



Science Virtual Learning

**LEP Science**  
**Plant Reproduction**

May 20, 2020



LEP Science  
Lesson: May 20, 2020

**Objective/Learning Target: I can explain how plants reproduce to make more plants.**



In the previous lesson, you were introduced to two ways plants reproduce

1. Alternation of Generations
2. Flowers-pollen and ovule

Today, we are going to go into those in detail, as well as go over some other unique ways certain plants make more of their own.

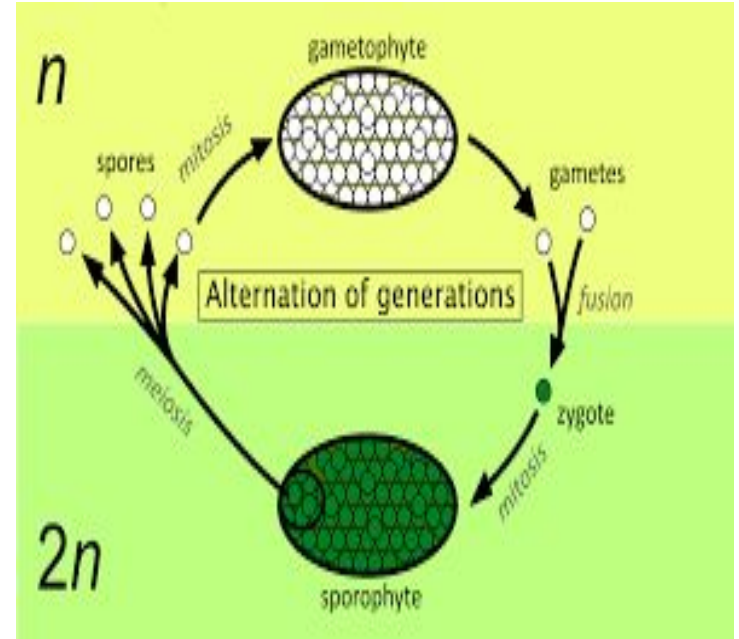
# Let's get started by reviewing Alternation of Generations:

Take notes

Look at the picture on the right.

$n$  = **haploid** or  $\frac{1}{2}$  the number of chromosomes. You will see that it is titled: **Gametophyte**. This is because this is when the **gametes** (sperm and egg) are produced.

$2n$  = **diploid** (full set of chromosomes). This occurs when fusion of the gametes occur ( $n+n = 2n$ ). This stage has been named: **Sporophyte** because this is when the plant will grow and develop.



Now, let's review the parts of the plant responsible for reproduction in Angiosperms. Take notes

### Male reproductive parts:

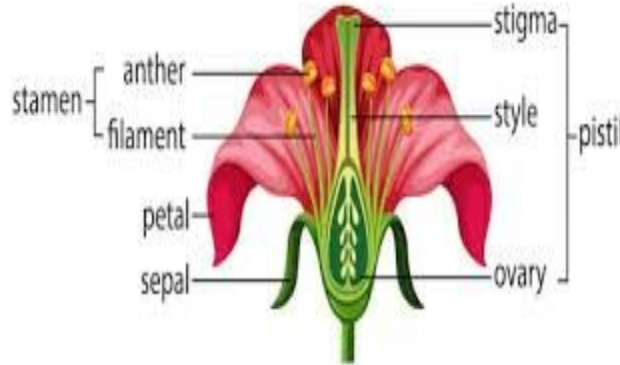
**Stamen:** consists of:

**Anther**-pollen maker

**Pollen** is the male gamete, aka sperm

**Filament**-holds anther up so pollen can be distributed.

### Common Flower Parts



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### Female reproductive parts:

**Pistil:** consists of:

**Stigma** - sticky opening that collects pollen

**Style**- tube that connect stigma to ovary

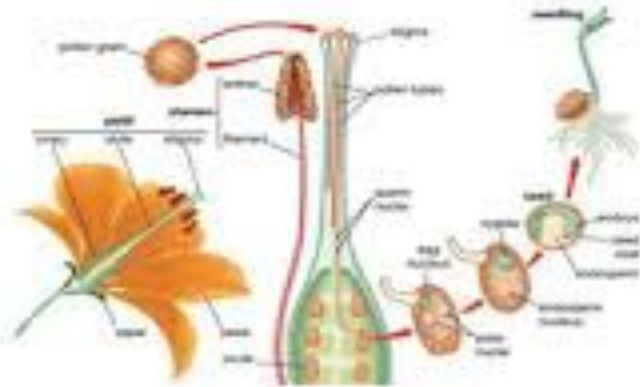
**Ovary** -contains the ovules (eggs)

Plants can reproduce in many ways: Asexually (not needing a “mate” and Sexually (pollen and egg)

Asexual Reproduction



Sexual Reproduction



Let's start with Asexual reproduction. Watch this [video](#) and take notes. When done, answer the questions to the right.

