



## Curiosity Guide #408

### Chocolate Chemistry

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

#### Curious Cocoa

Investigation #2

#### Description

Did you know that chocolate comes from beans?

#### Materials

- Raw cocoa bean

#### Procedure

1. Examine a raw cocoa bean and describe it.
2. Try tasting the bean.
3. What was it like?

#### My Results

## Explanation

The cocoa tree is the plant that produces giant cocoa pods. To harvest the beans, the pod is cut open to reveal a whitish pulp and beans.

Tasting a raw cocoa bean is even more unpleasant than the mass alone. When making chocolate, the first step is to let the pulp ferment for a few days, which makes the bean less bitter. After several days, the beans are dried and roasted. From there, the beans are crushed and pressed to separate the cocoa butter from the solid cocoa, leaving two of the main ingredients of chocolate, cocoa mass and cocoa butter. By adding soy lecithin and sugar, chocolatiers can produce sweet, smooth chocolate.

**Think about this:** Chocolate has been around a long time. Chocolate was consumed 4,000 years ago as a bitter drink. The Aztec and Mayan people even traded things for cocoa beans. I guess that was the first chocolate money! It wasn't until the 1820's that chocolatiers began to figure out how to press the cocoa butter from the beans and leave the dry cocoa mass to mix with liquids, sweeten it, and create molds. Chocolatier chemists continue to develop ingenious ways to make a delicious treat!

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