SALSA LABORATORY

Overview

This lesson allows teams of students to create their very own salsa recipe. They gather ingredients from the supply table and can either use plastic knives to cut up produce or can use blenders or a food processor to cut and mix the ingredients. Team building skills will be developed as the students create their own salsa recipe after studying a recipe from Kids A Cookin'. The connection is made from garden to plate.

Suggested Grade Level:
3rd-5th

Time:
50 minutes

Subjects:
Science
Math

Overview

1. Student's will create and name their own salsa recipe.
2. Student's will use standard units of measurement such as ounces, teaspoons, tablespoons, etc.
3. Develop technical writing and oral communication skills by creating recipe cards and giving a presentation.

Background Information

According to K-State Research and Extension tomatoes are the most popular vegetable grown in home gardens. Tomato plants are easy to grow because of how well they grow in different conditions. Although tomato plants can be grown from seeds, most gardeners prefer to purchase small plants and transplant them into their own gardens. Transplanting shortens the growing season and allows fruit production to occur before summertime temperatures get too high. The optimum daytime growing temperature for tomato plants is 70 to 75 degrees Fahrenheit. When temperatures are above 90 degrees and the humidity is low, tomato blossoms wither and will then drop off the plants or are poorly pollinated, resulting in lowered fruit production. If allowed to ripen on the vine, tomatoes will not turn red in color when daytime temperatures reach 95 degrees or higher. However, tomato plants often begin producing again once temperatures are lower in the fall.

A tomato plant grows upright with one main stem. During the first month of growth, a tomato plant's energy is directed at producing leaves. The plant grows very rapidly and may double in size every 12 to 15 days.

To maximize photosynthesis, tomato plants need to be supported so that they will continue to grow in an upright position, rather than being forced to the ground by the weight of the fruit and additional branches. Stakes or cages are used to support the plants, which improves yields and the overall quality of the fruit produced by the plants.

SALSA LABORATORY

Salsa Recipe

Ingredients:
1/2 cup corn, fresh cooked or frozen
1 can (15 ounce) black beans, drained and rinsed
1 cup fresh tomatoes, drained and rinsed
1/2 cup onion, diced
1/2 cup green pepper, diced
2 tablespoons lime juice
2 cloves garlic, finely chopped
1/2 cup picante sauce

Directions:
1. Wash your hands.
2. Combine all ingredients in a large bowl. Chill until serving time.
3. Drain before serving.
3. Serve with low fat baked tortilla chips or fresh vegetables.

Recipe from K-State Research and Extension Family Nutrition Program: Kids a Cookin'

SALSA LABORATORY

Materials

- Tomatoes (Roma) - 1 per student
- Onions
- Bell peppers
- Jalapeño peppers
- Canned black beans
- Garlic (fresh or pre-diced)
- Limes
- Cilantro
- Canned corn
- Salt and pepper
- Any other desired ingredients
- 1 or 2 blenders/ food processor
- Cutting boards
- Paring knives or plastic knives
- Measuring spoons
- Measuring cups
- Kitchen food scale
- Small bowls (for serving)
- Plastic plates to put produce on for each group
- Small clear cups or bowls for taste testing
- Colorful platters for display
- Canning jars 1/2 pint
- Funnels- wide mouth
- Recipe cards/index cards
- Markers
- Labels for jars
- Paper towels
- Tortilla chips
- Poster listing prices for each of the products (i.e. price per pound or price per item from shopping receipt)

Procedures

1. To enhance the learning experience, produce used in the lesson plan may be grown ahead of time. This step is optional; however, it does provide first-hand gardening experience for students.

2. Divide students into pairs or small groups. Each group will make a half-pint salsa recipe.

3. Students will determine ingredients needed for salsa by viewing the recipe on page 2 from K-State Research & Extension Family Nutrition Program: Kids a Cookin'.

4. Using a maximum of six ingredients, students will create their own salsa recipe. As they create their recipe, they must record the exact instructions and ingredient amounts. Use scales, measuring cups and spoons to aid in this step.

5. Have students create their recipe and write it on the student worksheet complete with a recipe name. Encourage creativity in naming the salsa.

SALSA LABORATORY

Procedures Continued

6. Ask teams to present their "shopping" list to the teacher who fills their order on a sturdy plastic plate from the selection on the table. The team will then return to their table to make the recipe. If they need a blender, they must wait their turn and must clean it for the use of the next team.

7. After blending/mixing, measure the total liquid salsa using metric and English measurements.

8. Have each team put their mixture through a funnel into a 1/2 pint canning jar. Extra salsa goes into a team bowl for taste testing.

9. Take advantage of the math moments during this activity. Present a poster with the ingredients, materials and cost of each. Have students determine how much each ingredient and material is worth. Students should add that cost to the predetermined value of their labor. Have them determine a price they are willing to sell their salsa for. They may want to consider how many more jars they can make in an assembly line process in 45 minutes. This will reduce their cost of labor. Lastly, have them compare this with the cost of a salsa product in the grocery store ads in their local paper. How do they compare?

10. Next, have the teams pour salsa into a small bowl and present their recipe to the rest of the class (each student then gets to taste test with tortilla chips). Teams should explain how and why they chose their ingredients, the process it took to decide on the salsa name and an assessment of their salsa. Have teams report the price of their salsa and how their salsa compares to store-bought salsa.

11. Students compare and contrast salsa recipes. 9

12. Students create and present an advertisement for their salsa using video, powerpoint or prezi.

13. Discuss with students the farm to fork process of the tomato. Then, challenge the students to compare and contrast other foods they eat (i.e. what they had for lunch).
    Example: Tomato in salsa
    Parent tomato that was genetically designed to be firm, red, juicy, fleshy, to withstand freezing temperatures → seed → truck → garden, farmer's field or hydroponic building → harvest machine → harvest truck → tomato → crushing plant → canning facility → distributor → store → grocery cart → home kitchen → dinner table

SALSA LABORATORY

Student Worksheet

Name:_____

Record the weight of each ingredient in pounds and grams

Product Name:	Estimated Pounds	Estimated Grams	Estimated Cost	Actual Pounds	Actual Grams	Actual Cost

Total cost of ALL produce in salsa recipe:

_____

Name of product:

_____

Total grams and pounds of ALL produce:

_____

Total mL and cups of liquid salsa as measured in liquid measuring cup:

_____

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SALSA LABORATORY

Name:_____

Comparing team made salsa vs store bought

Appearance	Extremely attractive	Moderately attractive	Acceptable appearance	Not very attractive	Very Unattractive
Taste/Flavor	Tasted great	Flavorful	Acceptable	Not great taste/ flavor	I did not like the flavor.
Texture	Wonderful texture	Good texture	Acceptable texture	Not great texture	Not good- runny, flat, gummy, etc.
Aroma/Smell	Wonderful aroma	Appealing aroma	Acceptable aroma	Aroma is not appealing	Unacceptable
Overall Acceptability	Extremely acceptable	Moderately acceptable	Acceptable	Moderately unacceptable	Unacceptable
Compared to salsa purchased from the store	I liked it a lot better	I liked it a little better	I didn't prefer one over the other	I think the store sample is a little better	I think the store sample is a lot better

SALSA LABORATORY

Sample Name or Number	Rank
Example: Verde Salsa #5	*3 of 10*