



Chapter V. Theme Gardens

Designing Classroom Raised Bed and Theme gardens

Themes Profiled:

1. Bird and Butterfly Gardens
2. Sensory Garden
3. Pizza Garden **
4. 3 Sisters Garden
5. Tea or Lemonade Garden
6. Herb Garden **
7. Salad Bar or Salsa Gardens **
8. Peace Garden **
9. Cowboy Garden
10. Rainbow Garden
11. Colorado History Garden
12. Colorado Wildflower and Sensory Garden
13. Garden of Thyme "Garden of Time"

** Incomplete

Designing Classroom Theme Gardens and Raised Bed Gardens

What are raised bed gardens?

Raised beds maximize food production by allowing plants to grow intensively on a 3 to 4 foot wide area. They can come in a wide range of shapes, sizes, and structures. Raised beds can include a built structured frame or stand alone with raised soil. The width and depth of the garden varies on the user and plants grown. The garden needs to be wide enough to easily reach the center of the bed to weed, cultivate, and harvest without stepping on the bed. The depth depends on the needs of the plants, with ideally 18 inches of loose soil. Root crops (carrots, beets, and turnips) will need more depth than other plants. The length of the bed depends on how much space you have in your garden. Raised bed gardens can also be in the shape (circular, square or even a triangle).

Benefits of Raised Beds

- Greater food production
- Less compacting of the soil
- More top soil in the growing area, aiding root strength
- Plants grow in clusters and shade out weeds
- Efficient use of compost

Benefits of Contained Raised Bed Gardens

- Keeps creeping weeds out
- Easy to care for
- Minimal work required after construction
- Attractive long lasting appearance

- Intergenerational and wheelchair accessible
- Offers a place to sit, relax, and converse about the garden
- Allows easy access

How many?

Of course, space will be your first determinate to how many raised beds you can include in your garden. Each school may have a plan for raised beds that can be designated for general purposes for the school garden or beds for each classroom. Having a designated bed for each grade level or class allows teachers and students to devise a plan that meets the specific needs and wishes of their class.

Building Materials: Straw bales, cob, cut wood, tree limbs, cinder blocks, river rocks (stacked with clay to hold), recycled tires, wine or juice bottles. Using natural, non-treated wood prevents the leaching of harmful chemicals into the soil.

Location: Where your raised bed is located may determine what you choose to plant. Is your bed in a sunny or shady spot in the garden? Do you want annuals (that need to be planted each year) or perennials (that return on their own) or a mix of the two? We would encourage some annuals, as this will give room for each proceeding class to make some decisions of their own.

Sharing the Decision:

There are many ways your class can be part of this decision. You can take a simple vote or have students submit drawings and ideas of their own or break into small groups to plan. Our experience is the more you involve them in the decision-making, the more invested they will be in the outcome.

1. Bird and Butterfly Gardens

Bird and butterfly gardens are great theme gardens for all ages. The gardens can be part of a larger habitat restoration garden or specific to encouraging birds and butterflies into the garden.

Butterfly Gardens

Butterflies add a beauty for all garden visitors as well as serve an important role as pollinators. Since children are often attracted to butterflies it would be natural to grow the plants and flowers that attract, feed and host these beautiful creatures in your school's garden.

There are two types of plants to consider when planting a butterfly garden: the host plant (plants eaten by larva/caterpillars) and the nectar plants (to provide food for the butterflies). It is important to have the host plants mixed in or nearby so the butterflies can lay their eggs.

Some examples of butterfly host plants could include milkweed, nettle, the parsley family (dill, carrots, parsnips, etc.), plantain, roses, violets, sedum, spirea, lilacs, aspen, birch, snapdragons, thistles, plums, cherries and many others.

Perennials, annuals and some weeds can serve as nectar plants for the butterflies. The perennials include yarrow, allium, asters, bee balm, black-eyed Susan, butterfly bush, columbine, Indian paintbrush, clematis, coreopsis, daisies and mums, coneflowers, cat mint, phlox, sedum, lavender, oregano and mints. Annuals include marigolds, zinnias, impatiens, cleome, cosmos, alyssum, ageratum, snapdragons, salvia and petunias.

Butterflies also need a water source.

You can use a shallow pan with a small amount of water and a flat rock where the butterflies can walk down to the water. Be sure to keep the pan stocked with water, as they will come to rely on this source. Any insecticides used in your garden, could adversely affect or kill your new butterflies.

Attracting Hummingbirds

You can't have too many flower blooms, because hummingbirds have a voracious appetite and require a great deal of nectar. The trick to attracting hummingbirds is in the color and shape of the petals.

Color is so important to hummingbirds, even a red umbrella, or orange hat will entice the hummingbird's curiosity. Their favorite colors are the brilliant shades of red, pink and orange, and purple. They prefer petals with a trumpet shape, which are the perfect size for their long skinny beaks. To provide a constant supply, choose perennial species with long and overlapping blooming seasons.

