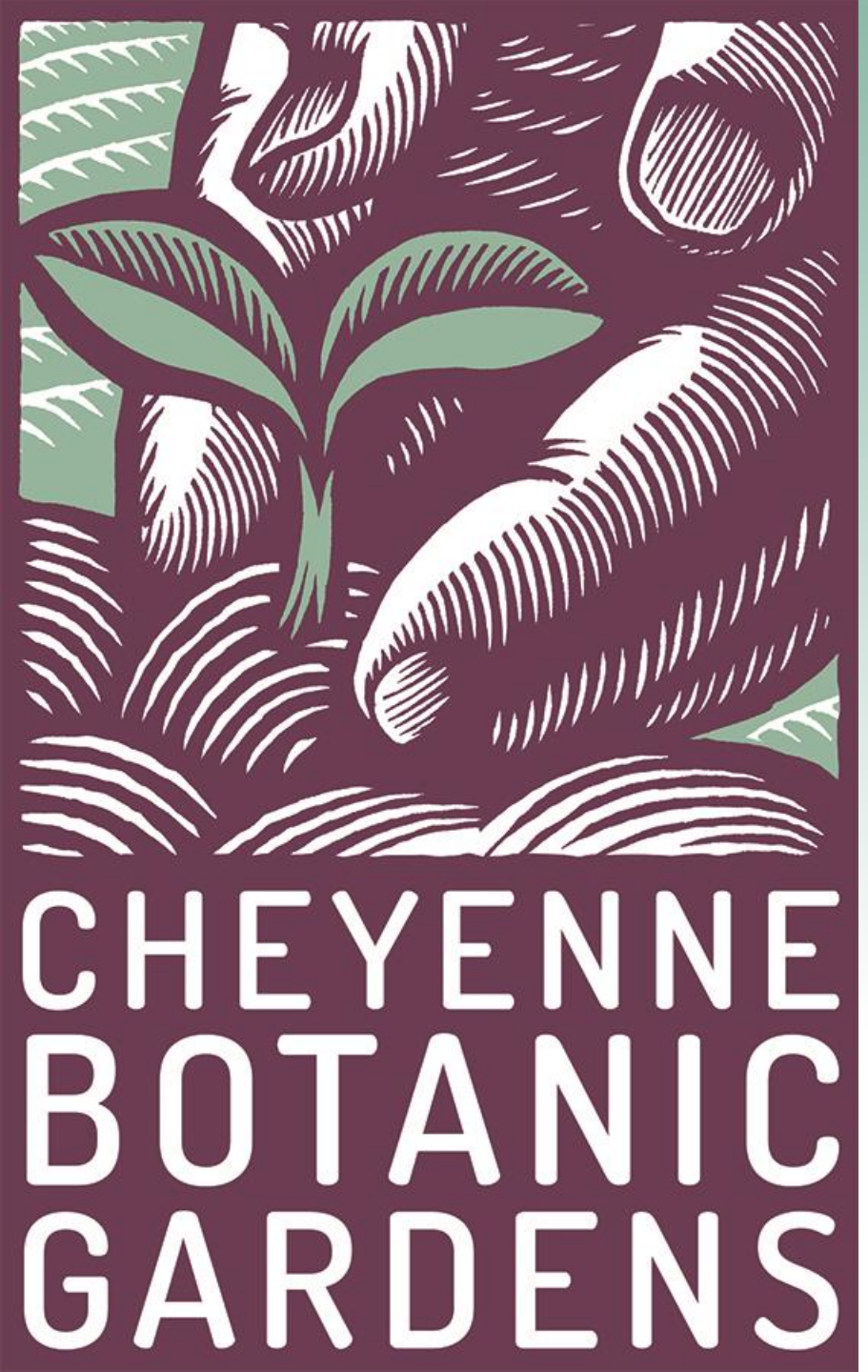
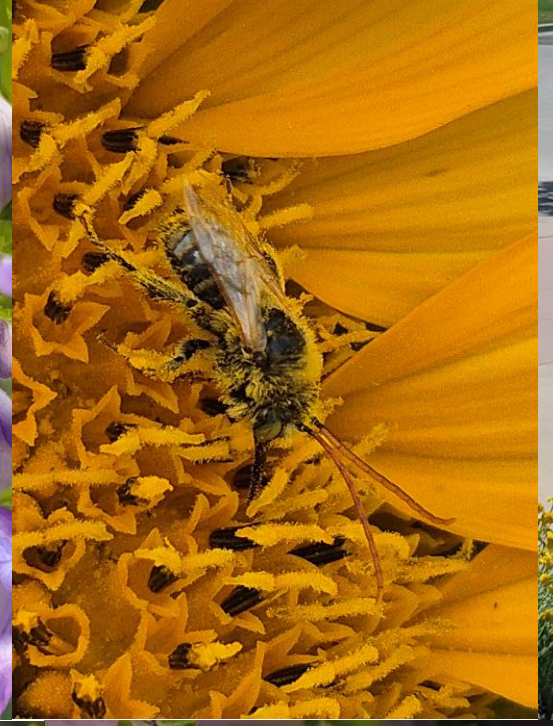


