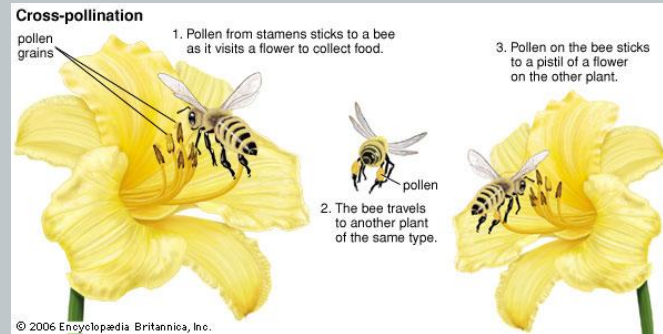


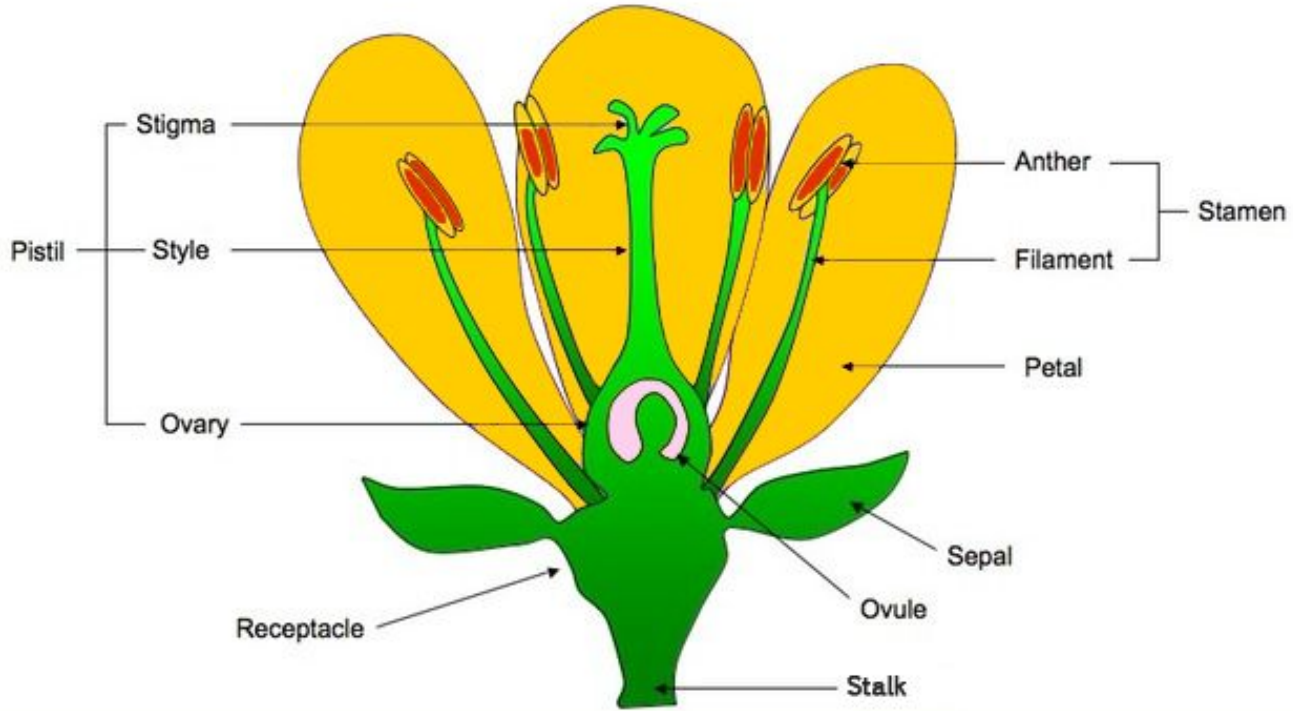
# Pollinating Orchards

# pollination

# Transfer of pollen from the stamen to the pistil

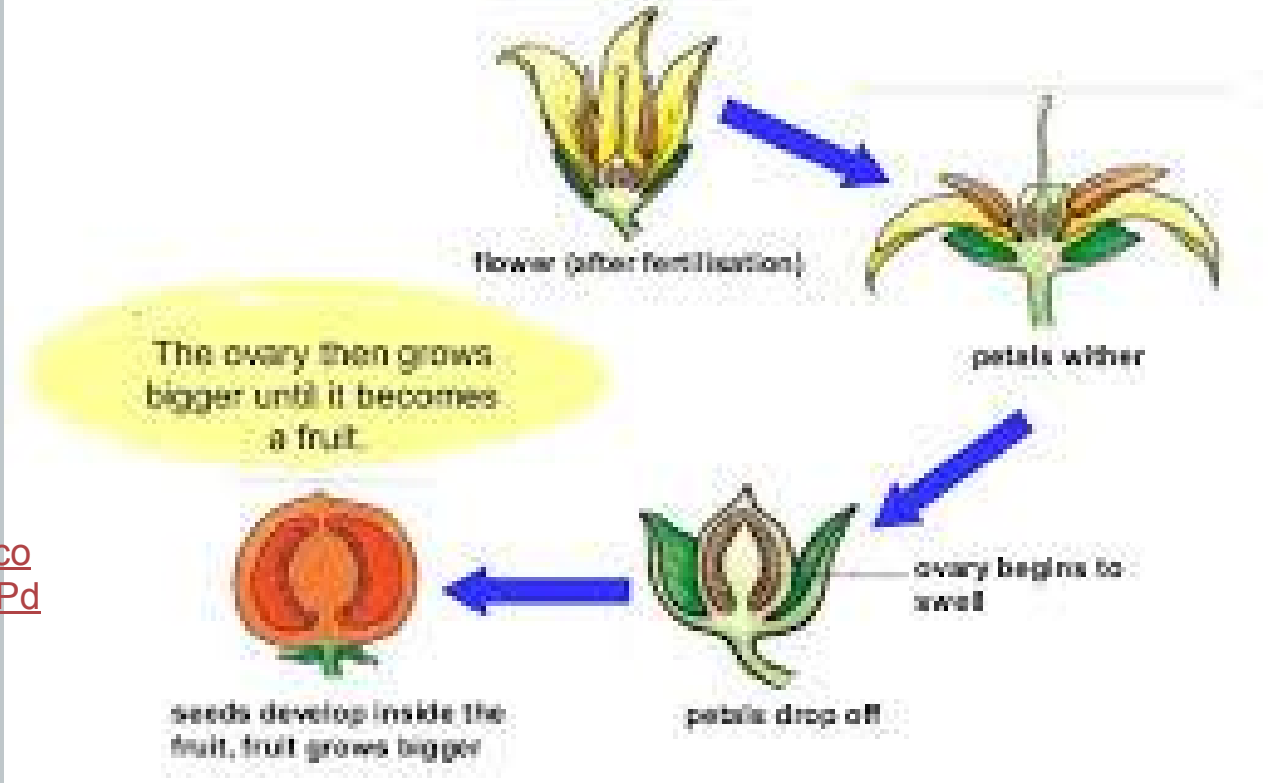


# Parts of a flower



Parts of a flower

# From flower to fruit



<https://www.youtube.com/watch?v=4ttRgMj7PdQ>

# Self Pollinating vs Cross Pollinating

Self Pollinating- Pollen from the SAME or variety plant arrives on stigma.

Cross Pollinating- Pollen from a DIFFERENT plant or variety arrives on stigma.

Most fruit trees need Cross Pollination.

# What happens?

What happens when fruit that needs to be cross pollinated is not? Or pollinated from pollen from the same tree or same variety?