1. In Asexual reproduction, there is not a mate involved. What do each of the new plants have in common with its parent plant?
2. What is another word that is used instead of "cloning" to refer to plant asexual reproduction?
3. List the 6 types of Asexual reproduction **and** give an example of each.

1. In Asexual reproduction, there is not a mate involved. What do each of the new plants have in common with its parent plant? **They are identical to the parent plant.**
2. What is another word that is used instead of “cloning” to refer to plant asexual reproduction? **Propagation**
3. List the 6 types of Asexual reproduction **and** give an example of each.
  - a. **Tubers -- potatoes**
  - b. **Roots -- sweet potatoes**
  - c. **Bulbs -- onions, tulips, daffodils, irises**
  - d. **Runners -- strawberries, ivy, bermuda grasses**
  - e. **Stem cuttings-- sugar cane, pineapples**
  - f. **Leaves -- African Violet , most succulents**



Let's get a little more detailed about Sexual reproduction in plants--especially flowering plants.

As you watch this next [video](#), take notes and write the definitions for these words:

Stamen

Filament

Pollen

Pistil

Stigma

Style

Ovary

Sepal

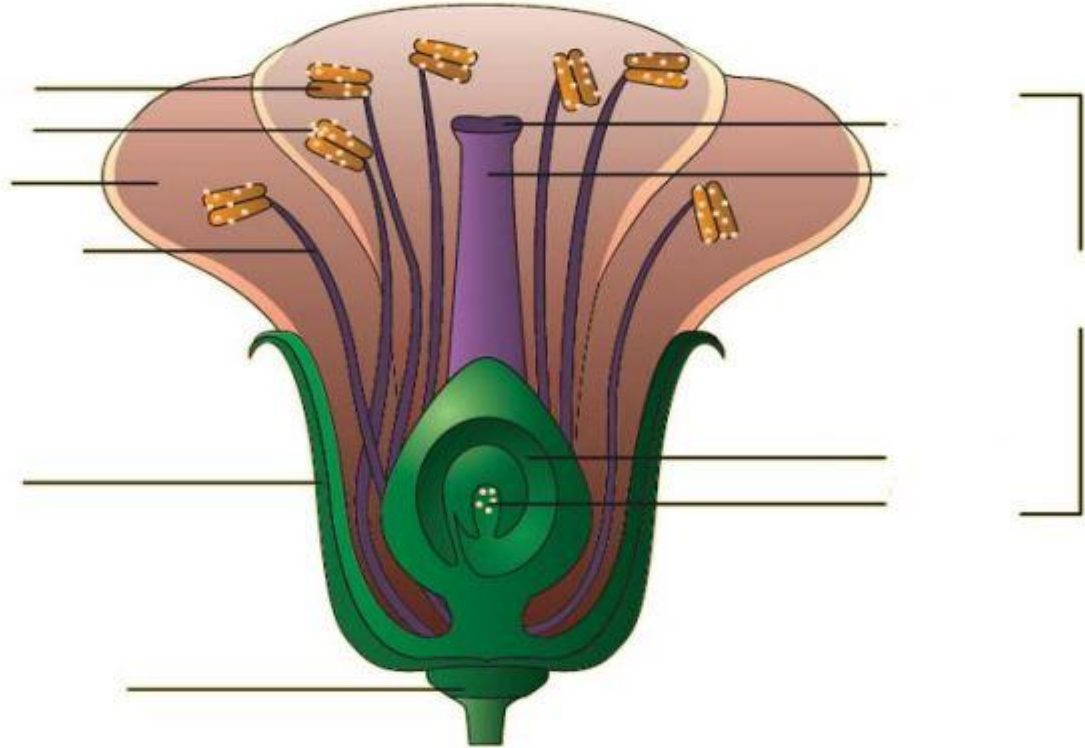
Petals

Pollinator

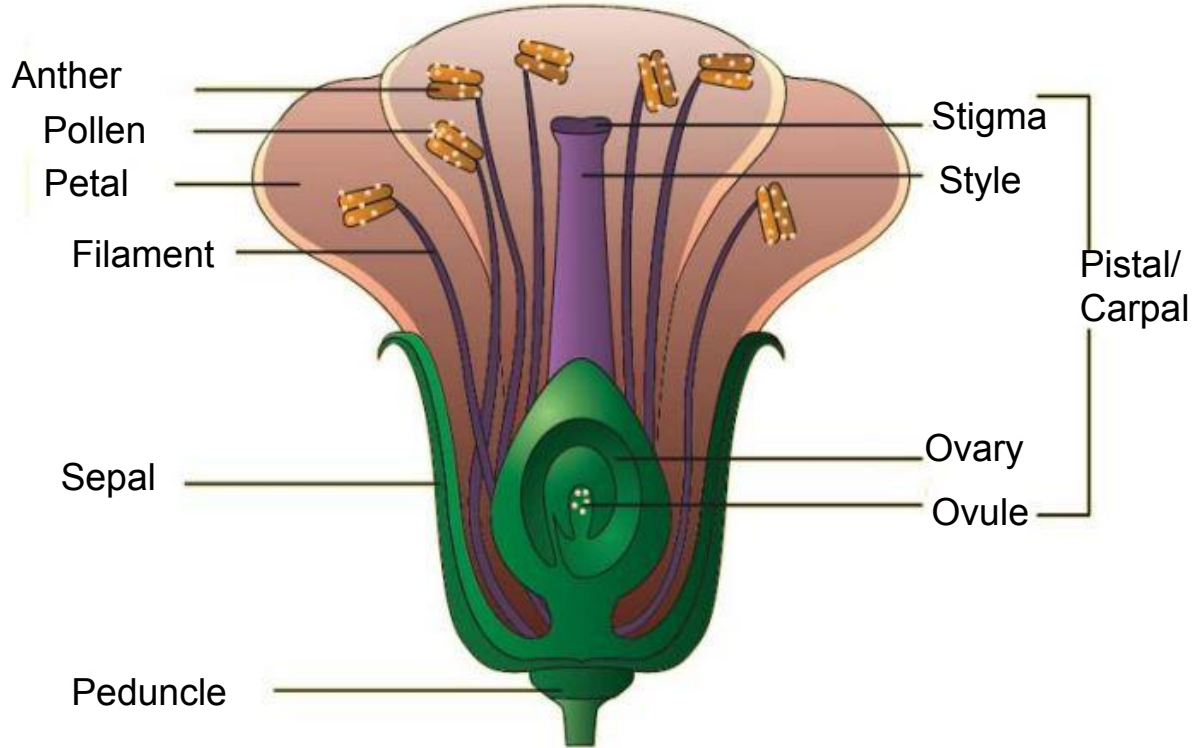
Nectar

## Using this image

1. Label the parts of the flower
2. Trace the path of pollen from the anther to the ovary.



