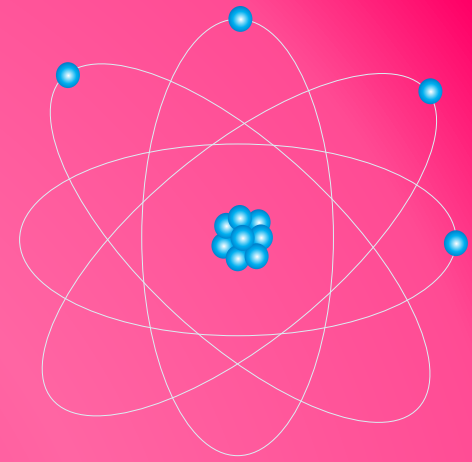




# Plant Structures and Reproduction in Flowers



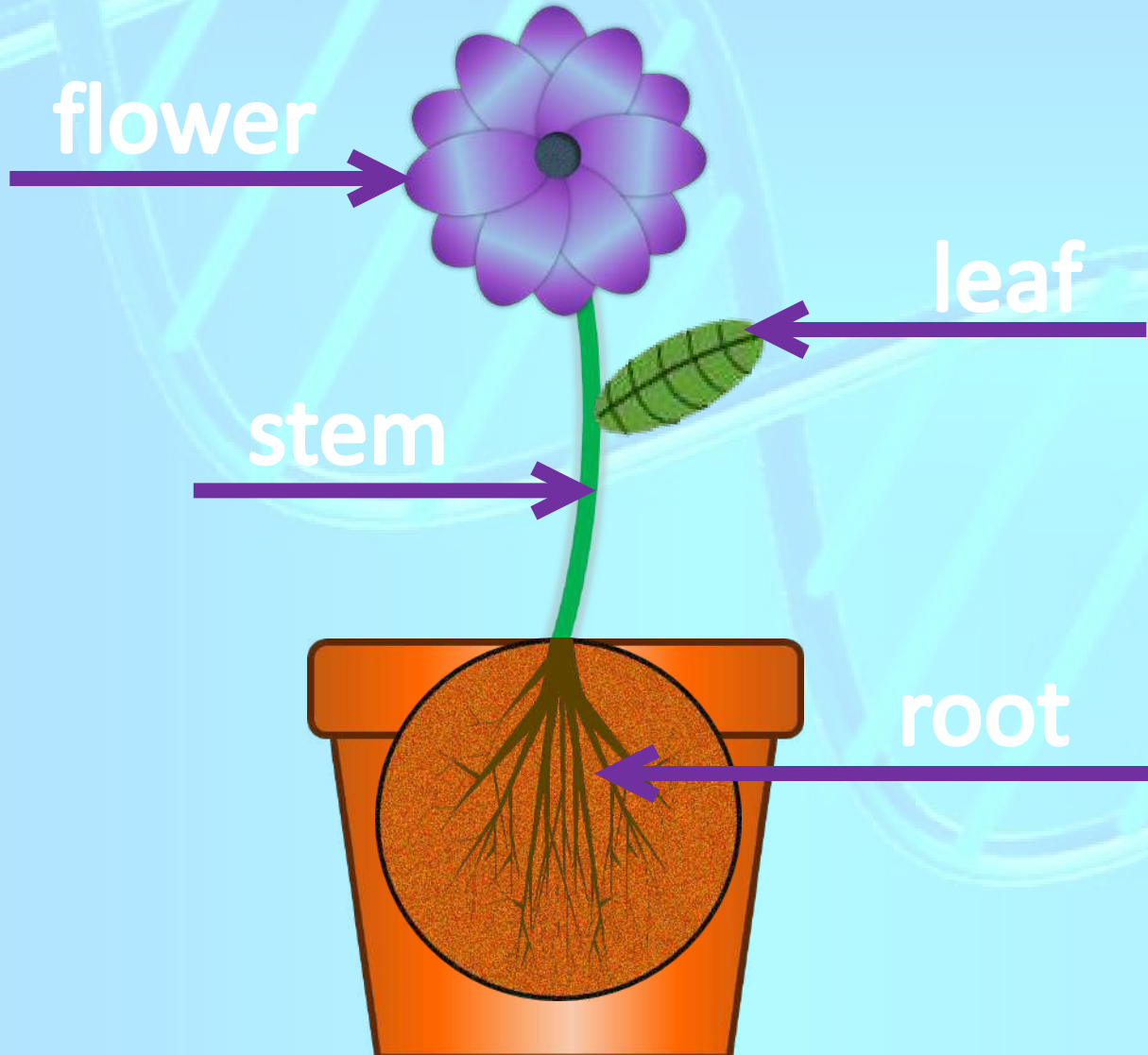
© MrJacksbackpack

## Guiding Question:

How can flowering plants reproduce?

# Plant Parts

There are four main parts of a plant.



