

MATERIALS

- Food Begins with a Plant game pieces
- Food Begins with a Plant worksheet (24)
- Food Product pairs: Maple Syrup & Aunt Jemima, Colby Cheese & Cheese Wiz, Cool Whip & Whipped Cream, Orange Juice & Orange Drink, Flamin Hot Cheetos & Sun Chips, Strawberry Preserves & Sugar Free Strawberry Jelly

PREPARATION

- Make sure you have a chalkboard or similar surface for recording student responses.

ACTIVITY

Part 1: Plants are Everywhere!

Set up the game pieces on different tables around the classroom.

1. wheat plant → wheat berries → flour → dough
2. tomato plant → tomato fruit → tomato sauce
3. plant → decomposing leaves → mushrooms
4. grass → cow → milk → cheese
5. grass → pig → pepperoni

In groups of four or five, students will rotate from station to station and arrange the game pieces properly. After the rotation is complete, discuss how each station traces a food product back to a plant because all food begins with a plant. Ask, “If we put together the final food products at each station—dough, tomato sauce, cheese, pepperoni, and mushrooms—what could we make?” Pizza!

Part 2: Deconstructing Food Ingredients

- Arrange students into groups of four. Pass out the “Food Begins with a Plant” worksheet and give each group a food product pair (e.g. Aunt Jemima Syrup & Real Maple Syrup).
- Explain how to fill out the worksheet: Returning to the activity in Part 1, make two columns on the board. In the column on the left, list the ingredients in the pizza -- *dough, tomato sauce, cheese, pepperoni, and mushrooms*. In the column on the right, list the original plant source for each ingredient. Explain that for this activity students will read the ingredient list on the package and list each ingredient on their worksheet. In the next column over they will name the plant source of that ingredient. If students are unsure they should ask a teacher or place a question mark in the plant source column.
- Give students about 10 minutes to deconstruct their food products. Then, have a representative from each group report back to the class. They should introduce each of their food products, tell how many ingredients each contains, and list the top three plant sources.
- After all groups have reported, list the final top three plant sources of all the foods.

Part 2 option: Making a Frittata

Instead of the above activity, make a Frittata in the garden with eggs and feta cheese and, from the garden, spinach and chives. Trace each ingredient back to a plant.

Life Without Plants—An Impossibility!

Food & Technology

ENGAGE

Have students look around the room: *Can you spot something in our classroom that comes from a plant?* Discuss as a class: *What would the world look like without plants?* Encourage students to paint a picture in words of what the world would look like. Would there be plastic? (Plastic comes from oil which comes from long decomposed plants.) *What do plants give us?* Plants supply us with the food we need to survive. Plants also feed the animals that we eat. Encourage students to consider other plant contributions like shelter, clothing, fresh air, and aesthetic value.

OBJECTIVES

- Students will be able to describe the impossibility of a world without plants
- Students will be able to trace the ingredients from common food dishes back to their original plant sources

EXPLAIN

Our Relationship With Plants

It's simple: humans depend on plants. First and foremost, plants supply us with food. We may eat the plants directly, or we may eat an animal—for example a cow—which has eaten plants (grass). Sometimes a plant is even more removed in the food chain. Chickens eat (among other things) beetle larvae which eat decaying plant matter. Even fish depend on plants growing in the water for their food source. Everything we eat can be traced back to a plant!

On top of providing us with basic sustenance, there are countless other ways in which we rely on plants to meet our needs. The wood from trees can be used to build our homes (shelter) or cook our food (fuel). Plants like cotton, for example, provide us with fine fibers that are woven into fabric. Fabric is then transformed into other valuable items such as t-shirts and blankets or rugs and curtains. Plants purify the air we breathe. Plants make our world a beautiful place to live in.

Tracing the Plant Food Chain

Separating a basic garden salad into its individual plant ingredients is relatively easy: lettuce leaves, carrot shavings, snap pea pods, and maybe some fresh raspberries thrown in for extra pizzazz. But what about the more mysterious processed foods we often enjoy, like pizza or even—gasp—a Twinkie!? Every food you eat either comes from a plant, is made from a plant, or can be traced back through the food chain to a plant. But that doesn't mean that all foods are created equal. Very often, the foods that have been processed the least are the most healthful.

ADDITIONAL CONTENT INTEGRATION (see previous page)

Were students stumped by any of the ingredients? Select a few students to research the original plant origins of any tricky ingredients.

ADDITIONAL MATERIALS

- Journals

EVALUATE

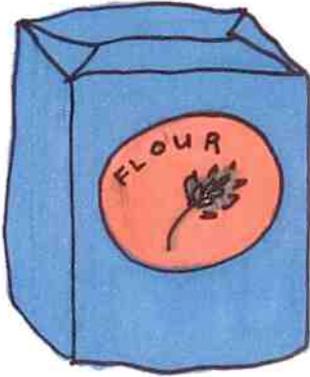
Journal prompt: Which of the two food products you studied are more healthful? Why?