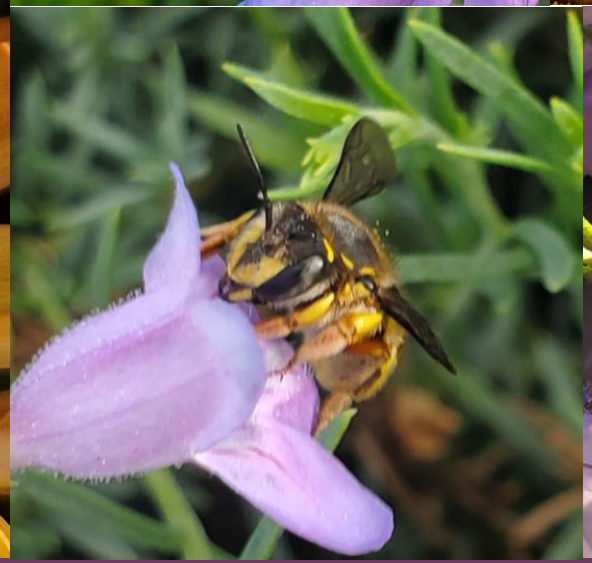
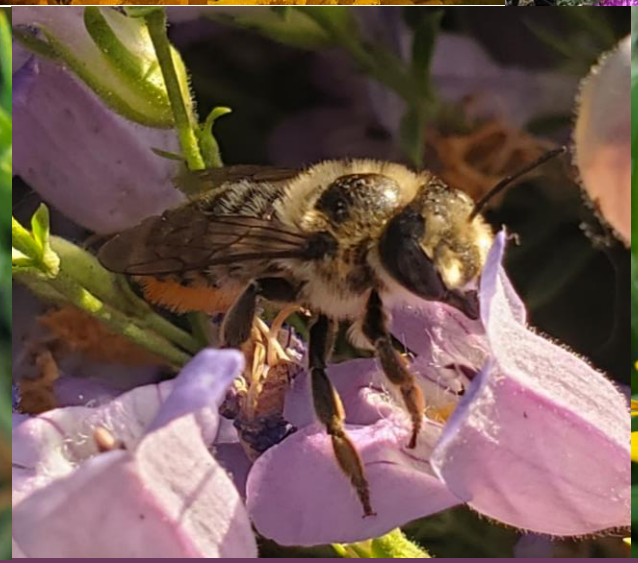
Basic Garden Design

(for pollinators)

Isaiah Smith



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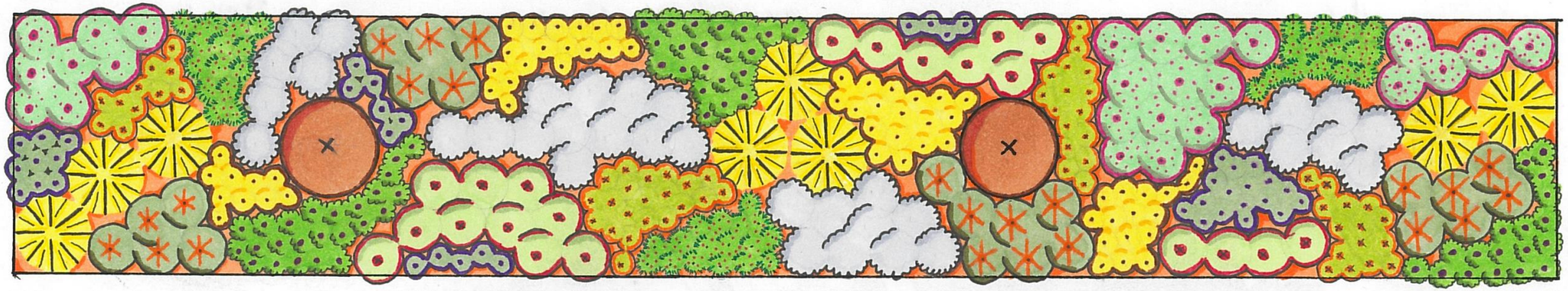

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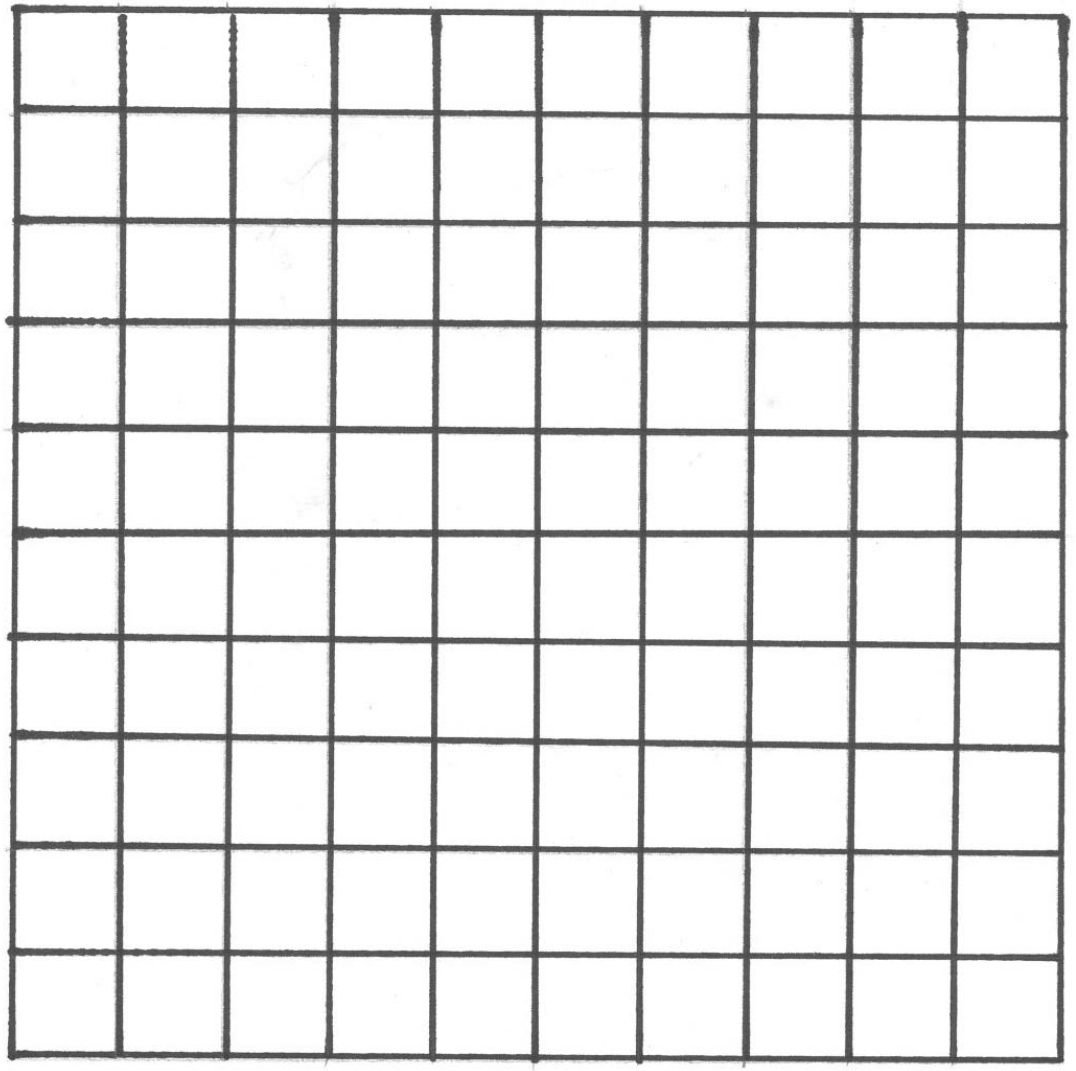

