What is coal?
Coal is a rock that can burn. Technically, coal is made up of more than 70 percent by volume of carbonaceous (carbon-rich) material. It has so much carbon because it originally was plant material (plants contain a lot of carbon), and then was made into rock by being compacted under pressure and high temperature deep under the ground. In fact, sometimes you can find pieces of plant material in chunks of coal!

Different types of coal have different proportions of carbon. Names for coals having different carbon content include the following:
• Anthracite has the highest carbon content, and thus yields the highest amount of energy when it is combusted.
• Bituminous coal, Subbituminous coal, and Lignite have progressively lower carbon contents. Coal mined in Indiana is bituminous coal.

Methane in Coal
When plants are converted into coal, natural gas (mostly methane) is released. In many places the plant material is buried by impermeable rocks, such as shale, and methane may be left in the pores and fractures of the coal. Some of this gas is released when coal is mined. Methane is colorless, odorless, and tasteless, and is difficult to detect. When the level of methane in air reaches 5 to 10 percent, it becomes highly combustible. Many of Indiana’s worst mine disasters were caused by explosions of ignited methane gas.