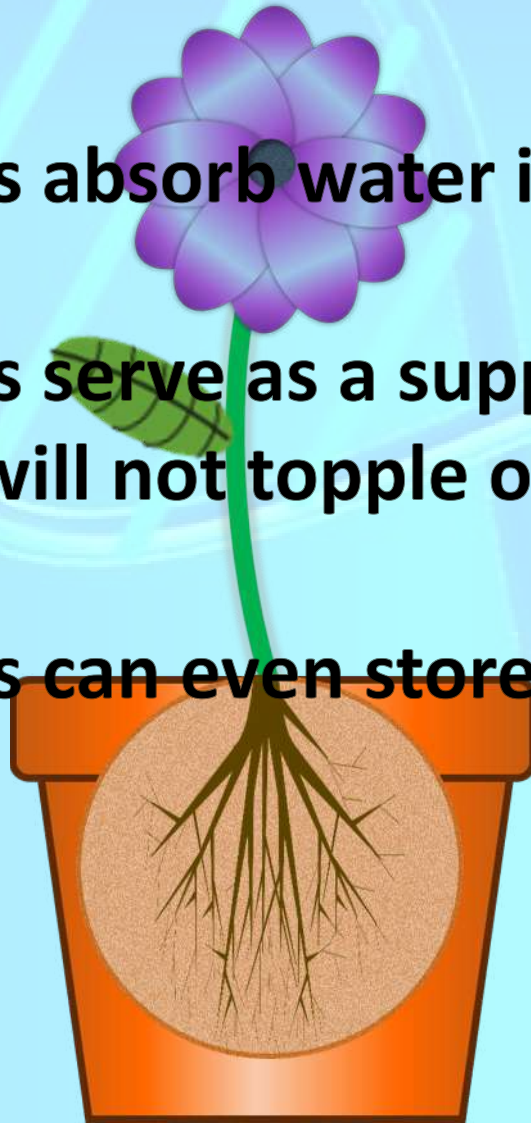
# The Root

**The root serves several purposes.**

**1) Roots absorb water in the soil.**

**2) Roots serve as a support base for the plant so that it will not topple over.**

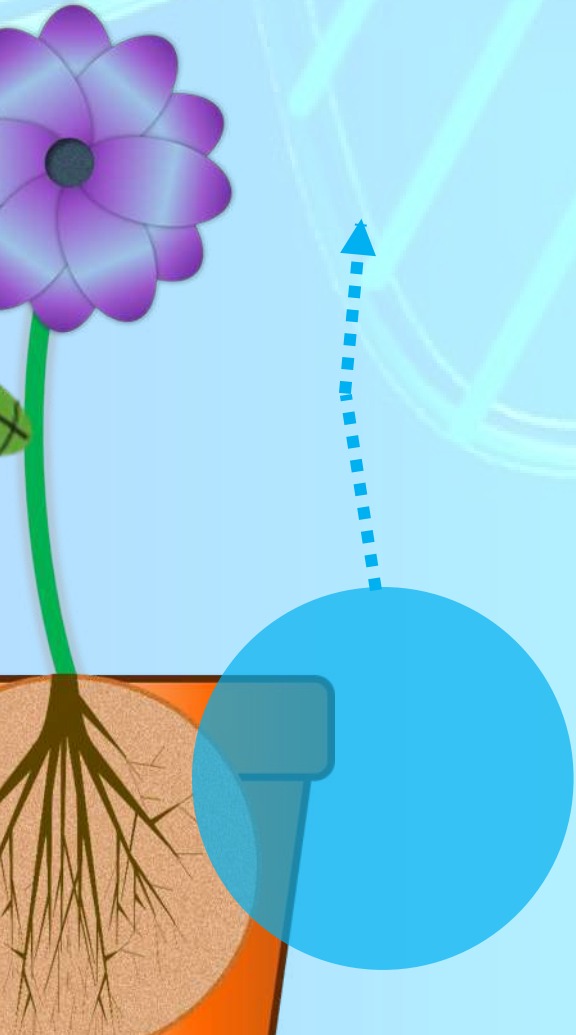
**3) Roots can even store extra food for the plant.**