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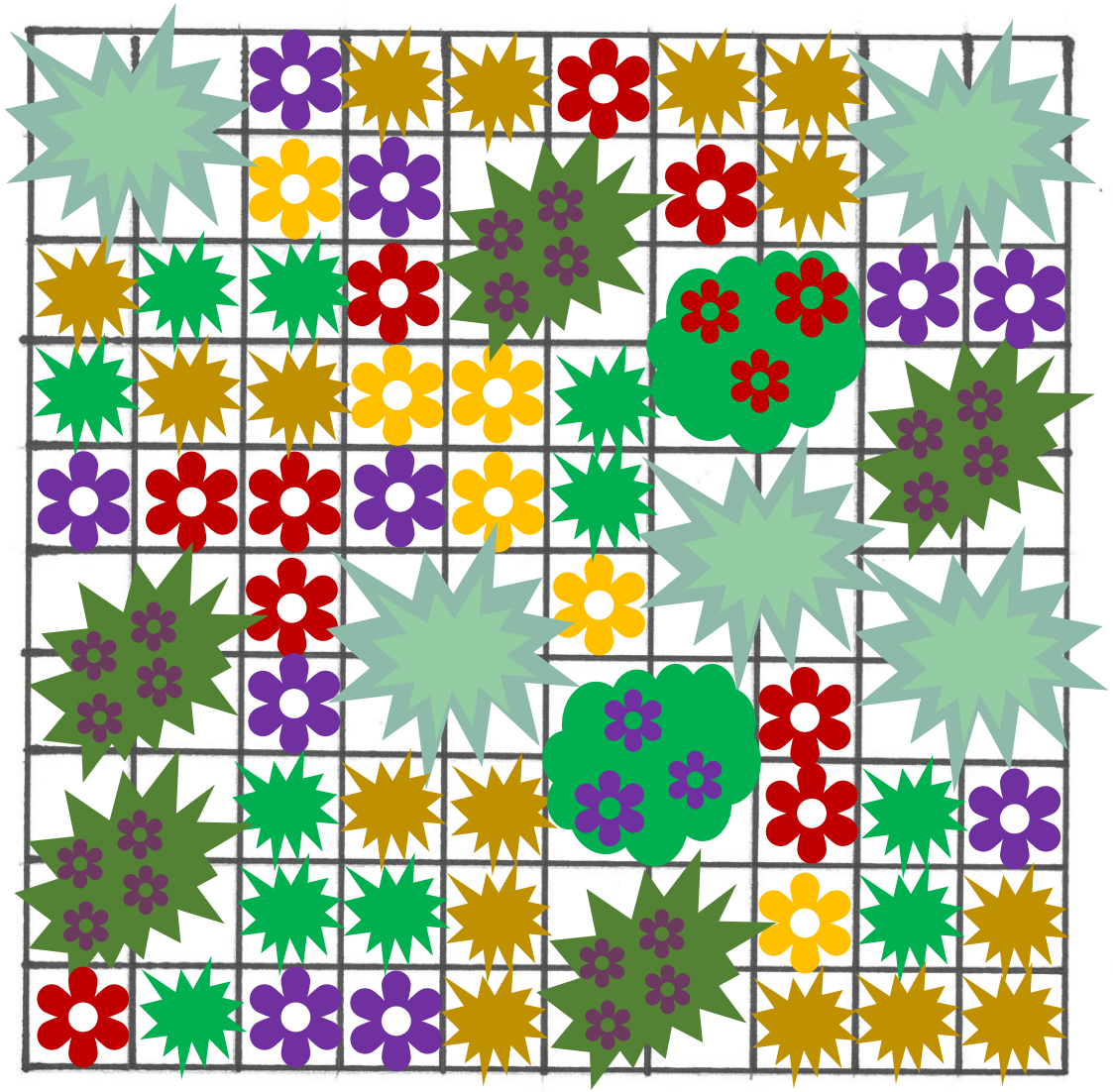