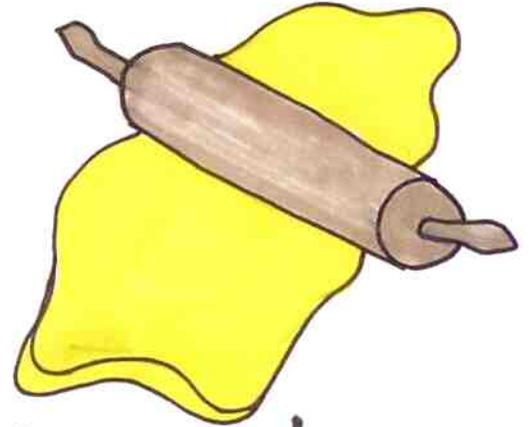
wheat



wheat
seeds



flour

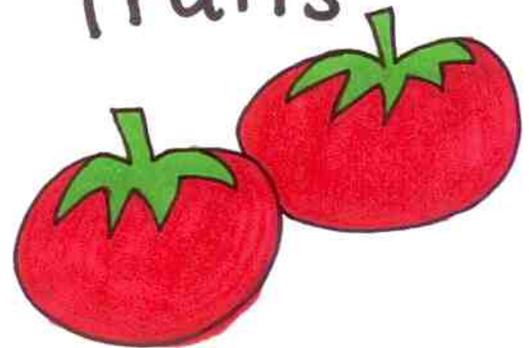


dough



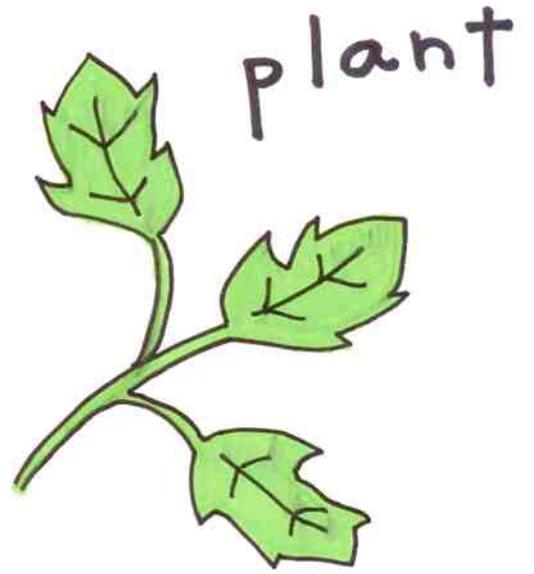
tomato
plant

tomato
fruits



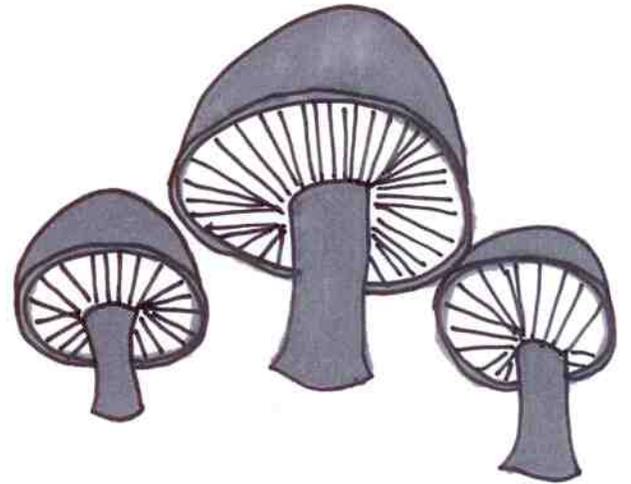


tomato sauce

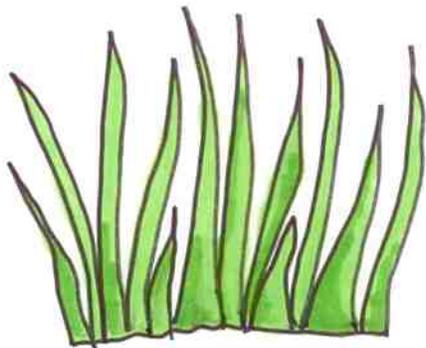


plant

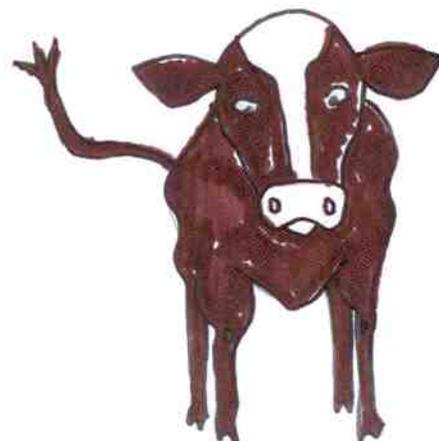
decomposing
leaves



mushrooms



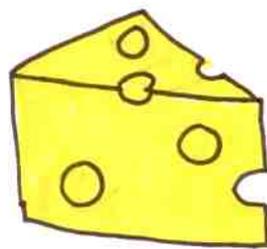
grass



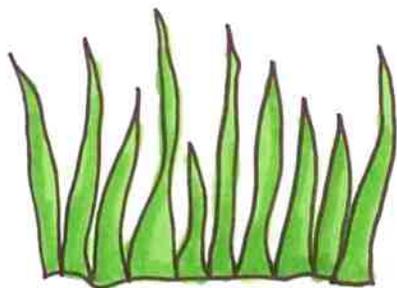
cow



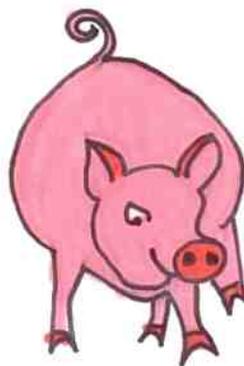
milk



cheese

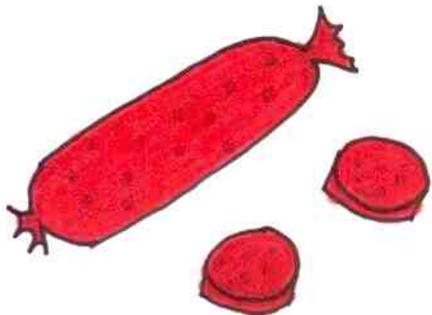


grass



pig

pepperoni



Pizza