Annuals include morning glory, nasturtiums, cosmos, scarlet runner beans, and varieties of sage (salvia), and snapdragons. Perennial favorites are bee balm, trumpet vine, lupines, columbines, bearded irises, poppies, butterfly weed, and lilies. Shrubs and vines examples are butterfly bush, cotoneasters, lilacs, pea shrubs, currants, and trumpet honeysuckle.

2. Sensory Garden

Sensory gardens use plants that enhance the five senses. Plants are chosen that are specific to touch, smell, sound, sight and taste. Although all plants encourage us to use our five senses, the following plants bring out the extremes, from a soft lamb's ear to a borage plant with hairy leaves. You can choose plants that enhance one or all of the senses.

The sensory garden is especially valuable for teaching kindergarten students as part of their science curriculum.

The following table provides examples of some of our favorite plants to enhance one or several of the 5 senses.

Table 2.1 Sensory Garden

Plant Name	Senses	Other Notes
Lamb's Ear	Touch	Soft Leaves
Mullein	Touch	Soft Leaves like lamb's ear
Wormwood Artemesia	Touch	In the sage family
Sunflowers	Sight	Several wild varieties
Bee Balm	Sight, smell	Attracts pollinators
Strawflower	Touch, Sound	Prickly, crackles when moved
Grasses	Sight, sound	Graceful movement and sound
Borage	Touch, Taste	Hairy leaves, edible blue or white flowers
Chinese Lantern	Sight	Unusual flower petals that open and close
Quaking Aspen	Sound	Fits its name
Wildmint, Catmint	Taste, smell,	Cats love it!
Coneflower, Echinacea	Touch	Prickly seed pods
Blanket Flower	Touch, Sight	Prickly seed pods with Yellow/orange/red flowers
Bachelor Button	Touch	Blue flowers
Columbine, Violas, Calendula	Taste	Edible flowers
Cactus	Sight, Touch or not	Un-mistakeable touch
Lavender, chocolate, apple or other mints, lemon verbena, pineapple sage,	Smell, Taste	Several herbs can be used for their strong aroma or flavor
Nasturtiums	Taste	Edible flowers (sweet), leaves (bitter), seeds (pickled like capers)
Sweat pea, geraniums, roses, petunias, lilacs	Smell	Strong aromatic flowers

9. Cowboy Garden

This cowboy garden profile was created by the 5th grade at Fort Lewis Mesa Elementary. Over the course of a few weeks, students shared ideas, plant suggestions, and their personal interests to create this youth inspired artistic and eclectic theme garden. The cowboy garden is filled with several student's interest and ideas and represents a class who used several methods of decision making to reach a theme, which everyone was proud of.

Materials: Cowboy boots, horseshoes, bottles, baling wire, split wood, nails and screws for construction

Plants: prickly pear cactus, rabbit brush, sagebrush, and lupine strawberries
Plants were chosen that reflect the

Design: The cowboy garden was built and designed in the shape of a cowboy hat. Students laid out the hat shape, which is clearly identified from an aerial view. A band in the center of the bed was marked with river rocks and lupine strawberries.

The juniper posts marked the shape of the hat, while the base of the cowboy garden was built with split, recycled wood approximately 12 inches high. After the wood was constructed students placed iron horseshoes through the bed. Horseshoes were faced up to collect good luck and facing down to hold the luck in. The cowboy boots were placed on each of the juniper posts. A gate and baling wire to look like a fence were the final touches on this garden bed.



11. Colorado History Garden

Native and Edible Plants of the Southwest

This garden is integrating the themes of culture, Colorado history, and native plants into the garden. Students will learn about native plants and their current and historical uses.

Materials Needed:

Fencing for Basket Weaving (low field fence, 2 feet in height, 14 feet in length)
Willow Branches

Look for Edible Plants Already in Garden such as common weeds such as common plantain, lambs quarter, or pigweed. Berry Bushes: Serviceberry, gooseberry, currant,

