

A STEM in the Park

Take Home Activity

STEM

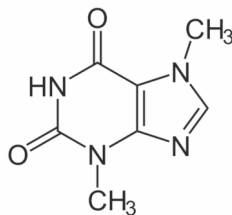
in the **PARK**™

Science, Technology, Engineering, and Mathematics

Cocoa Chemistry

What You Need

- Plastic bag
- 1 Tbsp cocoa
- 1 1/2 Tbsp sugar
- 1/2 tsp soy lecithin powder
- 2-9 oz cups of soymilk
- Stir stick
- 2 1/2 Tbsp chocolate milk mix



What To Do

1. Mix all of your dry ingredients into a plastic baggie: cocoa powder, sugar, and soy lecithin powder.
2. Add 9 oz of soymilk to the bag and ensure the bag is sealed.
3. Vigorously shake until all of the powder is dissolved.
4. Pour into cup
5. Mix chocolate milk mix into 9 oz of soymilk in another cup
6. Stir with a stir stick
7. Compare your two glasses of milk: taste, color, texture, smell
8. Which do you like better?

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The Science

Try to mix cocoa, sugar and milk together. It doesn't work very well. When you add soy lecithin, the lecithin acts as an **emulsifier**. An emulsifier is a molecule with one part that is attracted to the oils in the mixture and one part that is attracted to the water in the mixture. This addition of soy lecithin, helps the cocoa and milk mix.

Notes: *If you like this activity, visit: <http://grownextgen.org/curriculum/unit/beans-about-water-soybeans-and-food-science/> *These ingredients contain soy.*

This activity is brought to you by Grow Next Gen/Ohio Soybean Council



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