

Arizona Grown Specialty Crop Lesson Plan

**I'm Here,
I'm There,
I'm
Everywhere-I'm
Super Spud!**



LEVEL: Grades 4-6

SUBJECTS: Language Arts,
Computer Technology

AZ ACADEMIC STANDARDS: 3T-E1

MATERIALS

Teacher overhead pages of potato plant and part definitions, photocopies of unlabeled plant page for students to complete and also to use as assessment activity, computers.

VOCABULARY

Tuber, eyebrow, eye, stem end, lenticle, flower, true seed, leaves, root system, stems, stolons.

RELATED LESSONS

Arizona! How The Heck Did I End Up Here?
Mmmmm, I'm Good! But Am I Good For You?
From Mashed to Riches

SUPPORTING INFORMATION

Common Potato Varieties
Russet Potatoes-The most widely used potato in the U.S. A large majority is grown in the Northwest. Available year-round. High in starch. Brown skin and white flesh. Light and fluffy when cooked. Excellent for baking, mashing, frying, and roasting.
Round White Potatoes-Grown and most frequently used in the Eastern U.S. Available year-round. Medium in starch level. Light tan skin and white flesh. Hold shape well after cooking. Considered all-purpose and versatile.
Long White Potatoes-

Grown mainly in California.

Available spring through summer. Oval shaped with thin, light tan skin. Considered all-purpose and versatile.

Round Red Potatoes-Available mainly in late summer and early fall. Rosy red skin and white flesh. Ideally suited for salads, roasting, boiling, and steaming. Often referred to as "new potatoes".

Yellow Flesh Potatoes-Very popular in Europe and increasing in the U.S. Available in late summer and early fall. Golden flesh color.

Blue and Purple Potatoes-From South America and not widely grown in the U.S. Available in the fall. Slight nutty flavor and flesh ranges from dark blue or lavender to white. Best cooked by steaming, baking, or microwaving.

Potato Trivia

Today potatoes are grown in all 50 states of the U.S. and about 125 countries around the world. There are about 5000 varieties in the world. There are 3 to 4 common varieties in U.S. markets.

The potato is about 80% water and 20% solids.

The world's largest potato chip was produced by the Pringle's Company in 1990. It measured 23 inches by 14.5 inches.

The average American eats about 124 pounds of potatoes per year while Germans eat about twice as much.

In 1974, an Englishman grew 370 pounds of potatoes from 1 plant.

Thomas Jefferson gets the credit for introducing "french fries" to America when he served them at a White House dinner.

BRIEF DESCRIPTION

This lesson is designed to provide students with information about the main varieties of potatoes available in the U.S. and the parts and their function of the potato plant.

OBJECTIVES

The students will learn about the common varieties of potatoes, the parts of the potato plant, and their functions. Based on this knowledge, the students will generate a computer model of a potato plant.

ESTIMATED TEACHING TIME

45 minutes - 1 hour.
(Computer project will take additional 2-3 periods of computer lab time)

SUPPORTING INFORMATION (cont'd)

Laying the peel of a potato at the door of a girl on May Day showed that you disliked her. Less than 1 acre of potatoes can produce enough potato gasahol to fill up 25 cars. Mr. Potato Head was the first toy to be advertised on American television. The snowflakes used in the movie *Close Encounters of the Third Kind* were instant mashed potato flakes. The potato ranks 1st among the world's vegetables. Potato chips rank 1st among America's snack foods. The potato belongs to the family Solanaceae. Other members of the family include the tomato, the chili pepper, the eggplant, nightshade, belladonna, the petunia, and the tobacco plant. Some parts of these plants are very poisonous.

GETTING STARTED

Teacher presents examples and information on common varieties of potatoes. Pass out unlabeled copies of potato plant to all students and put labeled plant page on overhead.

PROCEDURES

1. Teacher shows examples of common varieties of potatoes and provides information about each type.
2. Teacher passes out unlabeled plant photocopies to each student. Teacher puts labeled plant page on the overhead and students will fill in the information on their blank pages including part descriptions as the teacher moves along with part locations and functions.
3. Using their completed models, the students will now make a computer generated model of the potato plant with illustration and description of parts.

Possible Questions - What are some of types of potatoes that you are aware of? (Russet, Round White, Long White, Round Red, Yellow Flesh, Blue and Purple)
What are some of the common parts of a plant that you can name? (Leaves, stems, flowers, roots, etc.)
How is the potato plant similar to other plants? (Answers will vary)
How is the potato plant unique to most plants? (Answers will vary-probably related to the tuber)

EVALUATION OPTIONS

1. Student completion of computer generated model of potato plant. Model needs to be labeled, illustrated, and with written description of parts. Assess on accuracy and spelling.
2. Students will write in parts of an unlabeled potato plant as a culminating assessment activity.

