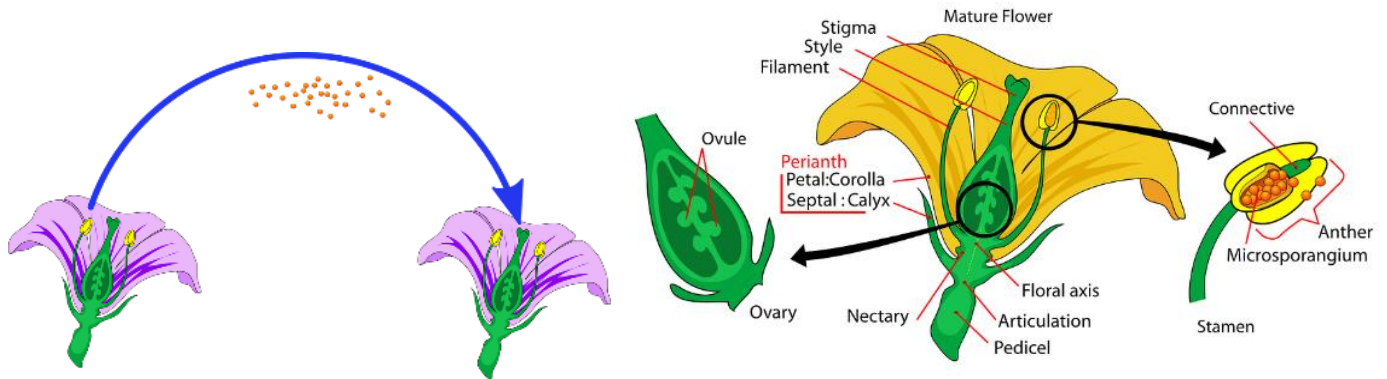




ANIMAL POLLINATION



Pollination is the way that plants **reproduce**, or make new seeds and plants. Like humans, plants have male and female parts which are needed to reproduce. The difference with plants is that a single flower contains both the male and female parts. The male part of the flower, the **anther** (part of the **stamen**), makes pollen. Pollen looks like a fine powder. The egg is made by the female part of the flower, the **pistil**, which is part of the **stigma**. Pollination occurs when the pollen is moved from the male part of the flower to the female egg to create a seed.



Pollination can occur in some plants by movement of the pollen in wind and water. About 12% of the Earth's flowering plants are wind-pollinated, including many grasses, grains, and most **conifers** (trees that have needle-like leaves and produce cones).

Some characteristics of wind-pollinated plants:

- usually small size
- unscented with no nectar
- lots of pollen that is light and easily airborne
- stamens and stigmas are exposed to the wind



Grasses



Conifer



Grain (wheat)



Water pollination occurs when pollen floats on the surface of the water until it drifts into a flower. This occurs in only about 2% of plants.



Water pollination

Most pollination occurs with the help of **animal pollinators**. There are many different animal pollinators including insects, birds, and even small mammals. Some of the most common pollinators are bees, butterflies, moths, ants, flies, beetles, wasps, birds, and bats.



Animals that fly from flower to flower are the best at transporting pollen. They often visit flowers to search for food. Animals get energy for their survival from the sugars in flower nectar and from nutrients such as protein, fats, vitamins, and minerals contained in the pollen. Bees are especially good pollinators because they transfer pollen as they visit many flowers to drink the sweet nectar. Some bees even have little baskets on their legs to carry pollen! Did you know that bananas are pollinated by bats? Chocolate, which comes from the cacao plant, is pollinated by tiny flies!

Pollinators are a “keystone” species. This means that many other species, including humans, depend on them to survive. Most plants depend on animal pollinators to reproduce and produce fruits and vegetables. Scientists estimate that 80% of all flowering plants and 75% of all the crops we eat depend on animal pollinators.

One out of every three bites of food that we eat depends on animal pollinators!

