called Pangea.



This was long before the dinosaurs.



Earth's creatures included fish, amphibians, and reptiles





Sea levels were low, and most of what is now Europe and North America was a tropical swamp.

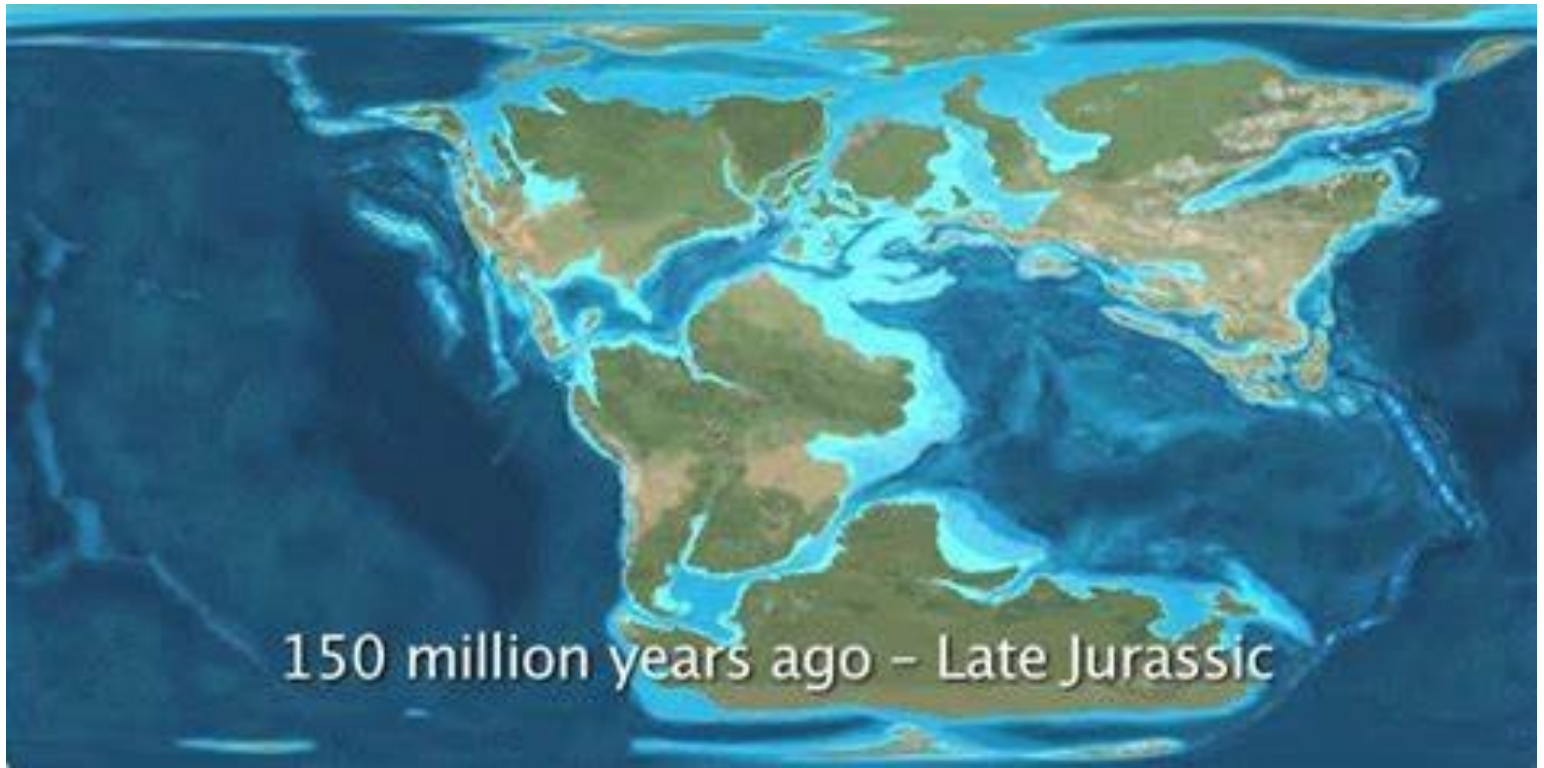
This was the period when trees first evolved bark.

Micro-organisms had not yet evolved that were good at decomposing bark. And in the standing water of the swamps, there was little oxygen in the water, so no insects or organisms lived in the water to decompose the plants.

So leaves would fall, and trees would fall, and big piles of plant debris would just pile up.

As more stuff got piled on top, it put pressure on what was down below.

