

Burning Money

Collect

- 1/2 cup rubbing alcohol
- 1/2 cup water
- 2 tablespoons salt
- Glass
- Spoon
- Metal tongs
- Dollar bill
- Lighter
- Kitchen Sink



Set up the experiment

1. Measure out the rubbing alcohol and the water and pour in to the glass.
2. Measure out the salt and add to the liquid. Stir the solution together with your spoon.
3. Using your tongs, pick up the dollar bill and dunk it completely in the solution. Gently swirl the bill around and allow 20 seconds for the bill to absorb the solution.
4. Using your tongs, remove the bill from the solution and still using your tongs, hold the wet bill over your kitchen sink.
5. Have your adult hold the lighter flame at a bottom corner of the wet bill and watch what happens.

If all went well, your dollar bill caught on fire for a few seconds and then went out. But you are still left with a damp dollar bill; why did that happen?

Flammable vs. Non flammable Liquids

Look at the ingredients for your solution. One of them was rubbing alcohol, which is a flammable liquid (it has the ability to catch on fire). So when you added fire to your dollar bill you were actually catching the rubbing alcohol on fire, not the paper money. When the fire ran out of rubbing alcohol to burn up it died out; it had run out of its fuel. Fire is actually a chemical reaction and chemical reactions only last as long as the chemicals last.

You also added water. Water is not a flammable liquid; we generally use it to put out fires. Water can stop fire's chemical reaction by taking away the heat. So when the alcohol was all used up by the flames they could not continue the reaction because the dollar bill was wet and not dry.