



Bio/Diversity Project  
Lesson Title: Plants & People

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Grade Level: Kindergarten

<b>Common Core Standard:</b>	
<b>Content Objective:</b> Science	<ul style="list-style-type: none"> <li>• <i>Students will be able to identify which foods come from plants.</i></li> <li>• <i>Students will be able to sort fruits, vegetables, and grains.</i></li> <li>• <i>Students will be able to distinguish between a diverse and a non-diverse group of foods.</i></li> <li>• <i>Students will be able to explain the importance of eating a diverse dinner plate.</i></li> </ul>

<b>Vocabulary</b>	<b>Materials</b>
<ul style="list-style-type: none"> <li>• Diversity</li> <li>• Edible</li> <li>• Flower</li> <li>• Fruit</li> <li>• Grain</li> <li>• Leaf</li> <li>• Native</li> <li>• Root</li> <li>• Stem</li> <li>• Vegetable</li> </ul>	<ul style="list-style-type: none"> <li>• Blank paper</li> <li>• Clipboard</li> <li>• Crayons</li> <li>• Outdoor area</li> <li>• Pencil</li> <li>• Worksheets (see attached)</li> </ul>

**Seasonality:** This lesson can be taught at any time of the year, but may be most relevant during the fall when crops are traditionally being harvested, or any time when edible native plants are in season.

<i>Monsoons</i> July-Sept.	<i>Autumn</i> Oct.-Nov.	<i>Winter</i> Dec.- Feb.	<i>Spring</i> Mar.-Apr.	<i>Dry Summer</i> May-June
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<p><b>Guiding Questions:</b></p> <ul style="list-style-type: none"> <li>• What are the parts of a plant?</li> <li>• What do plants need to live? What do we need to live?</li> <li>• Where does our food come from?</li> </ul>
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- What makes fruits, vegetables, and grains different from each other?
- What would happen if we only planted one type of crop to eat?
- What would happen if a disease killed that crop?
- What does “diverse” mean?
- What makes a “diverse dinner plate”?
- What is a native plant and how can it be used?
- What parts of plants are edible?

**Engagement/Introductory Activity:**

First, show an unlabeled picture of a plant (make sure it has roots, stem, leaves, and flowers) and ask students to identify the four parts of a plant. Next, ask them to imagine what a plant needs to survive. Is this the same as for humans? Encourage students to describe what humans and plants both need to survive (water, air, space, food). Finally, ask students what their favorite food is. Ask them to determine if it is a plant or comes from plants.

**Exploratory Activity:**

This lesson is designed for 90+ minutes. If the desired class time is shorter, split the Exploratory Activities (1 and 2) into two separate lessons.

1. Students will investigate where our food comes from and practice grouping plants as vegetables, fruits, or grains (there are more categories and this is an area where this lesson can easily be expanded!).
  - Give a brief presentation on the differences between fruits, vegetables, and grains.
  - Take suggestions from the class about what their favorite foods are, and draw them on the board where everyone can see. Then ask other students to classify these foods as vegetables, fruits, or grains.
  - Next, show a photo of two different crop fields, one with multiple colors of crops and one with only green crops. Ask students what would happen if a “green disease” came in and killed all the green plants. A good way to prompt students to think critically about this is by asking, “What if we could only eat broccoli for the rest of our lives because the other crop was killed?” We want greater diversity in plants so that we can eat what we want.
  - During this discussion, introduce the vocabulary of “plant diversity” and help students to recognize that “diverse means different”.
  - Following this discussion the students will complete the “Diverse Dinner Plate” worksheet (see attached). It may be helpful to first complete a practice version of this activity with the whole class.
2. Ask students what a native plant is. Break the term down into two words – “native” and “plant” and describe what each of these terms means.
  - Discuss where native plants are found in Tucson (in the desert, backyard, schoolyard, etc.).
  - Take class on a short “field trip” outside to any place that has native plant species. Students will use a clipboard, blank paper, and pencil to draw one native plant they see. If they finish before other students, ask them to label the roots, stem, leaves, and flowers (if there are any).
  - Back in the classroom, ask students to describe in as much detail as possible what their plant looked like and then prompt them to imagine what the plant could be used for. Ask if any students have eaten a native plant or cactus before – this is a great discussion starter!
  - Show some pictures of native plants and discuss how the Tohono O’odham gather saguaro and prickly pear fruits.
  - The final activity for this lesson is the “Plants We Eat” worksheet. Students will identify and circle the edible parts of various plants, and will then color them in.

**Explain:**

While students are completing their worksheets, approach them individually and ask why they have chosen to draw what is on their dinner plate, or why they have circled a certain part of a plant, whether or not is the correct answer. This allows students to explain what they know or what they are unsure about, without having to speak up in front of

the entire class. If a student is particularly confused, ask them to start with a small component of the activity, such as “Let’s start with what you had for dinner last night. Did you eat any vegetables?” or “On an apple tree, where do you think the fruits grow? Is that the same on this plant?”