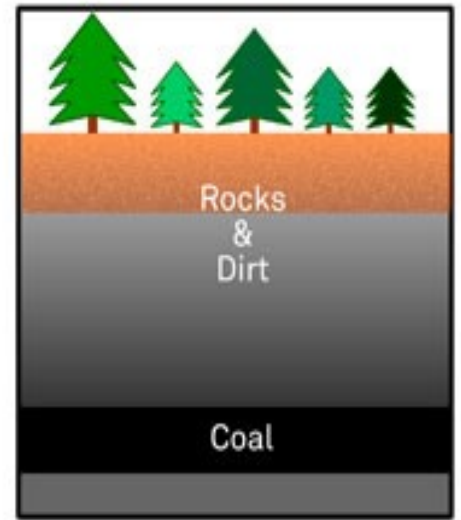
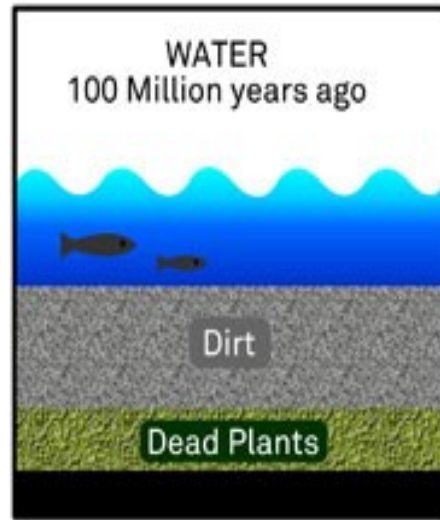
Over the next 200 million years, a lot of things changed.



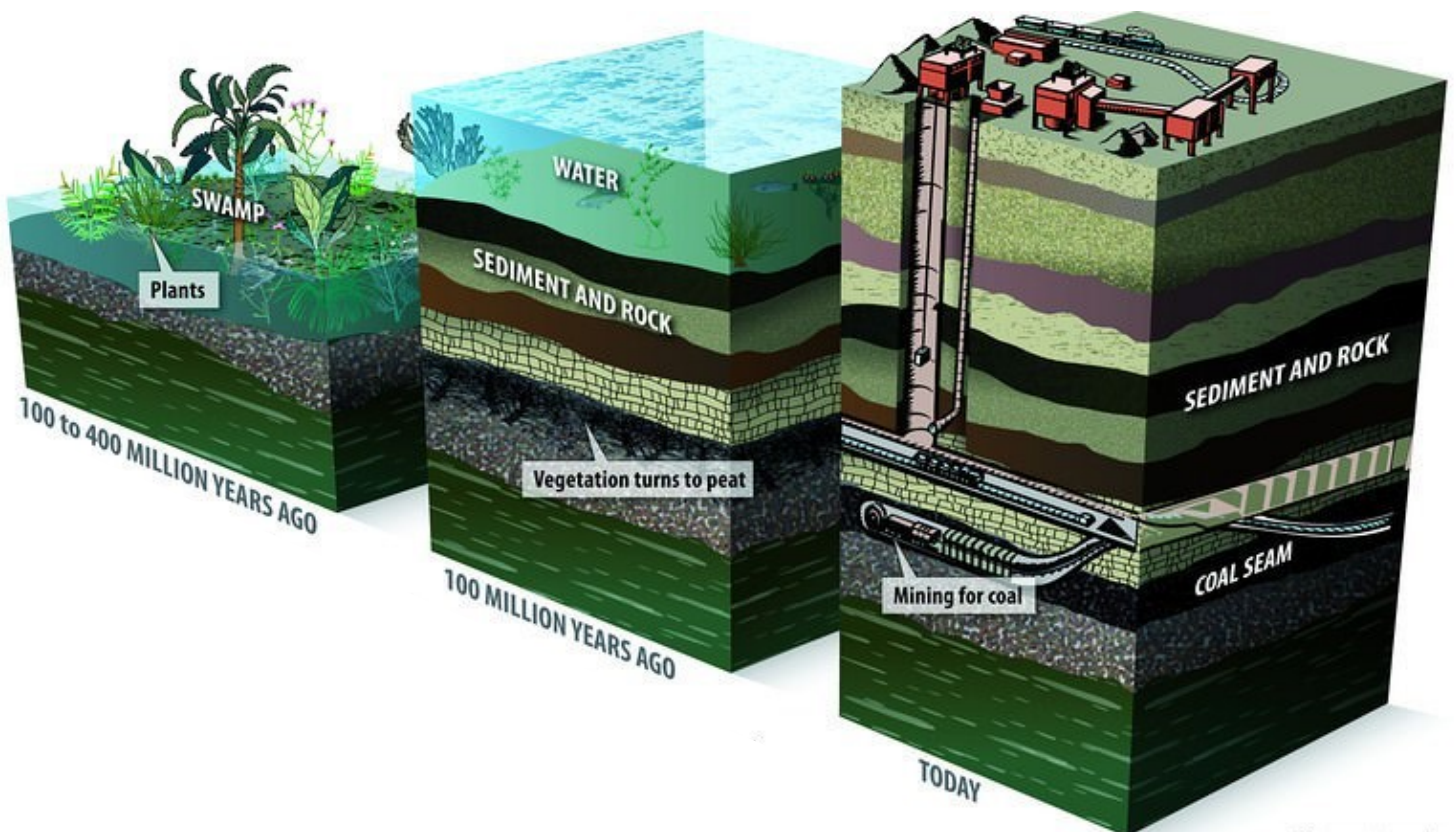
Through earthquakes, volcanic eruptions, and climate changes, Pangea separated into continents.

