

Make a Rainbow Crystal Garden

You need an adult to supervise this project.

What you need:

- glass baking pan
- metal mixing bowl
- Six charcoal briquettes
- Six different hues of food coloring
- $\frac{1}{2}$ cup water
- $\frac{1}{2}$ cup laundry bluing
- $\frac{1}{2}$ cup ammonia
- $\frac{1}{2}$ cup salt



What you do:

1. Place charcoal briquettes in the baking pan, evenly spaced.
2. Squeeze several drops of food coloring on each of the charcoal briquettes. Use one color for each briquette or mix the colors as you wish.
3. In the mixing bowl, combine the water, bluing, ammonia, and salt into a solution. Mix well. **Be careful not to get the ammonia near your face.**
4. Pour enough liquid solution over the briquettes to saturate them, and then store the remaining liquid in a tightly-sealed container.
5. Set the pan in a safe, warm place.
6. Check your garden every 2–3 days; mix and carefully add more liquid solution as needed.
7. Watch your rainbow crystal garden grow!

What's happening?

Charcoal absorbs liquids. As the liquid solution evaporates, it deposits salt and bits of dye from the bluing on the surface. The salt forms crystals around the dye; the crystals pull up more liquid from the pan using capillary action. Food coloring, which has mixed with the liquids, makes each briquette's crystals a different color.