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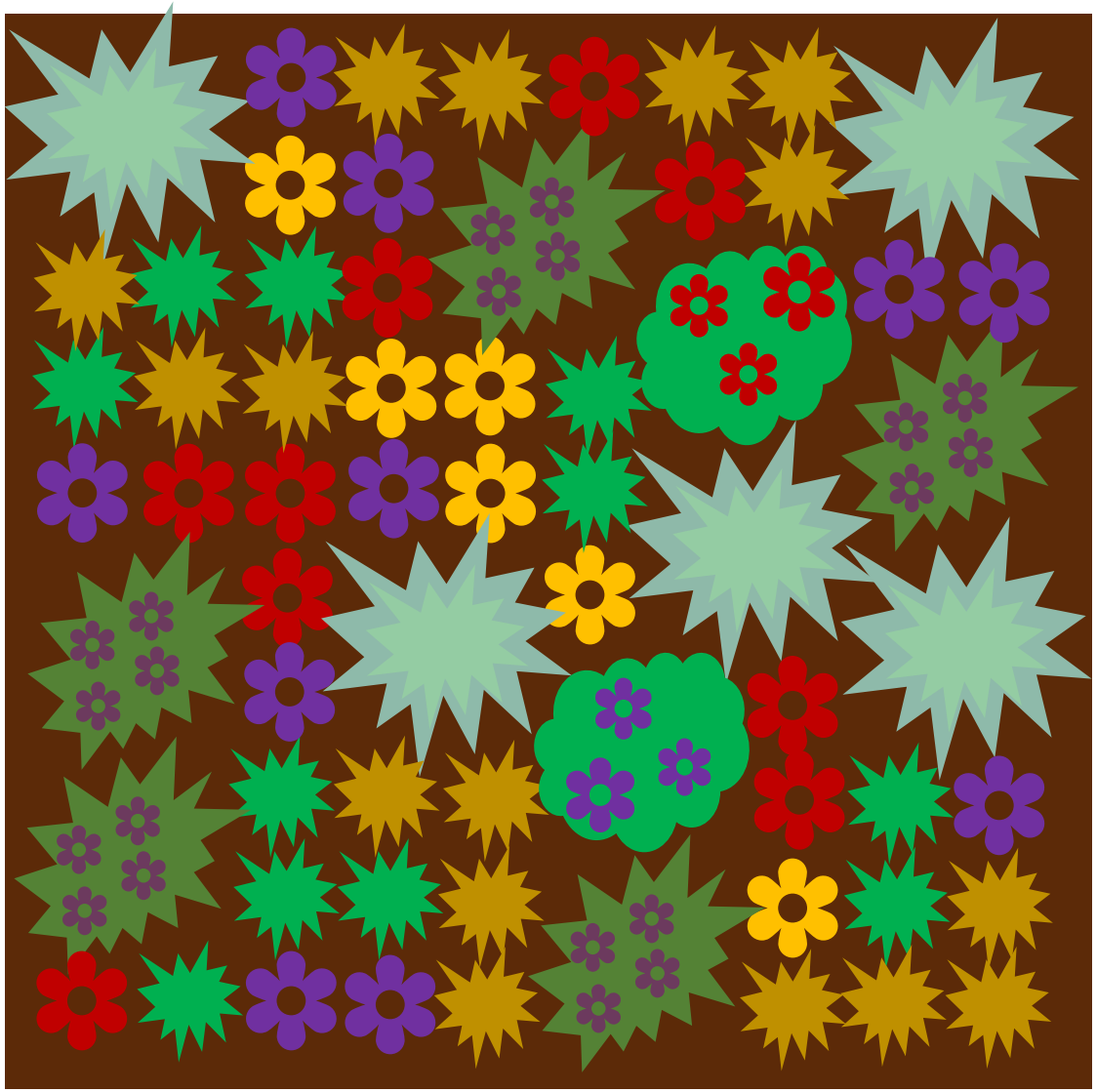

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Why Design a Garden?

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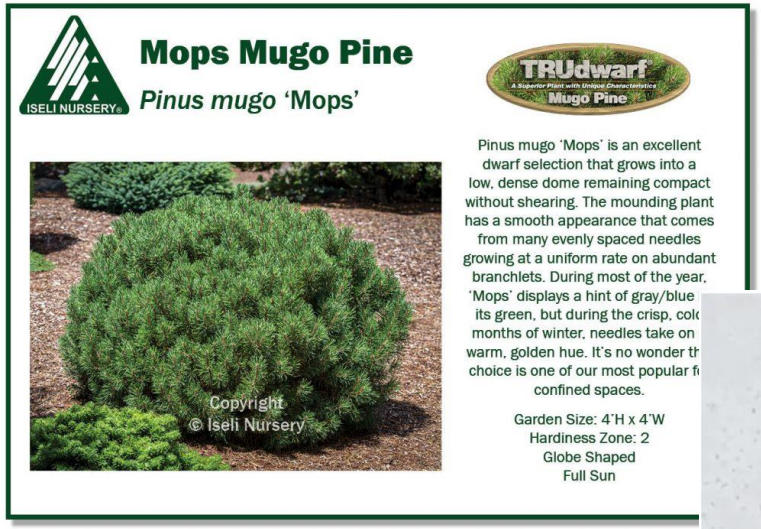

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Factors for Pollinator Habitat

Food Source

- All season long

Water Source

Shelter

You

- Vegetables?
- Aesthetically Pleasing?
- How do you use the space?

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Food Sources

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Pollinator Syndromes

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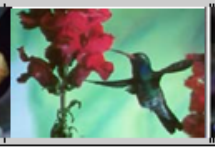
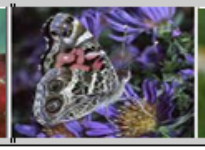
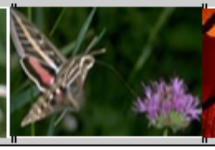
	Type of Pollinator							
Trait	**Bat**	**Bee**	**Beetle**	**Bird**	**Butterfly**	**Fly**	**Moth**	***Wind***
Color	White, green or purple	Bright white, yellow, blue, or UV	White or green	Scarlet, orange, red or white	Bright red and purple	Pale,or dark brown, purple	Pale red, purple, pink or white	Pale green, brown, or colorless
Nectar guides	None	Present	None	None	Present	None	None	None
Odor	Strong and musty; emitted at night	Fresh, mild, pleasant	None to strongly fruity or foul	None	Faint but fresh	Putrid	Strong sweet; emitted at night	None
Nectar	Abundant; somewhat hidden	Usually present	Sometimes present	Ample; deeply hidden	Ample; deeply hidden	Usually absent	Ample; deeply hidden	None
Pollen	Ample	Limited; often sticky, scented	Ample	Limited	Limited	Limited	Limited	Abundant; small, smooth
Flower Shape	Bowl shaped; closed during day	Shallow; with landing platform; tubular	Large and bowl-shaped	Large, funnel -like; strong perch support	Narrow tube with spur; wide landing pad	Shallow; funnel-like or complex with trap	Regular; tubular without a lip	Regular and small
								