All those dead trees were covered with sand, then water, then sand, then more dead trees, and so on. All of that time and pressure began to change that dead plant debris.



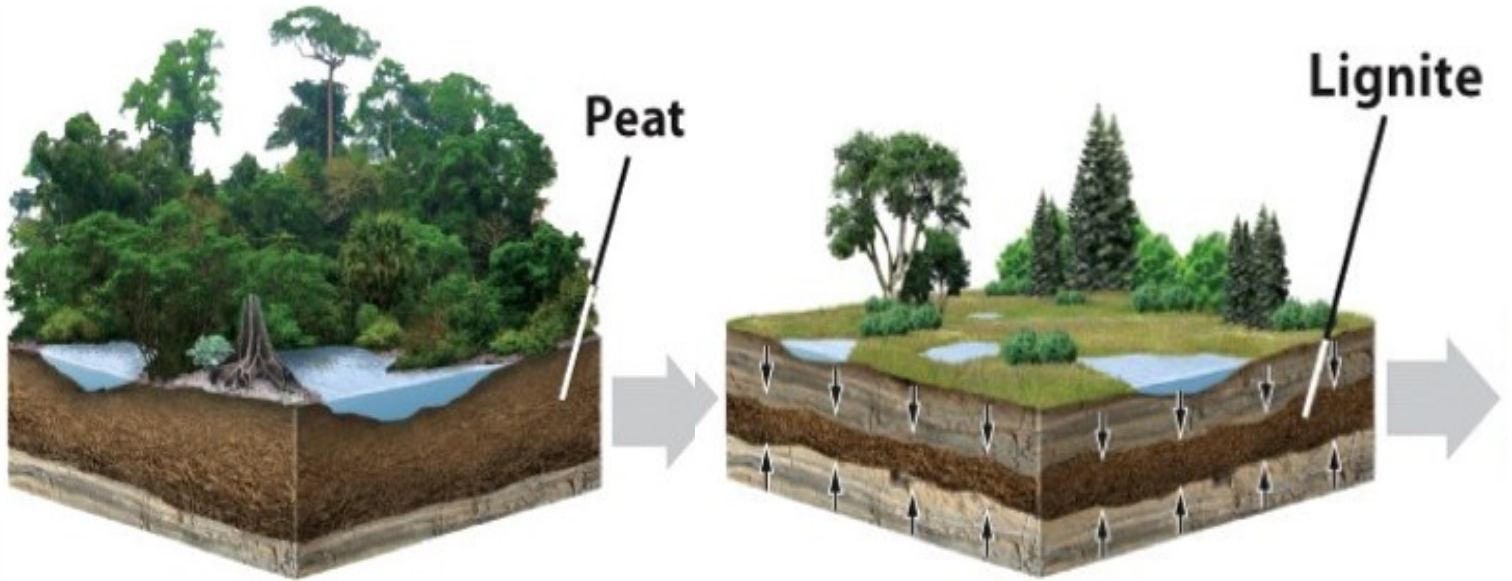


Millions of years of pressure changed those dead plants into peat. Millions more years of pressure changed that to coal.