EXTENSIONS AND VARIATIONS

1. Grow different varieties of potatoes. Make charts recording growth.
2. Compare other tubers to potatoes. What things are similar? What things are different? Make Venn diagrams to demonstrate.
3. Look at the parts of other AZ Grown Specialty Crops. What do they have in common? What are their differences?
4. Take a field trip to a local potato company or related industry.

RESOURCES

www.potatohelp.com
The potato then and now
www.sunspiced.com

EDUCATORS' NOTES

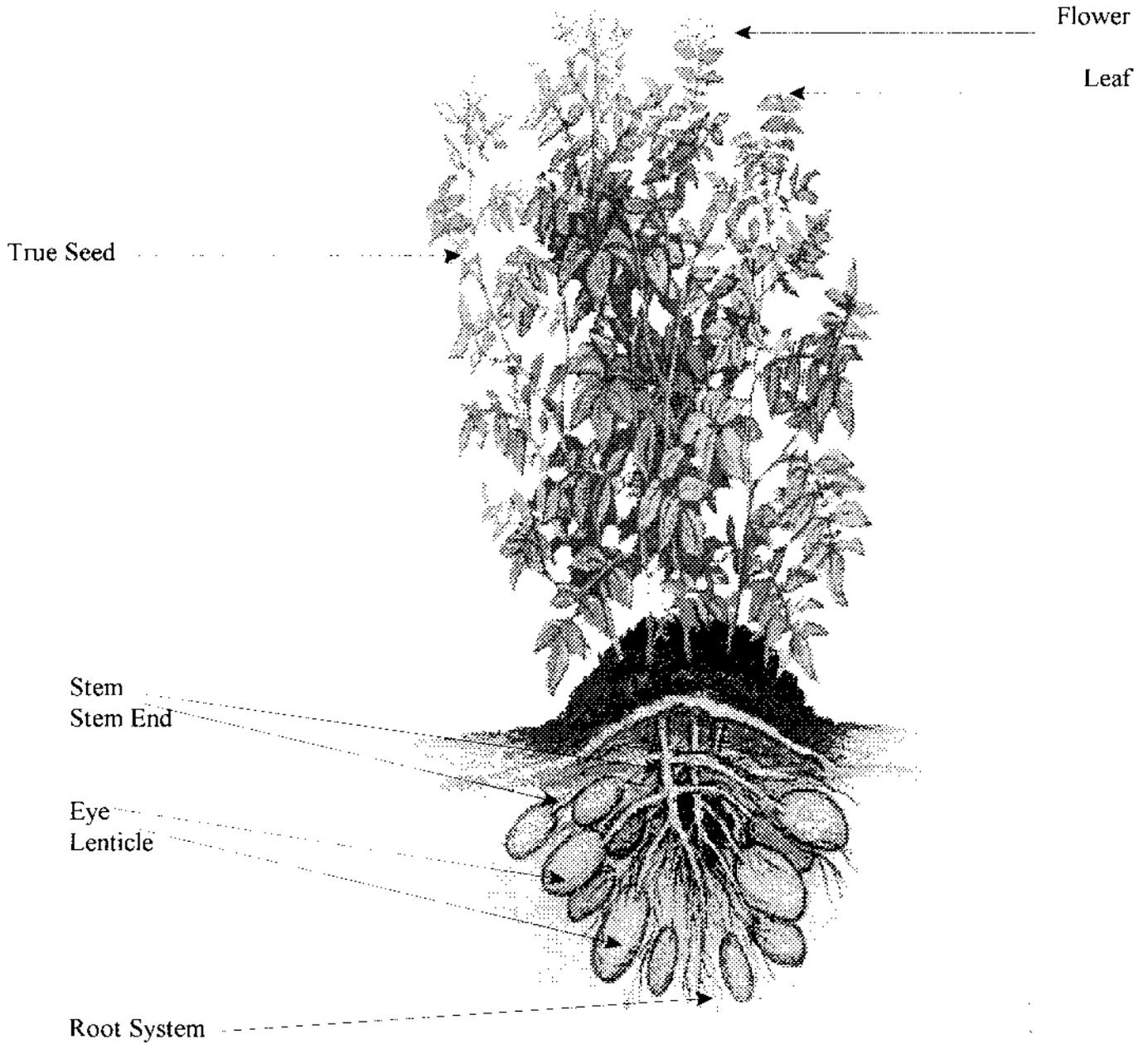
CURRICULUM DESIGN

Jeff Hayes
5th Grade
Burk Elementary
Gilbert Public Schools

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Scientific Name: *Solanum tuberosum* L.
Family: Solanaceae