**Extension Activity/Questions:**

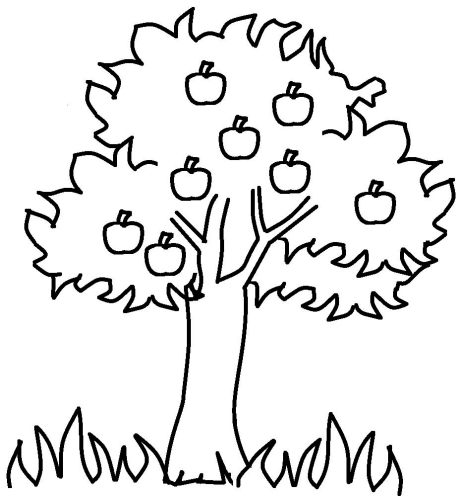
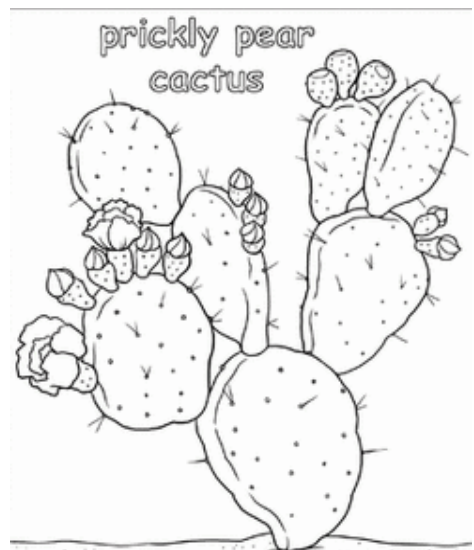
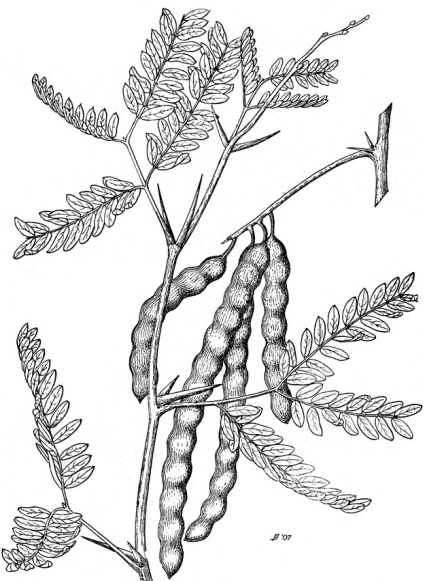
Instead of completing two different worksheets, the concepts of the “Diverse Dinner Plate” and “Plants We Eat” worksheets can also be combined into an activity that asks students to create a whole meal with only native plant ingredients. Students can be provided with a “food bank” of native ingredient examples so they have a specific number of ingredients to choose from to create their meal. This activity gives students the opportunity to combine what they learned from both sections of the lesson. If this is too difficult for an individual activity, the entire class can complete the activity together.