Pollen starts on the Anther. It is then transferred (by many different ways) to the Stigma, where it sticks to a substance. From here it moves down the Style to the Ovary. In the Ovary, the pollen will fuse with an Ovule to fertilize the plant. The Ovary becomes a fruit or seed.



# How are seeds dispersed for new plants to grow?

## How Seeds Travel

### by the wind



milkweed



dandelion



maple

### by animals



beggar-ticks



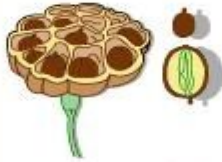
sandbur



blackberry

### by water

lotus



cattail



coconut

### by bursting

violet



jewelweed



witch hazel

### by humans

bean



wheat



cherry



Looking at the picture to the left, take some notes on the different types of seed dispersal.

Next, watch this [video](#)

In your notes, think of and write down what might be an advantage to each type of dispersal would be. Are there any disadvantages?



Advantages of each type of dispersal method is that it takes the seed away from the parent and allows for the species to propagate and spread out as opposed to staying in one general location.

Disadvantages could be that where the seed is deposited, is not suitable for growth. Some seeds may be destroyed in the process of dispersal as well.



## Additional Resources

[Biology4kids- article on plant reproduction](#)

[More on plant reproduction](#)

[Use this Quizlet to study the vocabulary](#)