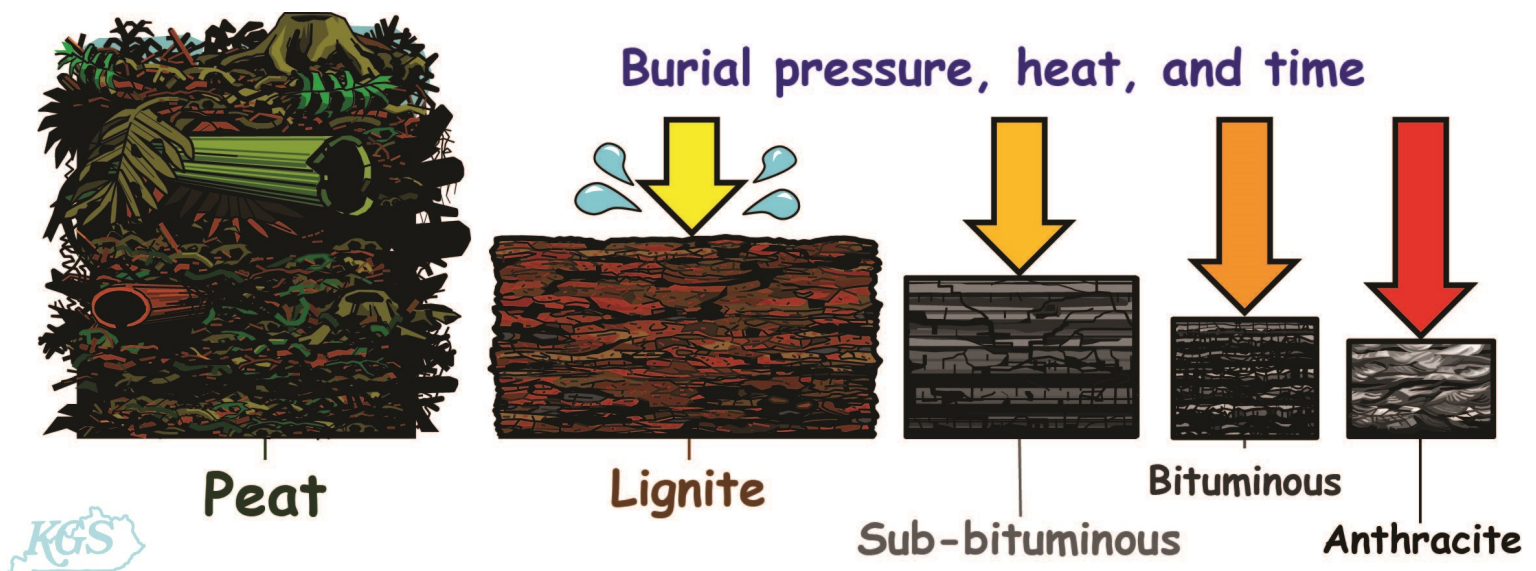


Note: not to scale

Where there was once a 20 foot layer of dead plants, that was compressed to a 2 foot layer of lignite coal.



And the more pressure that was piled on, the dryer, darker, and harder the coal became. There are now different "grades" of coal.



Peat

Brown. More like dirt than like a rock. Spongy—holds moisture. Used in gardening. When dried, it burns easily.



Lignite

Brown, crumbly rock. Close to surface of the earth. Can combust accidentally. Burns fast, makes lots of smelly smoke. Used to generate electricity.



Bituminous

Black soft rock. Generate electricity or used in the process of making steel (an alloy of iron and copper).

