



Candy Bar Dissection

Essential Question:

How far do plant products travel to end up in an Almond Joy candy bar?

At A Glance: Learners dissect an Almond Joy candy bar and discover that the plant products that they use everyday often come from distant locations.

Background:

Many commonly used products contain plants ingredients or have plant origins. These plants travel from all over the world to enter production in a variety of foods, medicines, textiles, etc. This activity shows the variety of plant products in a simple candy bar and where these plants come from. The Almond Joy bar ingredients are listed below, along with some information about each plant.

- **ALMOND:** Originally from the hot, dry climate of the Middle East (Eurasia) then was spread to the shores of the Mediterranean in north Africa and south Europe by Egyptians, Greeks and Romans. Spaniards brought the almond to California.
- **COCONUT:** No one knows for sure where it originated but it is thought to have come from an island in the South Pacific. It now occurs in tropical regions all over the world between 20N and 20S.
- **CHOCOLATE:** Originally from the Brazilian Amazon. Columbus was one of the first Europeans to discover cocoa beans while on one of his voyages to North America in his search for a route to India.
- **VANILLA:** Vanilla is in the Orchid family and comes from the West Indies, Central and South America. Mexicans were probably the first people to cultivate vanilla. In the early 1500's Cortez, a Spanish explorer, was offered a vanilla and chocolate drink by the Mexican Emperor Montezuma and brought cocoa and vanilla back to Spain.
- **SUGAR:** Comes from sugar cane which is actually a type of grass that originated in New Guinea. Columbus brought it to the new world on his second voyage. Sugar became linked with the slave trade and formed the 'sugar triangle' which took slaves from Africa to the West Indies, and raw sugar and molasses to New England and England and other trade goods back to Africa for slaves.

Procedure:

1. Begin by asking the children to name some of the different ways people use plants. Answers will probably include food, medicine, clothing, houses, etc.
2. "Are all of those plants grown right here in Athens? How about here in Georgia? Where do they come from?"
3. Take the Almond Joy bar and say "I wonder where this came from. Who can guess where I got it." - *The grocery store*

Location: classroom

Objectives: Learners will

- 1) understand that many plant products they use everyday come from all over the world.

Skills: observation, inference

Supplies:

- 1 Almond Joy Candy Bar
- globe or world map
- labels of five ingredients to stick on map: chocolate, coconut, almonds, sugar, vanilla

Subjects: science, geography

Time: 10 minutes

4. "But how about before that?" Ask one of the children to read the wrapper where it says "Made in Hershey, Pennsylvania".
5. "So we can say this came from Hershey PA. Or did it?"
6. Open the candy bar and discuss each of the five main ingredients. In what part of the world did they originate? As you point out the ingredients, you can actually take the candy bar apart. i.e. "And what are these big lumps right here". Ask the children to guess where each ingredient came from. Remind them that guessing is an important part of what scientists do and they should not be worried about incorrect guesses.
 - Chocolate - South America
 - Coconut - South Pacific
 - Almonds - Eastern Europe, Western Asia (Eurasia)
 - Sugar - New Guinea
 - Vanilla - South America
7. After each ingredient is discussed, place a label on the globe or map to illustrate how far these items had to be moved to become part of the candy bar.
8. Wrap up this activity by pointing out that although the wrapper says it came from PA, it took plants from all over the world to make that delicious treat!

Discussion/Assessment:

What plant ingredients are in an Almond Joy bar?

Where do these plants originate?

Can you think of some other plants that are in some common foods or other products that you use frequently?