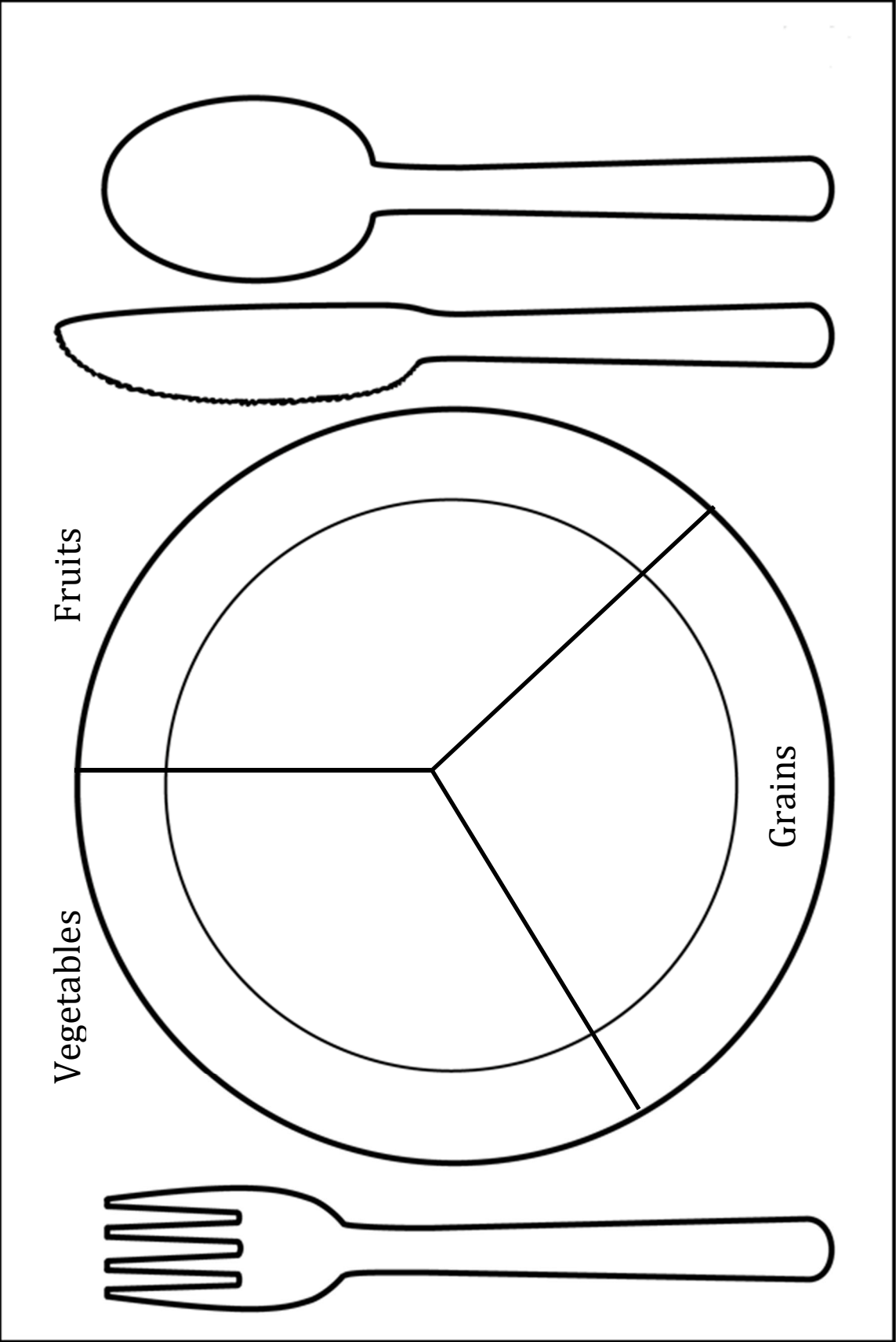
**Evaluation Activity:**

Completion of the “Diverse Dinner Plate” and “Plants We Eat” worksheets demonstrate understanding of the core concepts of the lesson.

# Plants We Eat

Circle the part of the plant that we can eat. Color it in!



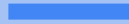


Vegetables

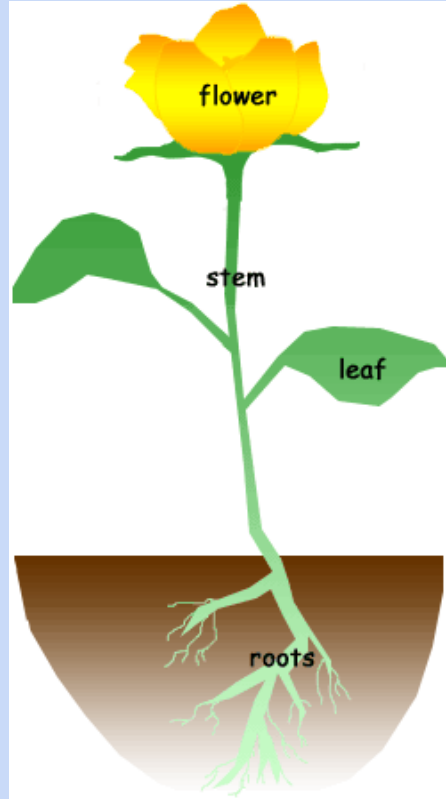
Fruits

Grains

# Plants & People



# Parts of a plant review



# What do plants need to live?





What do WE need to live?

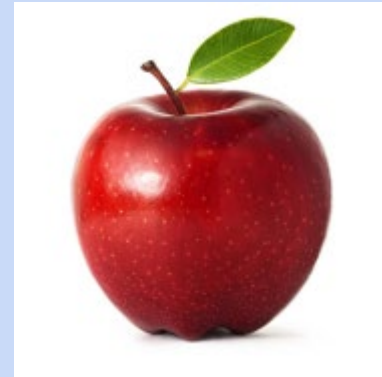


Where does our food come from?

Plants!



# Vegetables or fruits?



# Grains





# Plant Diversity



# Diverse or Not Diverse?



Not Diverse

Diverse

Activity!

Create a diverse dinner plate!

# What is a Native Plant?





## Native Plants: Investigate

Field trip to the garden!

How could we use the plants we see there?

What did you see?

# Native Plants



# Native Plants



Yum!

Worksheet activity!