List of Colorado Native and Edible Plants

PLANT	USAGE	HISTORY
Echinacea/ Purple Coneflower	Used to treat colds, flus and minor infections	One of the most commonly used plants
Yucca- Perennial cacti	Edible flowers, fiber used in basket weaving; roots are used as soap and for cleaning hair	*****
Sweet Vetch- Annual seed	Roots eaten by early settlers and Indians, used as a substitute for licorice	A favorite root for bears
Sunflower- Annual seed	Edible seeds,	Used sunflower oil on body before going into battle
Blanket Flower- Wildflower	Used as eyewash, footbaths, saddlesores	Represents health among Indians
Blue Flax- WILDFLOWER/ HERB	Stems used to make linens, seeds used in flours, edible; early settlers used the herb to make a poultice of powdered seed to treat battle wounds, and mumps	
Columbine- WILDFLOWER	Edible flowers, leaves can be eaten in salads	State flower
Prickly Pear Cactus- Perennial cacti	Fruit of the flower and meat of the cactus can be eaten and used in soups	***
Oregon Grape- Herb	Edible berries; used in jellies	Indians made a yellow dye from the bark and wood of shrubby varieties
Evening Primrose- Herb	Roots are edible, used for whooping cough	
Wildmint/ Catmint-	Flavored meats, teas, and children's teething	
Indian Paintbrush- Wildflower	Edible flower, eat the nectar	Research the Indian legend behind paintbrush
Wormwood Sage- Perennial herb	Season meats, used for colds,	
Yampa, Squaw Root	Roots were ground and made into cakes by Indians; gathered roots and ate as potatoes	****
Fireweed- wildflower	Edible leaves and flowers	**Indian legend

13. COLORADO WILDFLOWER AND SENSORY GARDEN

(adapted from the Fort Lewis Mesa Elementary Kindergarten sensory garden)

Plant Name	Senses	Other Notes
Wormwood Artemesia	Touch	Very soft
Quaking aspen	Sound, sight	In the alpine garden
Native Grasses	Sound, movement	Lots of varieties
Sunflowers- prairie	Sight	Several wild varieties
Bee Balm	Sight, smell	Purple/ red flowers
Blue Flax	Touch	(soft)
Mullein	Touch	(very soft, like lambs ear)
Wildmint, Catmint	Taste, smell,	Cats love it!
Coneflower, Echinacea	Touch of prickly seed pod	Bold Pink/Purple flowers
Blanket Flower	touch of prickly seed pod	Yellow/orange/red flowers
Bachelor Button	Touch,	Blue flowers
Columbine	taste	Edible leaves and flowers
Claret Cup Cactus	Sight, Touch or not	Bright red flowers
Penstemon	Sight	Trumpet shape flower, several varieties



In addition to creating a sensory garden using plant materials, you can also add creativity to this garden by incorporating objects and a raised bed structure that entices the five senses too. Some examples might be adding colored wine bottles to the garden. Colored bottles add reflection and beauty but have a dual purpose of discouraging rabbits and other small animals from nibbling on the garden.

(Fort Lewis Mesa Kindergarten Sensory Garden)

FORT LEWIS MESA THEMES FOR 2008 SCHOOL YEAR

Kindergarten- WILDFLOWER THEME

Material- split logs

Location: mountain zone

The plants will have a wildflower theme- and may include some plants to enhance the senses they learn in Kindergarten (smell, touch, even sound)

1ST GRADE- RAINBOW GARDEN

Material for Bed- straw bales

Location: Bird and Butterfly Garden

This garden will represent the shape and colors of the rainbow. Groups will focus on a specific color. Since many of the 1st graders also wanted to grow food for the salad bar, we may try to use edible flowers and plants as part of this rainbow design.

2ND GRADE- SCHOOL COLORS – BLUE AND YELLOW FLOWER GARDEN

Material- river rock

Location: Mountain Zone

This garden will represent the flavor and color of Fort Lewis Mesa. Students will be choosing blue or yellow flowers. Some ideas: yellow tulips, yellow prickly pear, yellow rose, blue columbines, delphinium and more.

3RD GRADE: 3 SISTERS GARDEN

Material: adobe/ cob (sand, clay, straw and water)

Location: north and center of sidewalk

A 3 Sisters garden represents the traditions of many Native American traditions to plant corn, beans and squash together. Since 3rd grade visits Mesa Verde as part of their curriculum, students can incorporate their knowledge of native planting, water wise gardening, and native and heirloom seeds.

BERRY GARDEN

Material- rock

Raspberries and strawberries and maybe more.

4TH GRADE COLORADO HISTORY GARDEN

Materials- wood frame with weaved branches – to represent native weaving traditions

Location: north and center of sidewalk

This class is incorporating several themes of culture, Colorado history, native plants, with plants that have several purposes (edible, medicinal, or aromatic). The design will be in a spiral shape. Students will be identifying native plants and what they were used for.

5TH GRADE COWBOY GARDEN

Materials- boots, horseshoes, and bottles- that's right

Location- Directly south of sidewalk, circular garden, arid location

Plants- prickly pear, rabbit brush, sage brush, and lupine strawberries

4TH and 5th GRADE GARDEN OF THYME

Materials- Rock, stepping stones, tiles, and uneven cut wood

Location- southeast corner, rectangular shape beneath science room

Plants- Thyme, thyme, thyme

This garden will represent different periods of time in history- the past, present and future.

Students would like to place the stones, inside the garden along with other statues, gnomes and other structures to represent the different times in history. The garden will also include a sundial; under the sundials will be time capsules of the current school year. They are planning on the garden for them and for students for the next 15 years.