


Gardening 101

Flowers

Annuals, Biennials, Perennials


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Planning

- Borders
 - Utilize taller plants toward the back for a backdrop and interest
 - Holly hocks, sunflowers
 - Use moderately tall as a backdrop for smaller beds
 - Rule of thumb for plant height 2/3 width of border
 - Shorter varieties in the front
 - Lines should flow rather than strict height lines
- Flower beds
 - Generally 2x3 feet to 6x8 feet
 - Artistic with shapes and colors
 - Avoid straight edges
 - Sweeping curves add interest
 - Use a hose, string, or paint



Artistic Plantings

- Placement and selection
 - Line
 - Silhouette or outline
 - Mass
 - Shape or density
 - Color
 - Dependability
 - Ability to remain attractive with minimum problems
- Shapes
 - Drifts
 - Plants melt into each other
 - Elongated groupings with a plant that flows
 - Clumps
 - Circular groupings
 - Single large plant
 - Poeny
 - Groupings
 - Half dozen
 - Fewer can look jumbled




Planting

- Space plants
 - Taller, with few stems
 - ¼ as far as mature height
 - Tall bushy plants
 - ½ as far apart as mature height
 - Rounded bushy annuals and perennials
 - As far as mature height
 - Ground cover
 - Twice as far as mature height




Color


- Many plant books suggest colors that blend
- White and gray are good separators
- Reds, oranges and yellows are warm
 - Warm colors give the illusion of little space
- Blues, greens and violets are cool
 - Cool colors give the impression of openness



Seasonal


- Select a variety of cool season and warm season for summer-long blooming
 - Bleeding hearts virtually disappear after their bloom
 - Ornamental grasses add height, color, and interest throughout the season
 - Select plants
 - Shade for shady spots
 - Full sun plants for afternoon sun






Life Cycles

- Annuals
- Biennials
- Perennials




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Annuals

- Complete lifecycle in a single year
 - Seed to seed
 - Seed parents unknown
- Plants not living through Montana winters
- Uses
 - Instant color
 - Bloom most of growing season
 - Vary color and texture year to year
 - Place where spring bulbs have bloomed and died back




Care of Annuals




Geranium is a perennial but doesn't survive MT winters – blooms all summer

- Deadhead for continuous bloom
 - Calendula, cosmos, marigold, pansy, zinnia
- Do not pinch flowers
 - Impatiens, cockscomb, everlastings, or poppies
- Stake taller plants
- Fertilize
- Infrequent, deep watering is better than light, frequent




Annuals

- If planting from seed
 - Harden off seedlings started indoors
 - Seeds planted directly into the soil need thinning per package spacing
- Transplants
- Mulches
 - Cultivation hard on roots
- Fall
 - Remove annuals to prevent disease
 - Wait till seeds fall if you want plants to reseed




Annuals

- Pests
 - Watch for spider mites, aphids, beetles, and thrips
 - Treat seeds with fungicide
 - Tear open package and add powder fungicide
 - Small amount as fits on tip of knife
 - Remember when using used pots sterilize with Clorox:water (1:9)




Life Cycles


- Annuals
- **Biennials**
- Perennials



Biennials




- Season 1
 - Produce leaves
 - Rosette
- Season 2
 - Bloom and die
- Sow seeds midsummer for bloom the following year
- Otherwise follow same cultural practices as annuals



Life Cycles

- Annuals
- Biennials
- **Perennials**



Echinacea



Perennials

- Tops die back each fall
- Regrow from rootstock following spring
- Some replaced every few years
 - Delphinium
- Some need divided every few years
 - Iris, daylily



Purchase

- Choose for characteristics
 - Height and shape at maturity
- Choose compact and dark green plants
 - Do not choose plants with pale yellow stems

Seeds

- Saving seeds
 - May not grow true to type
- Planting packaged seed
 - Difficult to establish
 - Sow in vermiculite filled furrows



Planting Perennials

- Plant in the correct exposure
 - Remember slope affects temperature and drainage
- Plant spring or fall
 - Fall generally preferred
- Soils
 - Well-drained, loamy
 - If poorly drained incorporate sand
 - Cultivate down 20" to encourage root growth



Planting Perennials

- Late summer, fall-flowering
 - Plant in spring
- Spring flowering
 - Plant in late summer or early fall
- Stake taller plants
 - Plants that fall may crack
 - Bacteria enter plants through cracks
 - Unhealthy plants increase disease potential
 - Dahlias, some asters, delphinium




Renewal

- Divide as necessary
 - Crowding
 - Inferior blooms
 - Spring or fall
 - Fall preferred
 - Work soil
 - Compost or rotten manure
 - Divide plants and reset
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- Don't divide
 - Peonies
 - Bleeding hearts
 - Oriental poppies
 - Short lived
 - Columbine
 - Lupine
 - Delphinium



Maintenance - Dividing

- Perennials left too long
 - Center of clump grows poorly
 - Flowers sparse
 - Divide when dormant
 - Just before new season growth or in the fall before ground freezes (giving chance to reestablish)
 - Select side shoots from outer part of clump
 - Discard center
 - Divide into 3 to 5 shoots
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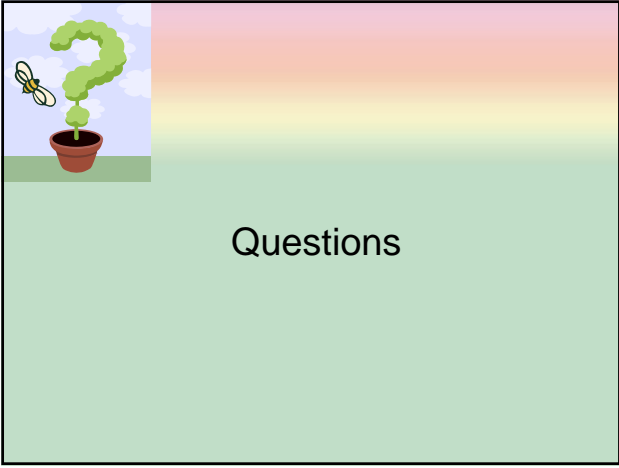
Maintenance - Other

- Deadheading
 - Remove spent flowers
 - Cleans up flower beds
 - Allows plant to move food reserves to roots
- Disbudding
 - Remove smaller side buds to encourage larger flowers
 - Peonies and chrysanthemums
- Fertilize
 - Spring and early summer
 - Do not fertilize after late June
- Mulch
 - Over plants in fall after top growth dies down
 - Remove as soon as growth starts in spring
 - Press plants back into the soil if heaving occurs



Life Cycles

- See Montguides
 - Annuals
 - Biennials and Perennials



Questions