



PLANTS GIVE US GIFTS* 2012

Grade: 1st /PSD 2nd Thompson

Setting: Any Nat Area...this one written for Magpie Meander

Theme (Bottom Line): Plants have special ways to survive but they also give us wonderful gifts that help us survive.

Description: Students review the parts of plants they learned in class, and learn some of the cool “gifts” plants give to people and animals.

Recommended Time: 30- 45 min

Recommended Group Size: 15 students

BIAS: [Stewardship](#)

FOSS Kit: New Plants

State Standards: Life Science 2.2 Analyze the relationship between structure and function in living systems at a variety of organizational levels, and recognize living systems’ dependence on natural selection. An organism is a living thing that has physical characteristics to help it survive.

Materials List:

1. This lesson plan **with plant information attached.** (*Fringed Sage, Common Mullein, Dandelions, Gumweed, Willows, Cattails, Rabbitbrush, Milkweed, Yucca*)
2. 10 Flags to mark plant locations (Flag #1 for MN demo plant but no bag for that plant)
3. 9 gift bags with plant photos and “gifts” inside, plant name on bottom of bag (*milkweed can substitute for dandelions or gumweed in the spring, yucca can substitute for cattails if you have second graders doing Cache la Pata as a rotation*)
4. 2 signs on gift bags “Education activity ahead- do not disturb gift bags”
5. 10 numbered necklace tags for the students who will be the helpers opening each bag
6. 1 plastic bag with 2 plants, their pictures and their “gifts” to substitute at a prairie site.
7. (for 2nd graders) a plant field guide is included to show students how to use and to look at the diagrams of plant parts in the back.

Getting Ready:

1. Scout out the location and find 7-9 plants you’d like to highlight.
2. Just before students arrive, place gift bags near plants and place signs “education activity ahead- do not disturb gift bags” on either end of the gift bag area.

Nat Notes: *Activity signs are needed to prevent other site visitors to the site from disturbing the props. This rotation is sometimes done with first graders and sometimes second graders. If you have a 2nd grade group it is possible to go a little faster and do 9 gift bags. They can also absorb more info on each plant. Check the attached info sheet for more facts.*

Introduction:

1. Welcome students and introduce yourself as a Master Naturalist from the Fort Collins NAD. Explain that this NA belongs to them and their families. They can

come here anytime. Ask them how much they think it costs? FREE!

Nat Note: *If they are doing the FOSS kit they will grow Brassica (a mustard), from seeds; bulbs (onions or garlic); houseplants (from nodes), and potatoes (from the eyes) in their classroom. If they haven't done the FOSS kit, skip to #3.*

2. Ask students if they have been growing plants in their classroom. Ask them how the project is coming- How have their plants changed over time? Do their plants have leaves? How about flowers or seedpods? Do they think plants are alive? Do students know how to get new plants started?
3. Ask if they know the parts of plants? Find a plant near the trail and review (or introduce) the parts of the plant by pointing to them (*the 7 parts are bud, flower, leaf, root, seed, seedpod, stem*) Remind them that we will not be observing roots because we aren't going to pull up any plants.
4. (**for 2nd graders**) Use the field guide pages at the end of the book to show different leaf shapes and flower parts. Point out the guide and explain that there are field guides for folks really interested in learning more about plants and knowing the names of plants.

Body:

1. Explain that natural areas are full of interesting plants, and today they will get to meet some of these plants. Preview the theme: *plants give us gifts.* Ask the students to tell you why plants are important or in other words what gifts do they give us. (*food, shelter for us and animals, beauty, medicines, clothes....*) Hand out the numbered tags to students who offer ideas about the importance of plants.

Nat Note: *Here are some basic important uses of plants.*

- *Plants are the foundation of the food web- plants produce food for wildlife.*
 - *Plants release oxygen as a by-product of photosynthesis*
 - *Plants protect the soil from erosion. Roots hold the soil in place while leaves absorb the impact of falling precipitation.*
 - *When roots decompose they add nutrients to the soil, these nutrients provide energy for living plants.*
 - *Decayed roots leave channels in the soil for water and air.*
2. Divide the students into groups of 2-4 with one of the numbered tag students in each group. The number on the tag will indicate when it is their group's turn to find a flag, identify plant parts, show the pictures and open the bag to reveal the gift.
 3. You can demonstrate with a plant near you. Go through the finding of the plant, talking about its parts and what kind of a gift it might give us. (*There are sunflower plants near the parking lot edge at MPM that make an excellent sample plant.*)

Nat Note: *Today at MPM you will be using the following plants. They are highlighted on the attached sheet. Fringed Sage, Common Mullein, Dandelions, Gumweed, Willows, Cattails, Rabbitbrush, Yucca and Milkweed can substitute if needed.*

4. Stop at plants and have different groups of students take a turn being teacher with the pointer. Give the name of the plant and ask the students to guess what this plant's gift will be. Open the bag and share the gift.