Potato Plant

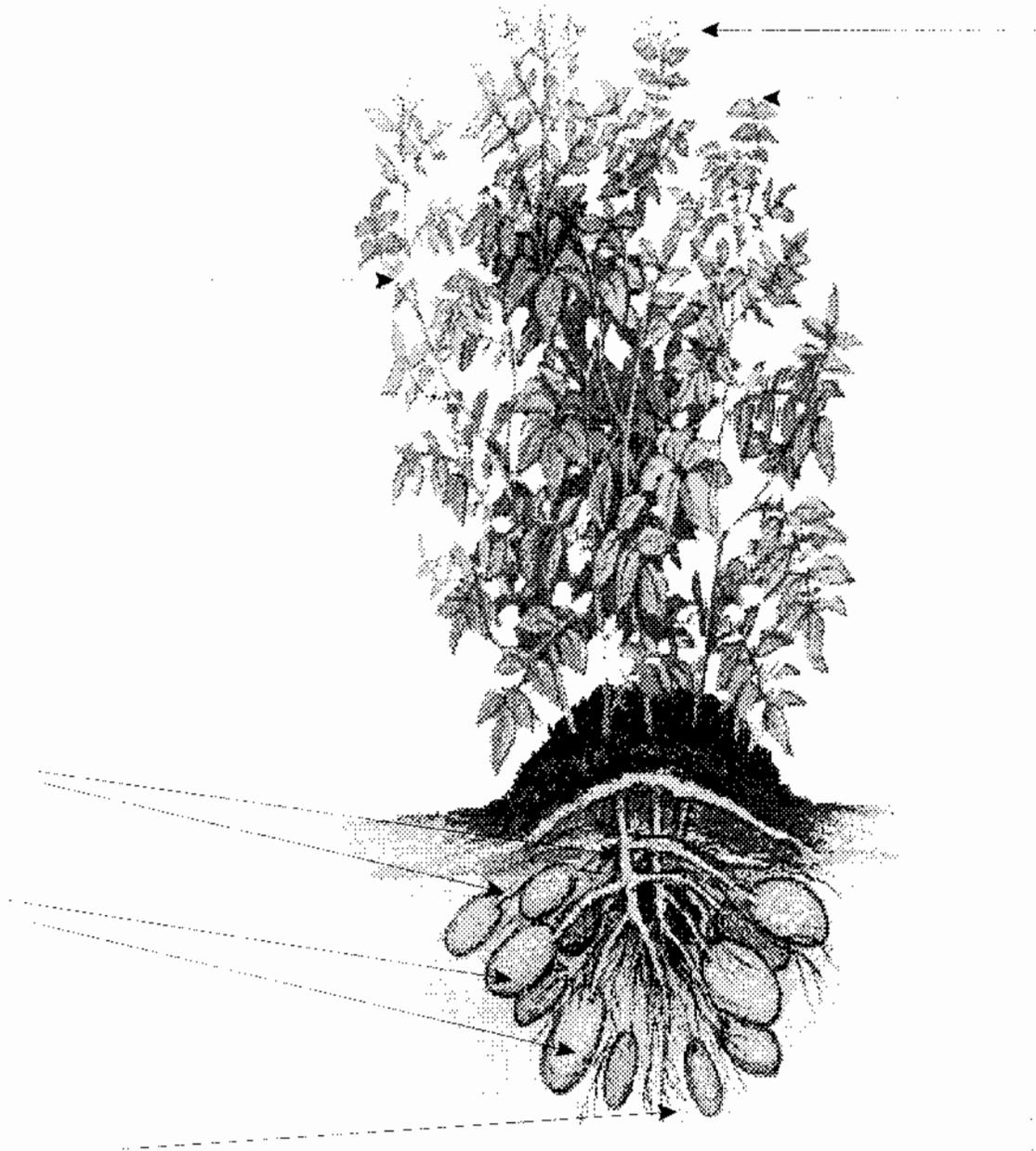


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Scientific Name: _____

Family: _____

Potato Plant



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Potato Parts and Descriptions

What is a potato? A tuber or underground stem with stored food.

Eyebrow-A leaf scar which always faces the topmost end of the potato.

Eye-The growing points for new plants.

Stem End-The point of attachment between the plant and the tuber.

Lenticle-Tiny openings to allow water into the tuber.

Flower-The potato contains both male and female parts. It has 5 petals and can be purple, lilac, white, or violet in color.

True Seed-After fertilization, a small green fruit ball is produced containing 50-200 seeds per ball.

Leaves-The potato has compound leaves.

Root System-Cultivated potatoes have a fibrous root system.

Stems-The stems originate from the eyes on the potato's surface.

Stolons-(Underground Stems) Originate from the eyes when the potato is underground. The tuber forms at the tip of the growing stolon.