

Sunflowers

Subject Area: Agricultural Science

Unit Title: Colorado Sunflowers

Grade Level: 4th & 5th grade

Objectives: To understand the many uses of sunflowers.

Colorado Content Standards to be covered:

HISTORY

Standard I - Students understand the chronological organization of history and know how to organize events and people into major eras to identify and explain historical relationships.

SCIENCE

Standard I - Students understand the processes of scientific investigation and design, conduct, communicate about, and evaluate such investigations.

Standard III - Life Science: Students know and understand the characteristics and structure of living things, the processes of life, and how living things interact with each other and their environment.

Materials:

- sticky notes (or scraps of paper)
- 1 cup firmly packed brown sugar
- 2/3 cup peanut butter
- 1/2 cup light corn syrup
- 1/2 cup butter or margarine, melted
- 2 teaspoons vanilla
- 3 cups quick-cooking rolled oats
- 1/2 cup coconut
- 1/2 cup shelled sunflower seeds
- 1/2 cup raisins
- 1/3 cup wheat germ
- 2 tablespoons sesame seeds
- 1 cup semi-sweet chocolate chips

Anticipatory Set: Make the following statement and ask students to write “true” or “false” on a sticky note: Sunflowers are used to produce oil.

Input:

It's easy to guess where the sunflower got its name – the sun of course! Its bright yellow petals remind many people of rays of sunshine. Native to the Great Plains of North America, there are more than 60 species of sunflowers. Long before the pilgrims landed at Plymouth Rock, Native Americans grew them for the seeds that were eaten. Flour was also made from the seeds. They boiled and crushed the seeds to make sunflower oil. This oil was used for hair conditioner, in cooking and even for softening leather. No part of the plant was wasted. The flower petals were used for yellow dye, and the fiber

from the stalks was used for weaving fabric.

In the early 1600s, explorers brought the sunflower back with them to Europe. Before you know it, sunflowers spread around the world. Today, it is an important crop in Hungary, Russia, Egypt, Turkey, India, Peru and Canada.

When farmed, the common sunflower is one of the largest annual plants. Its stem grows up to 15 feet tall and the roots can be up to nine feet deep. The head may be 20 inches across and produce 5,000 or more seeds.

There are 2 types of sunflowers – striped and black. Striped sunflower seeds are salted and roasted and make a healthy snack for people. Birds like them plain. Black seeds are mostly used for making sunflower oil for cooking and salad dressing. It’s healthier than olive oil. We also use sunflower seeds for livestock and poultry feed. In addition, they are used for making soap. Sunflowers are the fifth largest oil seed crop in the world.

Sunflowers are planted during May in Colorado. They grow quickly, and as they grow they turn their heads to face the sun. They are drought tolerant, meaning that they don’t require as much water as some other crops. Colorado’s production of sunflowers ranks fourth in the nation.

Sunflower seeds are rich in nutrients. They contain high levels of protein, iron, vitamin E, some B vitamins, zinc, magnesium, copper, fiber, folate and other nutrients. Some of these nutrients can help protect us from disease.

Sunflower seeds are a healthy choice in salads, desserts, casseroles, snacks and bread. Or you can sprinkle them on your pasta, soup or yogurt.

Checking for Understanding: At the end of this section choose one of the following for a quick check: ask the students to partner share and think, pair and share, do a quick 3 word write up as an exit slip, do a quick sketch or give each other a quick thumbs up or down to check for understanding. Determine the level of mastery for each student and provide individual remediation as needed.

Procedures/Activities:

Simple Sunflower Seed Recipe - Homemade Chewy Granola Bars

1. Preheat oven to 350.
2. Grease a 13x9” pan.
3. In a large bowl, combine brown sugar, peanut butter, corn syrup, margarine and vanilla, blend well.
4. Add remaining ingredients and mix well.
5. Press evenly into greased pan.
6. Bake at 350 for 15-20 minutes or until light golden brown.
7. Cool 1 hour.
8. Cut into bars.

Yields 24 bars

Closure:

Read the anticipatory statement to students again, and make sure everyone understands that oil is one of the products made from sunflowers. Ask students to name other products sunflowers are used for.