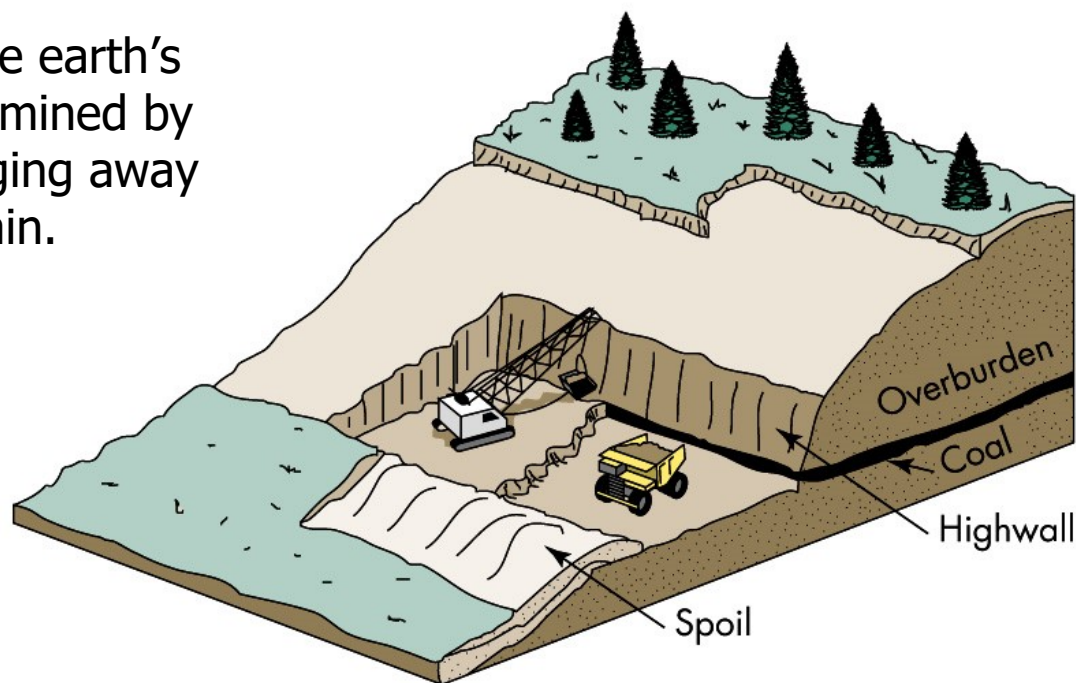


Anthracite

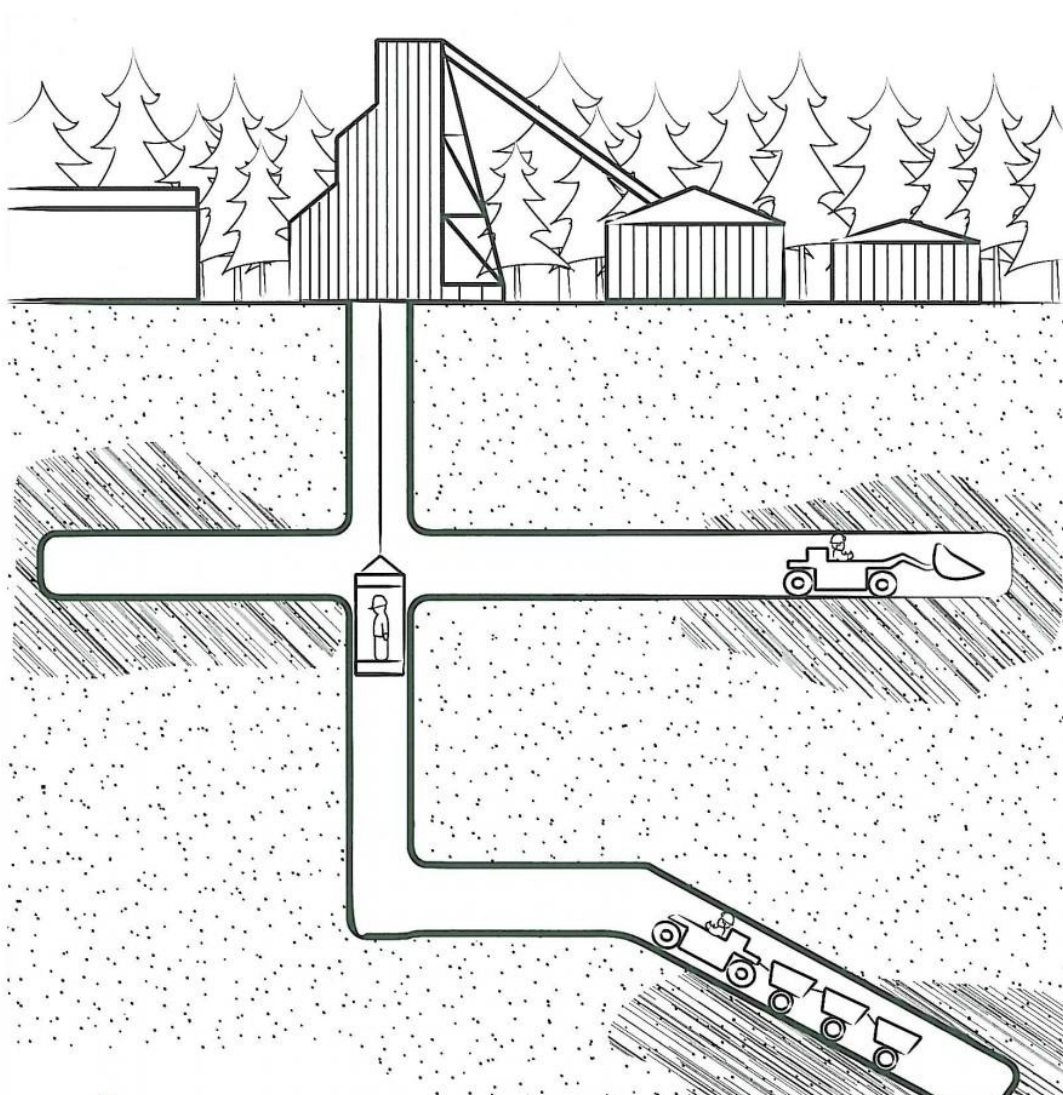
Hard, black, shiny. Used to heat homes as it doesn't smell much or create much smoke. Rare. (1% of coal.)

