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Hey All,

My 8th graders are still having trouble with chemical change, and that the original reactants are no longer really there but have combined or whatever to make something new.

Any suggestions for some simple/safe chemical reactions besides baking soda/vinegar and flammable substances?

I’m going to try some acid/base reactions with indicators this week.

Mike

--
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I don't think you need another piece of evidence because what is happening is that your students probably believe something else, and generally evidence you present doesn't change what they believe. I suggest you think in terms of conceptual development supported by some evidence that they collect and work though.

Anyone have suggestions for how to do this? You might want to look at the modeling chemistry material at the modeling site at Arizona State. They have lots of good ideas about this sort of thing.

cheers,

joe

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Here is a great reaction that produces a precipitate.

Transfer 1 mL of CuSO4 solution to a test tube.  Add 1 mL of NH3 solution.

 Tammy Simons [tssimons@gmail.com]

Here's a couple:

1. Sugar Cube--students can crush the sugar cube to observe & record the physical changes; sugar is poured into a foil bowl (purchased or made from a square of foil) & placed on a hot plate.

Students observe changes: melting & changing color (yellow to dark brown) and ultimately burning black and producing a frothy black carbon.

Fairly simple & surprisingly dramatic for 8th graders. They can see they absolutely end up with something different than what they started with that cannot be changed back into the original sugar.

2. Dissolve washing soda in water (releases energy, exothermic process--not actually a chemical reaction),  dissolve Epsom salts in water (absorbs energy, endothermic process), and  then pour one solution into the other. A white percipitate forms & 8th graders think this is very cool.

Washing soda is found with the laundry detergent products & Epsom salts are usually found with first aid supplies.

What I have found is that with my 8th graders, their understanding is not so much about observing or doing the actual chemical change, but it is about the questions they must answer as a result of their observations. Allowing students to answer written questions in a small group setting so they can discuss them with one another is good, followed by a whole class discussion of the results.

Hope this helpful,

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