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Bloom Calendar

Genus	Specific Epithet	Variety	April					May					June					July					August					September				

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Linum lewisii
Blue Flax
May

Gaillardia sp.
Blanket Flower
July-Sept

Echinacea angustifolia
Coneflower
July

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Bloom Calendar

Genus	Specific Epithet	Variety	April					May					June					July					August					September				
Echinacea	angustifolia																		x	X	x											
Gaillardia	sp.																x	x	x	x	X	X	X	X	X	x	x	x	x	x		
Linum	lewisii								x	X	x																					

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Gaillardia	sp.																x	x	x	x	X	X	X	X	X	X	x	x	x	x		
Linum	lewisii								x	X	x																					

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Linum lewisii
Blue Flax
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Gaillardia sp.
Blanket Flower
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				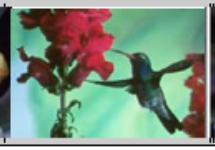	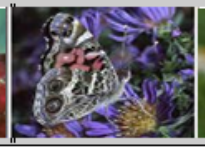		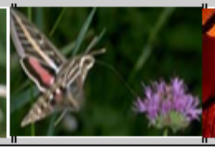	

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Water Sources

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Bees and butterflies drinking safely from a shallow pollinator water stations filled with fresh water.

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Photo: Buddha Bee Apiary

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Nesting Material

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How to Create Habitat for Stem-nesting Bees

WINTER

Leave dead flower stalks in-tact over the winter.

SPRING

Cut back dead flower stalks leaving stem stubble of varying height, 8 to 24 inches, to provide nest cavities.

Female bees find cut or naturally-occurring open stems, start a nest, then lay an egg on the pollen balls. Larvae eat the pollen.

SUMMER

New growth of the perennial hides the stem stubble.

Bee larvae develop in cut dead stems during the growing season.

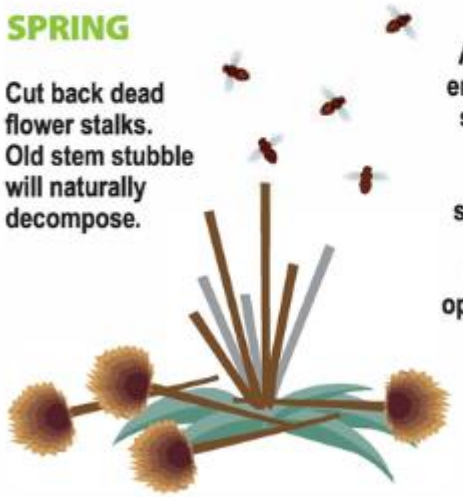
FALL

WINTER

Bees hibernate in stems during the winter.

SPRING

Cut back dead flower stalks. Old stem stubble will naturally decompose.



Adult bees emerge and start nests in newly cut dead stems or in naturally-occurring open stems.

Graphics and content: Colleen Satyshur, Elaine Evans, Heather Holm, Sarah Foltz-Jordan

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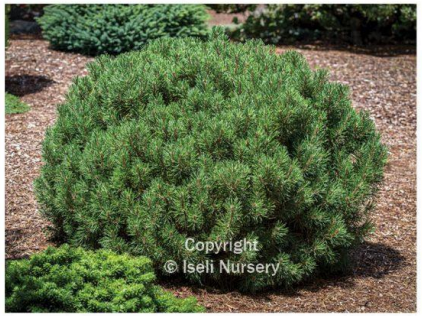
Mops Mugo Pine

Pinus mugo 'Mops'



Garden Size: 4'H x 4'W
Hardiness Zone: 2
Globe Shaped
Full Sun

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Basic Design Principles:

Form

Texture

Color

Scale

Repetition

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Design Element: Form

The overall shape of a feature. Can include plants, hardscapes, art, etc.

Plant forms allow you to change the way a plant looks in the design *and* can change how it functions in the design.

Common Plant Forms:

- Round
- Oval
- Vase
- Pyramidal
- Columnar
- Weeping

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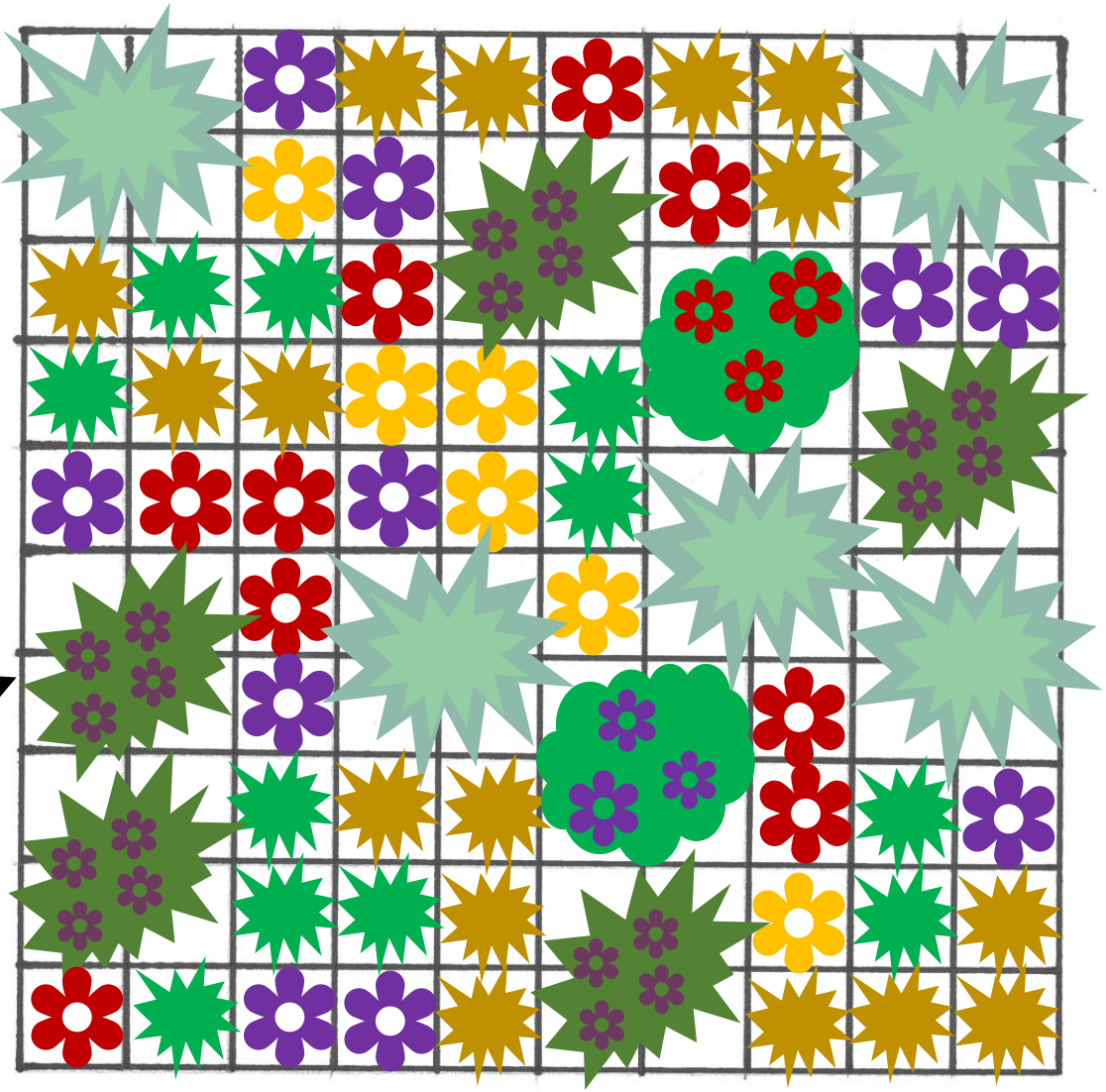