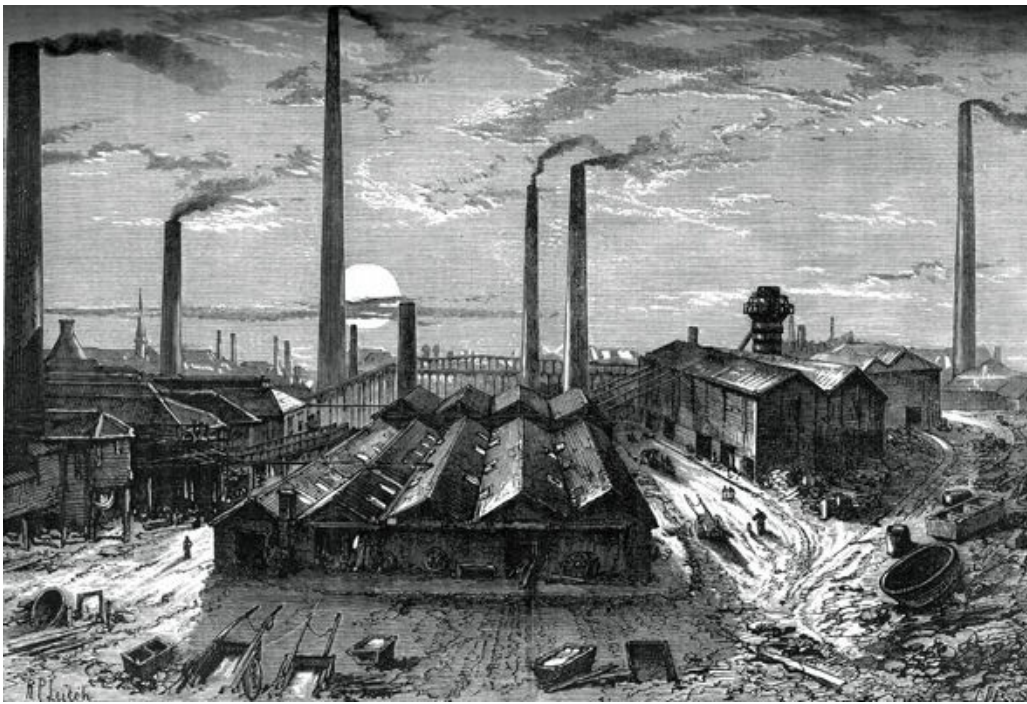


Some coal is near the earth's surface, and can be mined by digging holes or digging away the side of a mountain.



The best quality coal is often buried deep under the ground. Miners have to dig deep shafts, and then tunnel sideways to get to the coal.





Peat was burned for fuel in ancient cultures, and coal was mined in small quantities in ancient China, Greece, Britain and by the Aztecs, but large scale coal mining really happened in the 1800's.

By the late 1800's, coal was in high demand. It was the most common source of heat for homes, and needed to power all the machines of the Industrial Revolution.



