

# Make Colorful Crystals from Coal

Your child is probably familiar with coal: it's those chalky black briquettes that cook up burgers and hot dogs on the open grill. But does he know that with a lot of pressure—and even more time—coal can be transformed into glittering diamonds?

You don't have to wait millions of years to turn coal into a beautiful gem. Watch coal turn into crystals right before your eyes! While you're at it, take time to explain how diamonds are formed: he'll be surprised to learn that natural material, such as peat, is compressed over years and years into carbon-rich coal, and then into crystals!

## What You Need:

- Adult helper
- Measuring spoon
- Liquid blueing
- Laundry detergent
- Iodized salt (table salt)
- Small bottle of ammonia
- Small jar
- Plastic picnic spoon or old table spoon
- 8 to 10 charcoal briquettes
- Disposable pie tin
- Food coloring



## What You Do:

1. Measure 2 tablespoons each of liquid blueing, laundry detergent, salt, and ammonia into a small jar. Have an adult helper supervise this mixing. Avoid breathing the ammonia fumes as much as possible. Stir with an old tablespoon or plastic picnic spoon.
2. Place 3 or 4 charcoal briquettes on a disposable pie tin. Add a few drops of food coloring on each briquette.
3. Pour some of the detergent, salt, and ammonia solution over the top of the charcoal pieces. While the crystals are forming, replenish your supply of solution.
4. As you enjoy the beautiful colors and shapes that emerge, repeat the process with 3 or 4 more briquettes.

This fun activity will not only introduce your child to geologic concepts, it will also make your child realize that beautiful things can come from unlikely places, and that colorful jewels can hide even in the blackest briquette!

*Adapted from "Have Fun with the Presidents: Activities, Projects, and Fascinating Facts" by David C. King (San Francisco, CA: Jossey-Bass, 2007). [www.josseybass.com](http://www.josseybass.com)*

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