Columnar Grass

Low (<6") Groundcover

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Design Element: Texture

The general look of an individual element. In plants, foliage mostly contributes to texture.

Texture can change depending on distance from element.

Texture is coarse, medium, or fine in appearance.

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Coarse

Medium

Fine

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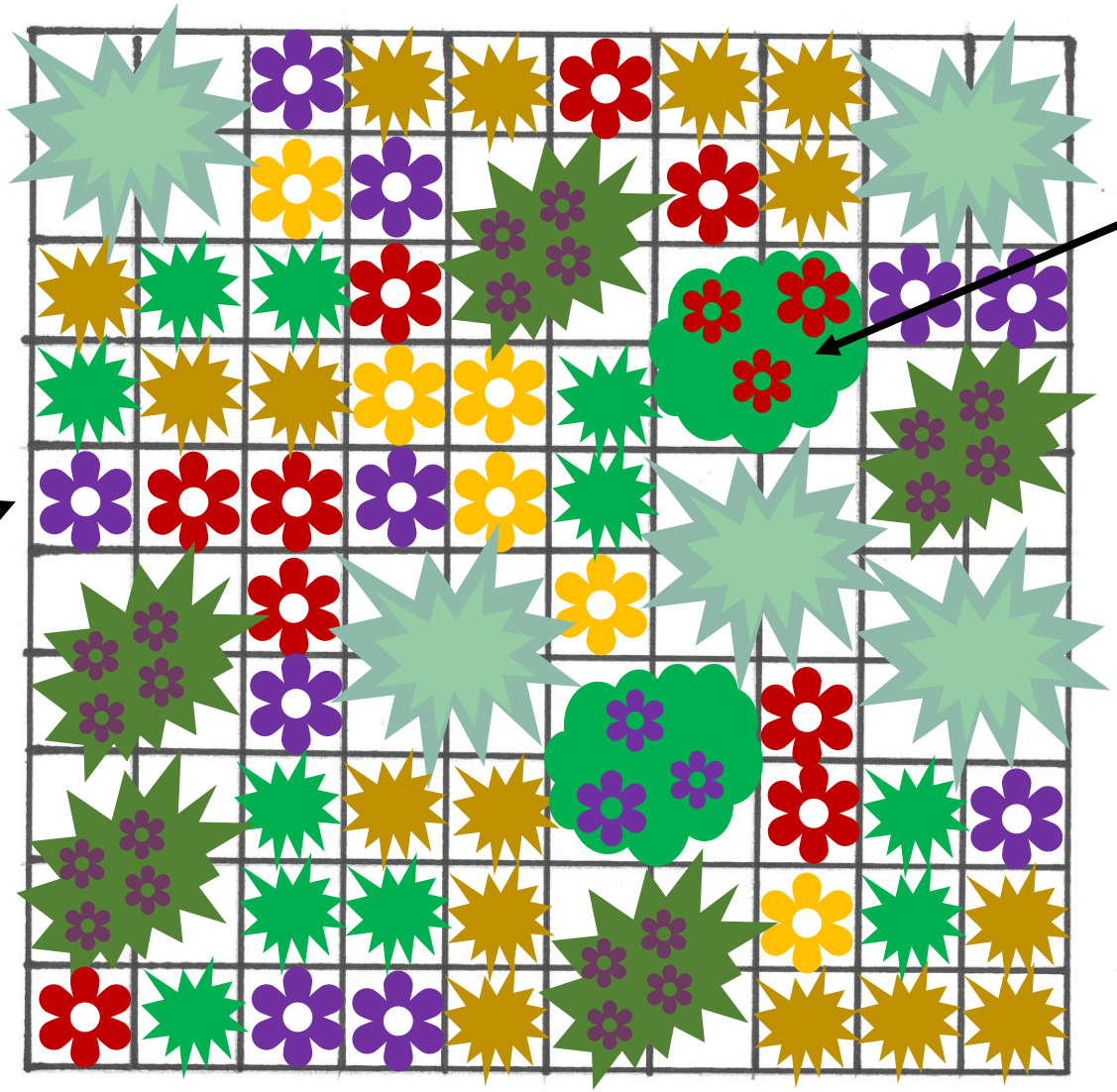

Coarse-leaved Shrub

Narrow Leaf Perennial

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Design Element: Color

Color can relate to flowers, foliage, and to non-plant elements in a design.

