MELTS IN YOUR MOUTH

This is fun demonstration can be used to show how substances with similar chemical attributes interact with one another.

BACKGROUND INFORMATION:

Chew on this…

"Natural" chewing gum is a combination of flavoring (such as sugar and natural flavors) and a gum base. The common natural gum base used was chicle, a tree sap obtained from several trees of the Manilkara genus (specifically the Sapodilla tree). The chicle is effectively a natural rubber polymer, like latex.

Choco-yum!

The primary component of chocolate is *cocoa butter*, a fat made of up of many different triglycerides. These long alkyl chains are also polymers in nature. Let's explore what happens when you combine two substances with similar polymer properties.

MATERIALS NEEDED:

Hershey's Milk Chocolate Kisses (or any other "true" chocolate with cocoa butter)
Chicle gum (Glee Gum is a great option – can be obtained online or at specialty retailers (http://www.gleegum.com)

WHAT TO DO:

- Unwrap a piece of gum and chew for a short time. You should be able to manipulate the gum easily in your mouth
- Unwrap the piece of chocolate and mix it with the gum in your mouth. "Embed" the gum in the chocolate, wrap the chocolate around the gum.
- Spend time sucking on the gum/chocolate mixture.
- What do you notice about the gum and/or chocolate as they mix? Describe what you think is happening.

OPEN EXPLORATIONS:

- Why do you think it is important to use natural gum instead of the more readily available options? Test with normal gum and record the differences. Try with various chocolates.
- Do you get the same results if you don't mix them right away?

This is a fun and safe demo that allows you to explore the topic of "like dissolving like". This exploration is adapted from FLINN Scientific's "Melt in Your Mouth, Not in Your Hand" activity.

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