Nat Note: *If they have the parts of the plants down cold skip naming them at each stop, or just name a couple of parts, and spend more time looking at plants along the trail.*

Along the trail:

- *Mention how the plant reproduces (by seeds, nodes or runners) and compare to the plants they are growing in the classroom (brassica, onion, houseplants, potatoes)*
- *Look closer at some plants by noting the number of leaves per stem, where leaves grow on the stem*
- *Look for evidence of animals/ people using the plant.*
- *Ask if this plant is the same as the last one? Compare and contrast them.*

Conclusion:

1. Remind the students that plants are important and special because they give us gifts such as ... recall each “gift.”
2. Tell students that you hope they enjoyed meeting the plants during their “Day In a Salad Bowl”. Plants are interesting to study. Many people do not think much about all the plants that grow in our world, but you hope that they will look at plants more closely to see their beauty, and the special gifts they give to us.

*This lesson was written by Zoe Whyman, Susan Schafer, and Dolores Daniels of the City of Fort Collins Master Naturalist Department.



naturally yours

Plant	NPM page	Habitat/ Nat Area	Gift	Metaphor
Cattails		Ditches, ponds, valley, marshes	Food and cover for wildlife, food for people, medicine for people	Sample or photo of food, house, pill bottle
Willows		Drainages, rivers, sandbars lakeshores,	Medicine for people, furniture	Picture of furniture, aspirin bottle
Sedges		Ponds	Wildlife food and cover	
Snowberry	189	Pl-Fth Gulches, moist slopes	Medicine for people	Soap to represent the cleansing wash
Chokecherry	399	Pl-Fth Streamsides	Food for people	Jam sample
Clematis	380	Fth-Mts. Valleys, rivers	Beauty for people, nectar for butterflies	Juice for nectar, picture of an arbor of clematis for beauty
Rabbitbrush	63	Pl-Fth Dry open areas	Food and shelter for animals, rubber for people	Pictures of animals, rubber ball
Mountain Mahogany	390	Fth-Mts Dry rocky slopes	Repels bedbugs, dye for moccasins	Plastic bedbug, moccasin/picture
Gumweed	86	Pr -Fth fields	Medicine for people	Pill bottle
Yucca	3	Pl-Fth Dry rocky areas	Soap, medicine, sewing needles	Bar of soap, pill bottle, needle and thread
Needle and Thread Grass	346	Pl-Fth Grasslands	Food for Wildlife	Picture or sample of food
Milkweed	31	Pl- Mts. Ditches, fields	Host plant for Monarch butterfly, fluff for old-fashion life preservers, people eat shoots (taste like asparagus)	Picture of Monarch, or life preserver, or vegetables
Hairy Golden aster	100	Ft- Mts.	Toothache relief, insect repellent	Picture of tooth, sample of insect repellent
Bush Sunflower	96	Fth-Mts Roadsides, slopes	Seeds made into oil	Sample/picture of oil
Thistles	57-61	Fth-Mts Pastures, fields, neglected areas	Goldfinch seed	Picture of goldfinch

Three-leaf Sumac	17	Pl-Fth Rocky slopes	Berries make a lemony drink, stomach aches, deodorant, org/blue dyes	Picture of lemonade, sample deodorant, sample of org or blue fabric
Curly Dock	374	Pr-Fth Moist ditches, drainages	Stems can be ground into flour	Picture of a bag of flour/ bag of flour
Winged Buckwheat	372	Fth-Mts Open hillsides	Pain diarrhea and cough medicine	Sample medicine
Sulphur flower	370	Fth-Mts Dry open spots, rocky slopes	Food for chipmunks and mice, dried flower arrange for people	Picture of chipmunk, or sample of flower arrangement
Scarlet Guara	304	Pr-Mts Grasslands, sagebrush	Fragrance	Sample of perfume
Harebell	185	Fth-Mts Dry slopes	Flowers are edible and sweet	Picture of food/flower
Prickly Pear	179	Pr-Fth Rocky slopes	Pads combined with other foods make a stew (okra like)	Picture of a stew
Cow parsnip	22	Fth-Mts Moist meadows streams, shady edges	Host plant for Anise Swallowtail	Picture of Anise Swallowtail
Woods Rose	412	Fth Valleys, gulches, trail edges	Vitamin C for animals	Vitamin C sample
Buckbrush	386	Fth-Mts Dry areas	Soap , hair tonic, seeds for food	Sample of soap, hair product
Coneflower/ Mexican Hat	118	Pr-Fth Open areas	Medicine for reducing fever and for poison ivy	Sample of medicinal lotion
Common Mullein	455	Pl-Fth Roadsides, Disturbed areas	Medicine for infections, skin lotions, Cowboy toilet paper	Samples of medicine or lotion or toilet paper
Gay Feather	105	Pl-Fth Dry open slopes, rdsides	Beauty/color for flower arrangements	Picture of flower/arrangement
Buffalo Grass	335	Prairies	Forage for wildlife, home for butterflies	Picture of grazing animals, butterflies
Blue Grama grass	339	Pr-Fth	Forage for wildlife winter and summer, Colorado state grass	Picture of grazing animals, picture of CO
Dwarf Fleebane	83	Pl-Fths Open grasslands and	Nectar and pollen for insects, heads are like a landing pad for	Photo of pollinators

		foothills	insects/pollinators	
Fringed Sage	7	Pl-Mts Dry meadows, slopes	Fragrance, ceremonial smudges, flavor	Sample of dried sage spice
Yarrow	33	Fth-Mts Meadows, roadsides, slopes	Yellow dye	Sample of yellow fabric

NPM = Native Plant Master Guide

Key to abbreviations:

Fth= foothills

Mts= mountains

Pl= plains

Pr= prairie