Color can change over the course of a season.

Common color schemes:

Warm colors – reds, oranges, yellows
Cool colors – blues, purples, greens
Contrasting colors – blue/orange, yellow/purple, red/green
Monochromatic – one color

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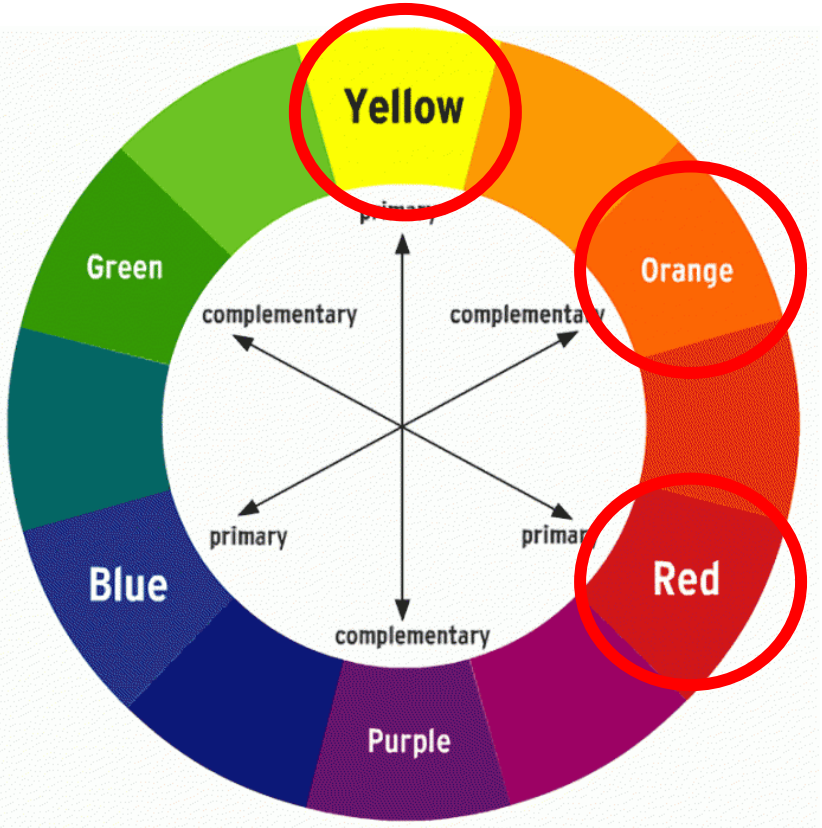

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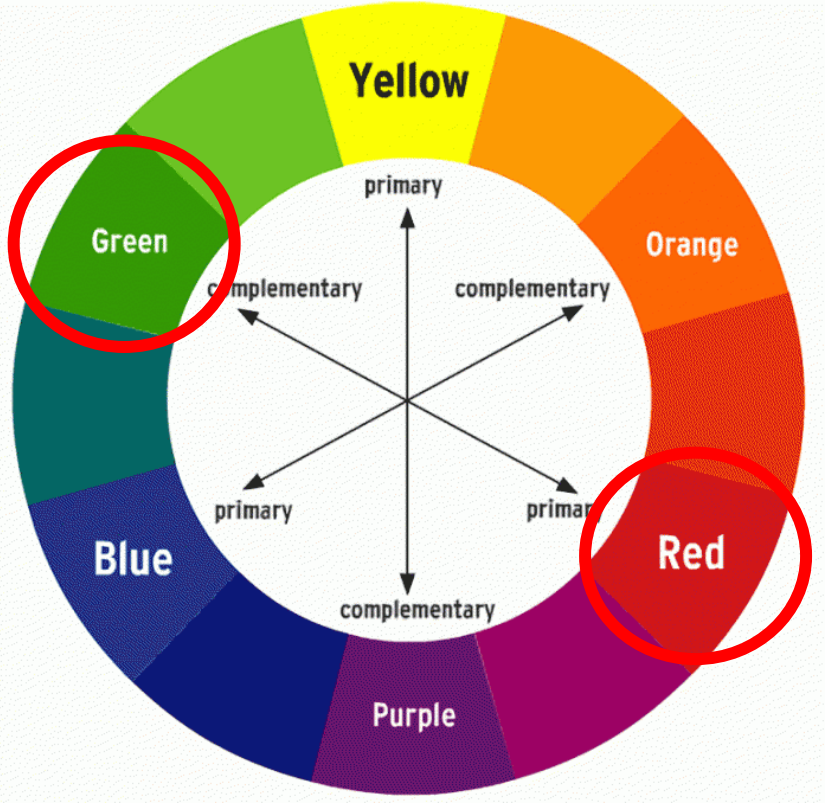