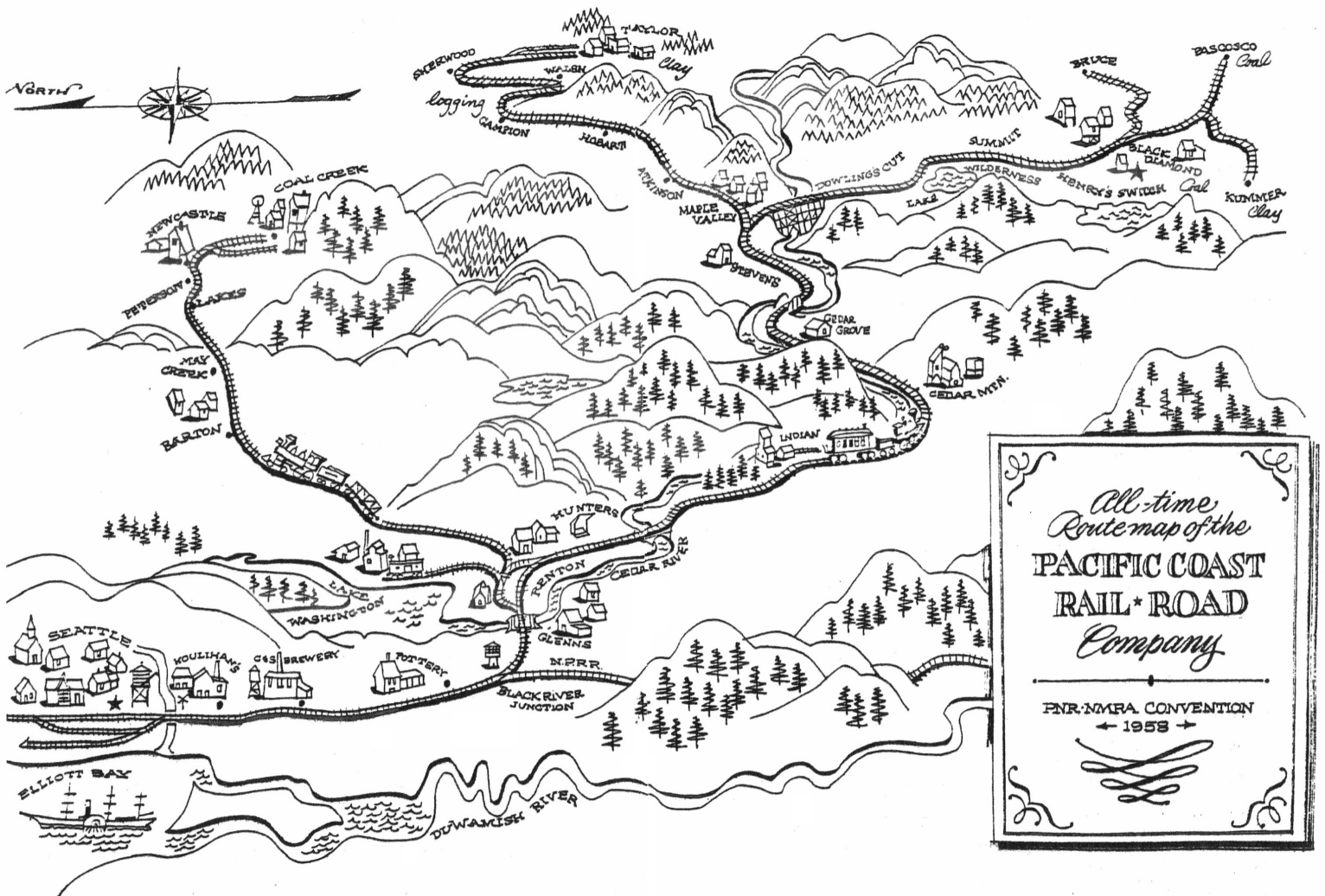
In 1863 (when your great-great-great grandparents were alive, and the Civil War was raging), coal was discovered here, in what we now call Issaquah, Renton and Newcastle.

Coal prospectors staked claims and built wagon roads to transport coal to Lake Washington, where it was barged to Seattle to load onto ships bound for California.





More coal companies staked claims and soon, by 1891, there was a railroad from Coal Creek parkway to Seattle. The coal from Newcastle helped make Seattle a major port city.



In 1872, 75-100 tons of coal were produced each day in Newcastle. In 1917, the Newcastle mines produced 360,000 tons a single year.



Early on, most miners were Italian, French, English or Finnish. Later, they were mostly Chinese, Native American, and African American.

Company towns grew to house workers and their families.

The company towns where they lived were called Finn Town, China Town, and so on. Red Town and Rainbow Town were named for the colors that the houses there were painted.