No fruit ;(



# Fruits that SELF pollinate

- Peaches
- Nectarines
- Many citrus
- Sour cherries
- Strawberries
- Grapes
- pecan



# Fruits that need to cross pollinate

- Apples
- Pears
- Plums
- Sweet cherries
- Apricots
- Blackberries
- Almonds
- pistachio





# How to ensure cross pollination

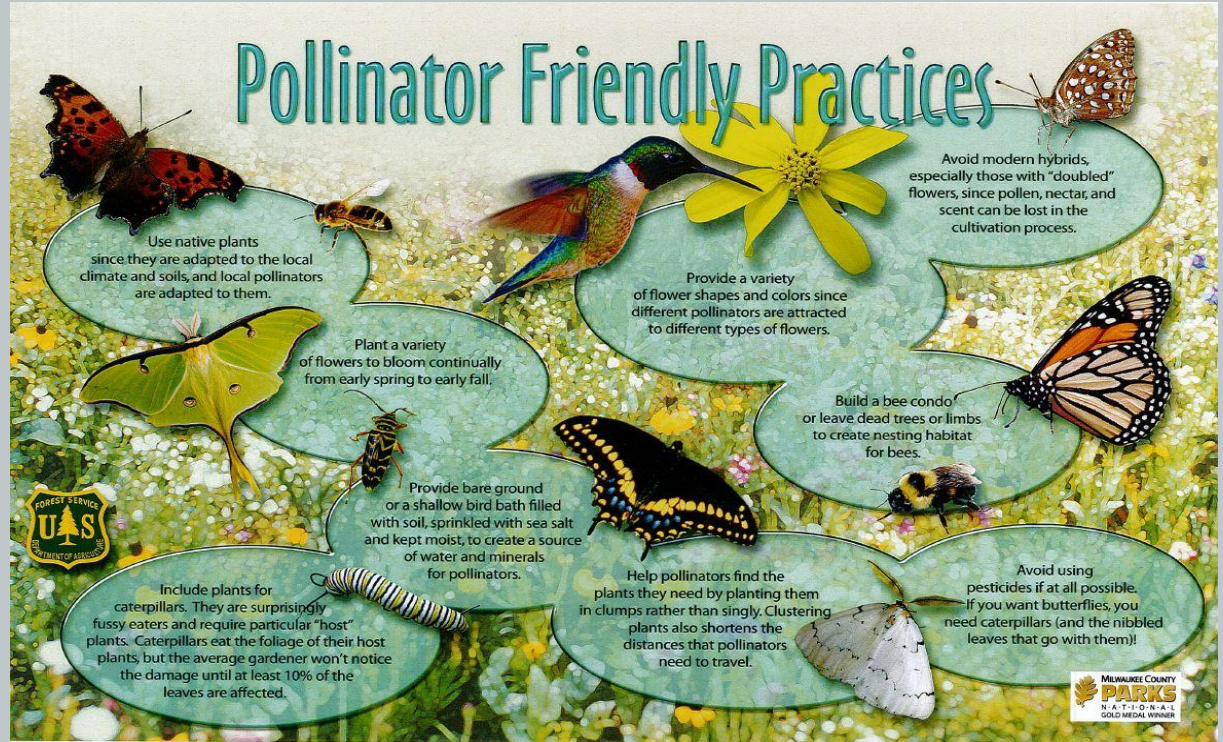
- Plants lots of variety close to each other
- Hand pollinate



- 1) List 2 culprits of bee death
- 2) Environmentalists blame bee deaths on\_\_\_\_\_
- 3) Honey bee pollination adds how many billions of dollars to US crop value?
- 4) The use of weed killers is reducing what?
- 5) Why is it important to have plant diversity on our farms?

# Who does this?- Pollinators

- Bees
- Wasps
- Beetles
- Hummingbirds/birds
- Butterflies
- Bats
- mice
- Also wind



# Bees

- The most important pollinator
- Honey bees contribute over \$15 billion to the value of U.S. crop production.
- Many of the country's crops would not exist without the honey bee at bloom time.
- Honey bees enable the production of at least 90 commercially grown crops in North America. (fruits, nuts, vegetables)
- Pollinators contribute more than 24 billion dollars to the United States economy, of which honey bees account for more than 15 billion dollars through their vital role in keeping fruits, nuts, and vegetables in our diets.

# Threats to our pollinators

Habitat loss- resource extraction, urban development, agricultural

Disease- parasites, mites, viruses

Pesticides- from major crops

Pollution- air pollution

Climate change- much of this effect is unknown



# Pollination lab