

Welcome/ Staff/Volunteer Names
Introduction: **Today’s Topic-Spring Blooming Flowers** **Question: What makes a flower?**

Icebreaker/ **Spring Sharing**-Have the students take turns saying their name and a favorite flower,
Game: or their favorite thing about spring.

Background/ Using a flower cross-section diagram and live flowers, show students the **parts of a flower**.
Exploration: Talk about each part and its function. Show how each set of parts forms a ring.

sepals-cover and protect bud (1st/outermost ring-color green)

petals-attract pollinators (2nd ring-color of choice)

stamens-have anthers/pollen (3rd ring-color yellow or orange)

filament-supports anther

anther-holds pollen

“pistil”-has ovules/seeds in chambers (4th ring-color of choice)

style-stalk on top of pistil, supports stigma

stigma-top of pistil, receives/catches pollen (may be sticky)

Optional: **“Tepals”**-the sepals and petals look alike in some flowers, especially lilies.

Pollinators-Explain that colored petals, scent, and nectar attract bees to flowers.

Tell how pollen is spread by pollinators and collected on bee legs (show picture).

Mention **nectar guides**-patterns on petals (spots or lines) or shape of petals or flower that help bees find nectar and pollen.

Some guide patterns are seen only by bees and butterflies in ultraviolet light.

Game: **Flower Frenzy**

Activity: **Flower models**-Students use craft supplies to make a flower to take home.

Prepare to We will explore the area outside for to look for spring plants in bloom.
go Outside: As winter has changed into spring, things in nature have changed.
Can you think of some changes we will see?

OUTDOOR Visit nearby wooded areas or nature center gardens. Look for wildflowers.
EXPLORATION: Talk briefly about spring ephemeral (woodland wildflower) ecology.
(Live entire life cycle before trees leaf out-get more sun, pollinators can find them.)
Mention the **importance of plants**. What food doesn’t come from plants?
(even meat-eating animals eat plants; their prey survives on plants)

Spring changes-Look, listen, feel. What has changed since winter?
Discuss eggs, animal babies, warmer temperatures, plant growth, etc.

Games: Play “Duck, Duck, Goose” with flower part names.

Closing: Discuss the students’ favorite flowers & other signs of spring seen.

Send Off: Goodbye! **Take Home:** Flower model

Vocabulary

Sepal, petal, stamen, anther, filament, pistil, style, stigma, tepal, nectar guides, ultraviolet light

Background on Flower Color and Pollinators

Red and Orange flowers attract hummingbirds; bees can't see red and orange.

Blue, yellow, and lavender flowers attract bees and butterflies.

Butterflies are considered to have the widest visual range of any animal, seeing most of the spectrum.

Dark Red/Maroon flowers attract flies, sometimes beetles (smell like rotten meat!).

White flowers may be pollinated by moths or bats. Some smell stronger at night.

Flower References

http://light.gotdns.com/kris/wildflowers/Introduction_to_Flowers.html General information and images of flower parts, shape, color, and arrangement, and pollinator interactions

http://www.cals.ncsu.edu/course/ent591k/nectar_guide.html image of nectar guides in normal AND ultraviolet spectrum Search Google for "nectar guides" for even more interesting information.

<http://webexhibits.org/causesofcolor/17C.html> normal and ultraviolet light images of black eyed susan and Cleopatra butterfly

Forey, Pam. 1994. *Science Nature Guides: Wild Flowers of North America*. Thunder Bay Press, San Diego. Wildflower pictures/descriptions by habitat region, experiments with plants, and flower pressing and drying. Good take home information.

Iowa's Plants. 1994. Iowa Association of Naturalists Booklet Series. ISU Press, Ames, IA. (IAN-301- -307) *Iowa's Spring Wildflowers* (IAN-301) <http://www.extension.iastate.edu/pubs/wi.htm>

Runkel, S.T., and Bull, A.F.. 1979. *Wildflowers of the Iowa Woodlands*. Iowa State University Press, Ames. Good photographs, basic information, and food/medicinal uses of each plant.