Curiosity Guide #408



Chocolate Chemistry

Accompanies Curious Crew, Season 4, Episode 8 (#408)

# Shiny Chocolate

Investigation #5

## Description

I never met a chocolate I didn’t like. But is some chocolate better than others?

## Materials

* Sample of tempered chocolate
* Sample of untempered chocolate
* Plates
* Plastic knife
* Friends

## Procedure

1. Cut or break pieces of the two types of chocolate and place them on a plate for each friend.
2. Ask your friends to describe the appearance of one chocolate compared to another.
3. Is one of the types of chocolate shiny?
4. Try breaking the chocolate. Does the chocolate snap apart?

## My Results

## Explanation

When chocolate solidifies, the crystals can form in one of six patterns. However, only two of the crystal patterns will yield a shiny surface. Tempered chocolate is shiny, while untempered chocolate may look spotty or crumbly. Sometimes the untempered chocolate will have white spots called bloom, and that is normal. Tempering the chocolate is a process by which chocolatiers repeatedly heat and then cool the chocolate to establish crystal seeds from the cocoa butter molecules so that the crystals begin to pack in a certain way. When done correctly, the chocolate appears shiny and will snap when you break it. When not done correctly or if stored improperly, the chocolate could get crumbly or spotty.

Parents and Educators: use #CuriousCrew #CuriosityGuide to share what your Curious Crew learned!



*Curious Crew is a production of Michigan State University.*

*Learn more at WKAR.org.*

*© MSU Board of Trustees. All rights reserved.*