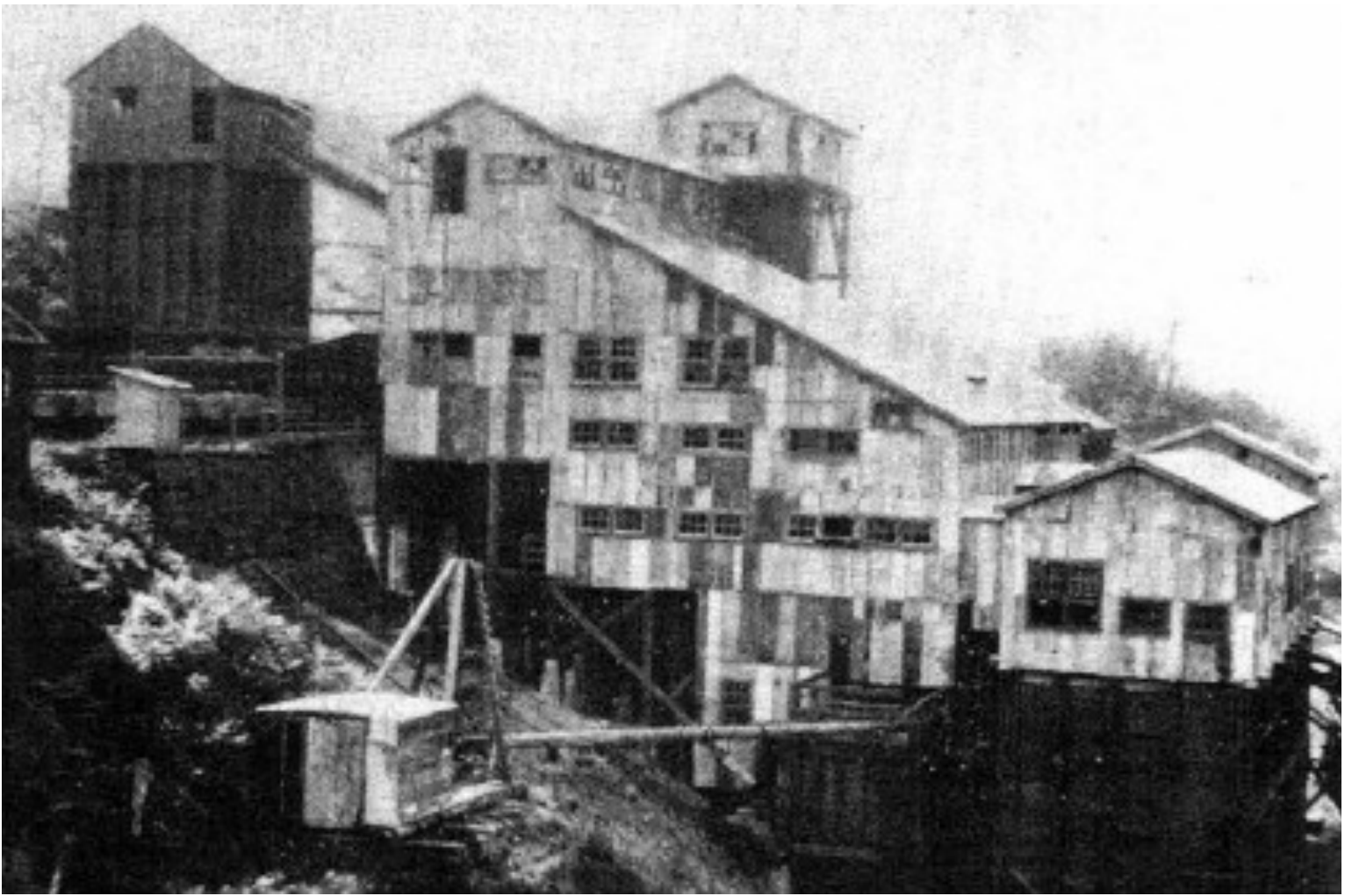


This area was home to over 1000 people (almost the size of Seattle at the time). There was a hotel, stores, community halls, a post office, a hospital, and over 400 homes.

Children attended the company school, and on weekends rival companies played each other in soccer and baseball.



Company House,
Built 1870, still
standing



By the 1940's, demand for coal fell, as cheaper fuel like natural gas became available. Most coal companies pulled out of the area.

By the time the last mine closed in 1963, more than 11 million tons of coal had been extracted from the Newcastle area.

Coal is what we call a non-renewable resource. Once we use it, it will never exist again. (Not only would it take 350 million years to form, it likely will never be possible again because the environmental factors that formed coal no longer exist.)

Also, coal mining is very hazardous to the miners, and coal burning is very bad for the environment, because it makes LOTS of smoke. So, there are no more coal mines in this area.

Where the coal mines and the coal towns once stood, there is now Cougar Mountain Park, which is where we'll hike today.

Many of the hills here are made of coal tailings—the waste rock. The land underneath this park is filled with empty mine shafts. Sometimes sink holes appear in the ground. That's why this area is a park now. The ground is not stable enough to build houses on. That's also why it's important for us to stay on the paths, and not wander off of them! We'll see some remnants from that time.



Ford Mine Shaft

descended 1740 feet to
200 feet below sea level

Coal Creek Hotel Foundations



Generator House Foundation



Steam Valves

Primrose Coal Mine
air shaft



Hoist Foundations

Be sure to stay on the
paths!