In addition to providing food, pollinators help to maintain healthy **ecosystems** by keeping our plants healthy. An ecosystem is a community of organisms living together including their physical environment. Plants clean the air, prevent soil erosion, and support wildlife. Sadly, the population of many pollinators is decreasing. This is thought to be due to pollution, loss of habitat, and climate change.

Earth Day will be celebrated throughout the world on April 22nd. Earth Day is dedicated to the promotion of healthy lifestyles and policies to protect and sustain the environment for people and wildlife. Earth Day reminds us that our planet is fragile and that we all have a responsibility to protect it. One thing we can do to help our planet and the ecosystems of the world is to protect and help our animal pollinators.





HAPPY EARTH DAY!

ACTIVITY #1: Create a pollinator garden to help the pollinators in your neighborhood! This can be done by planting flowers in your yard or even in pots on a small porch or balcony! Some plants that are known to attract pollinators are listed below.



Black-eyed Susan



Chives



Common sunflower



Coreopsis



Echinacea



Potentilla



Rose of Sharon



Shasta daisy

For more tips on creating a pollinator garden in Northern Nevada visit the Northern Nevada Horticulture website for local, science-based gardening education <https://www.growyourownnevada.com/attract-pollinators-to-your-garden/>

ACTIVITY #2: Go on a pollinator scavenger hunt!

Spring and summer in Northern Nevada are great seasons to scout for pollinators. You can search for them in your yard or at a local park. The next time you are outside, see if you can find some of these things.



Unopened flower bud



Bumblebee



Butterfly



Blossoming tree



Flowers in bloom





Hummingbird



 Moth

 Bat

 Pollen in the air

 Pollen on a water surface

ADDITIONAL RESOURCES

Books Available from the Washoe County Library System:

[*The Bat Book*](#) by Charlotte Milner

[*Butterflies: Pollinators and Nectar-Sippers*](#) by Adele D. Richardson

[*Earth Day*](#) by Margaret McNamara

[*Earth Day*](#) by Joanna Ponto

[*Earth Day - Hooray!*](#) by Stuart J. Murphy

[*Every Day is Earth Day*](#) by Jane O'Connor

[*Every Day is Earth Day: A Craft Book*](#) by Kathy Ross

[*Earth Day: Keeping Our Planet Clean*](#) by Elaine Landau

[*Flowers*](#) by Melanie Waldron

[*Flowers, Fruits, and Seeds*](#) by Angela Royston

[*Flower Talk: How Plants Use Color to Communicate*](#) by Sara Levine

[*The Hive Detectives: Chronicle of a Honeybee Catastrophe*](#) by Loree Griffin Burns

[*The Honey Bee's Hive: A Thriving City*](#) by Joyce Markovics

[*Plant Reproduction*](#) by Shelly C. Buchanan

[*What's The Buzz? Keeping Bees in Flight*](#) by Merrie-Ellen Wilcox

[*You Wouldn't Want to Live Without Insects*](#) by Anne Rooney

Videos:

TED, Louie Schwartzberg, TED2011, "The Hidden Beauty of Pollination"

https://www.ted.com/talks/louie_schwartzberg_the_hidden_beauty_of_pollination?language=en

SciShow Kids, "Busy Bees" <https://youtu.be/ta154f5Rp5Y>



SciShow Kids, "Like Fruit? Thank a Bee!" <https://youtu.be/txv2k7OoY7U>

Websites:

EarthDay.org <https://www.earthday.org/earth-day-2021/>

National Audubon Society, Native Plants Database <https://www.audubon.org/native-plants>

National Institute of Environmental Health Sciences, Kids Environment - Kids Health, Our Health Depends on Pollinators <https://kids.niehs.nih.gov/topics/natural-world/wildlife/ecology/pollinators/index.htm>

Pollinator Partnership, Keep Going, Keep Growing: Pollinator-Themed Activities for Kids!
<https://www.pollinator.org/parents-and-kids>