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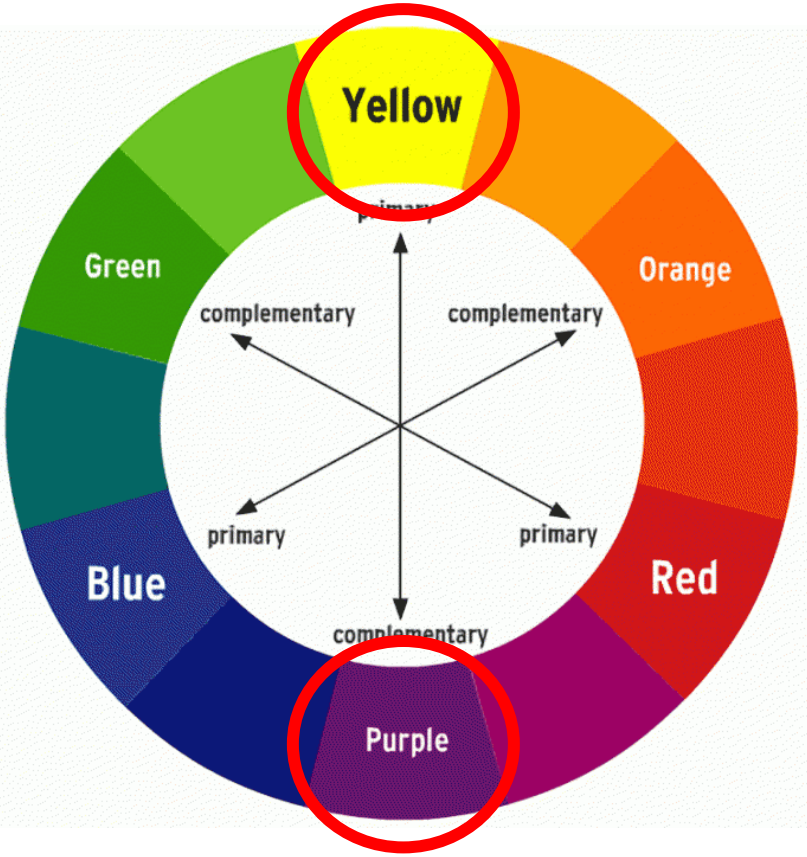

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				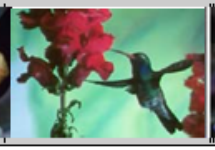	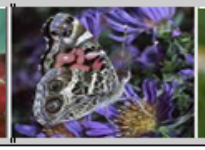		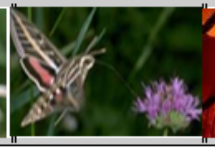	

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Design Element: Scale

Scale is a relation of one or more design elements to another. Scale can change the feeling of a space and the perception of relative size.

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Design Element: Repetition

Repetition is the repeated use of design elements to create a sense of pattern or rhythm in the overall design.

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Denver Botanic Gardens
Ornamental Grasses Garden

Isaiah Smith *ismith@cheyennecity.org*

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SummerHome Garden

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SummerHome Garden

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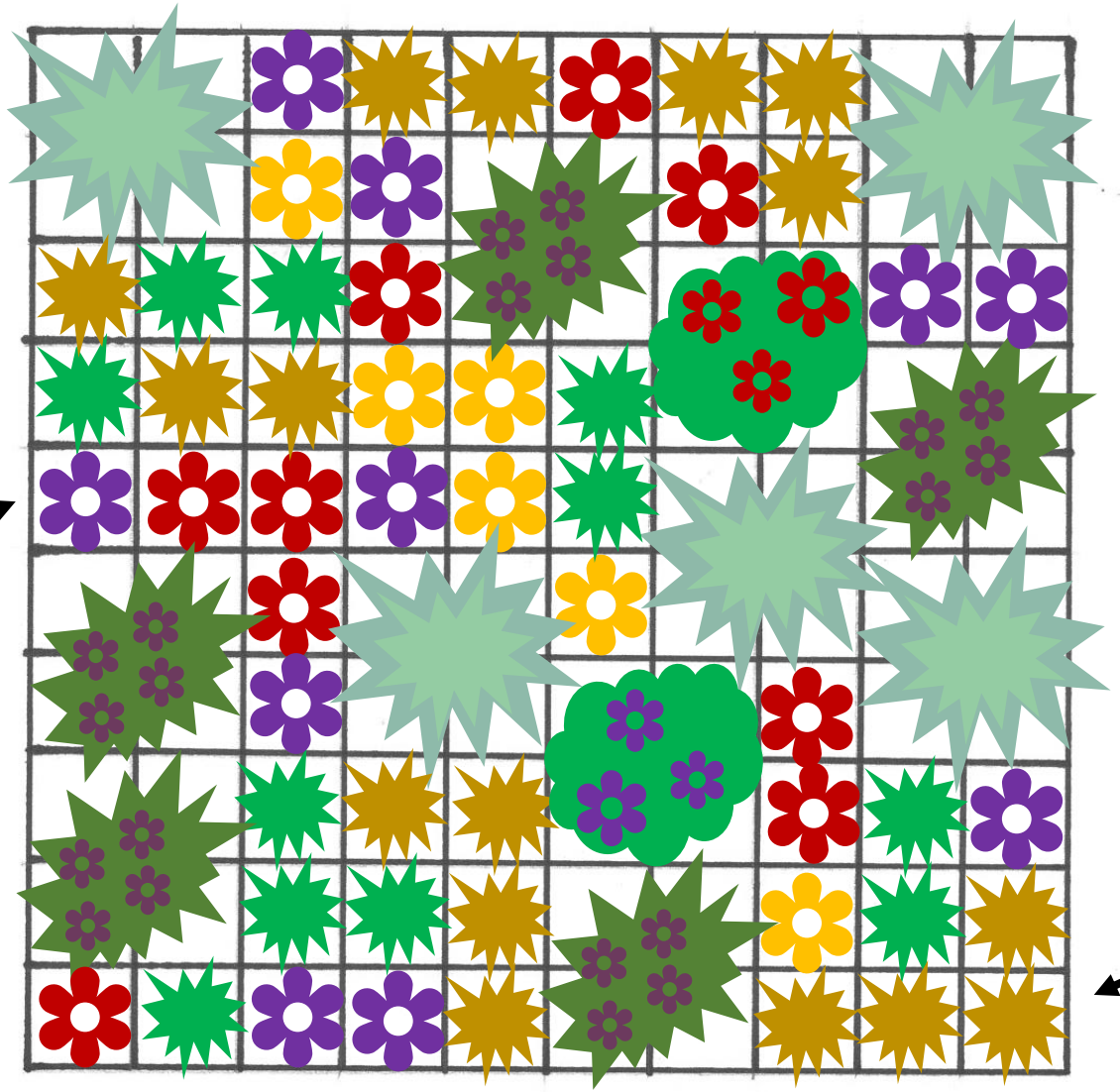

Repeated use of same color

Winter Interest Ornamental Grass

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Photo: Iseli Nursery

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