# The Stem

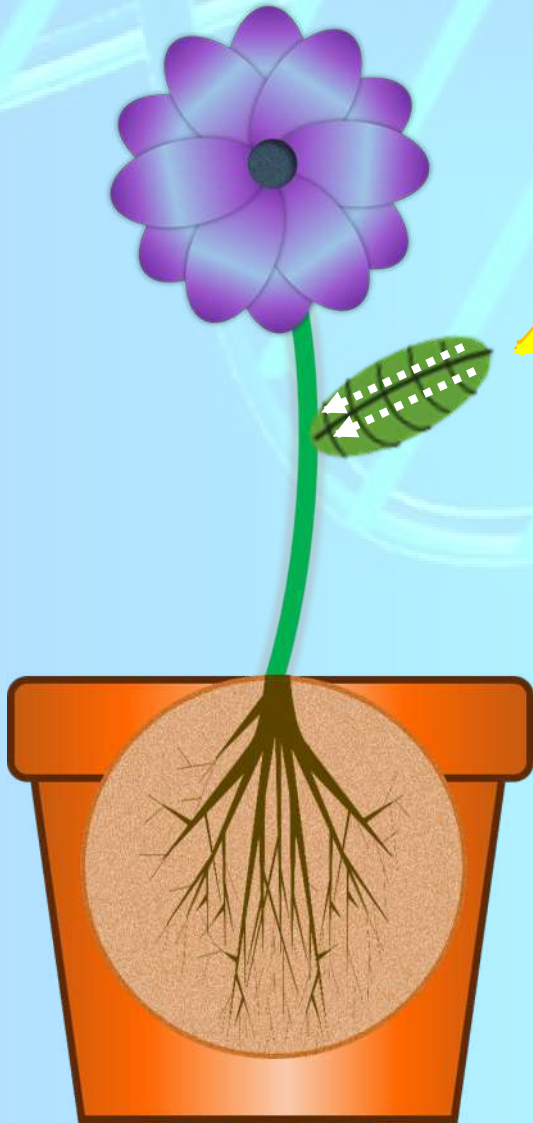
**The stem supports the plant beyond the root.**

**Stems also transport water and nutrients to the other parts of the plant, like a straw.**



# Leaf

**The leaf of the plant is where the food is made.**



**During a process called photosynthesis, the leaf uses carbon dioxide and sunlight to create sugar (food) for the plant.**

# Photosynthesis

Photosynthesis in leaves also creates oxygen

A diagram illustrating the process of photosynthesis in a leaf. A green leaf is shown on a stem. A blue arrow points away from the leaf, labeled 'Oxygen (O2)'. A red arrow points towards the leaf, labeled 'Carbon Dioxide (CO2)'. A yellow dashed arrow points from the top right towards the leaf, representing light energy. The background is light blue with faint green leaf patterns.

Oxygen ( $O_2$ )

Carbon Dioxide ( $CO_2$ )

During photosynthesis, the chlorophyll in the leaves of the plant use up carbon dioxide and while they create sugar for the plant, they also create oxygen.

# Reproduction in Flowering Plants

**Flowers are the part of the plant where seeds are made.**



# Reproduction in Flowering Plants

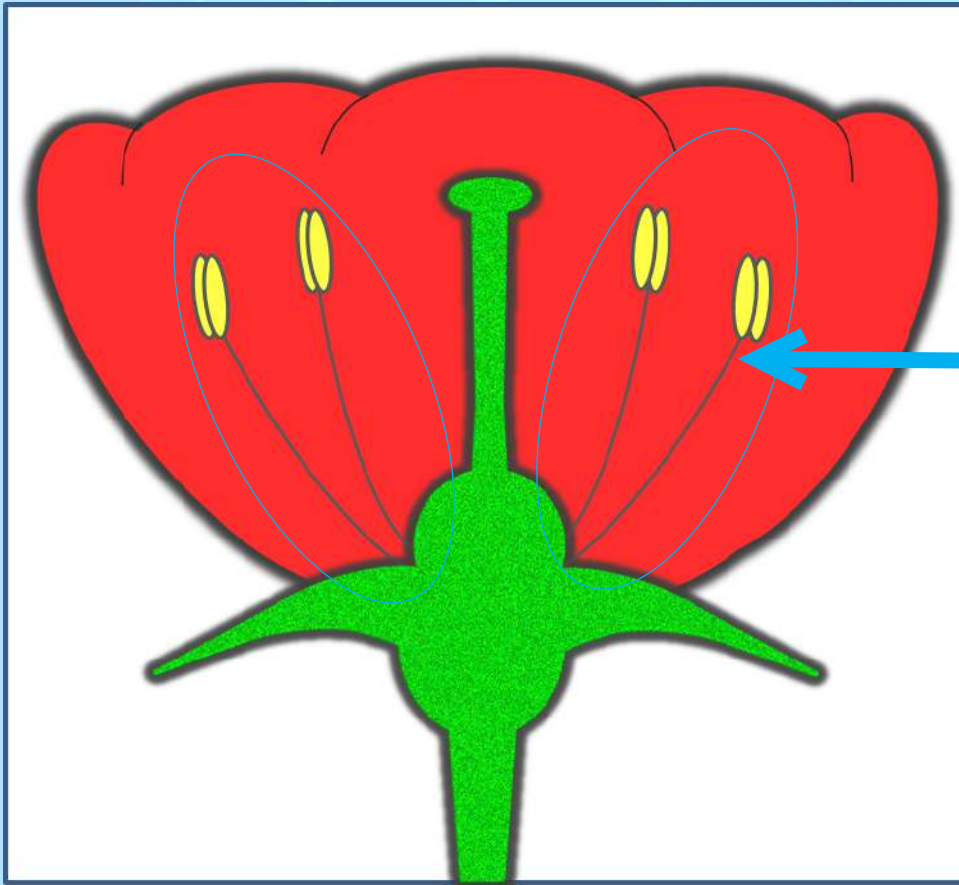
**Seeds are what make new plants grow.**





# Reproduction in Flowering Plants

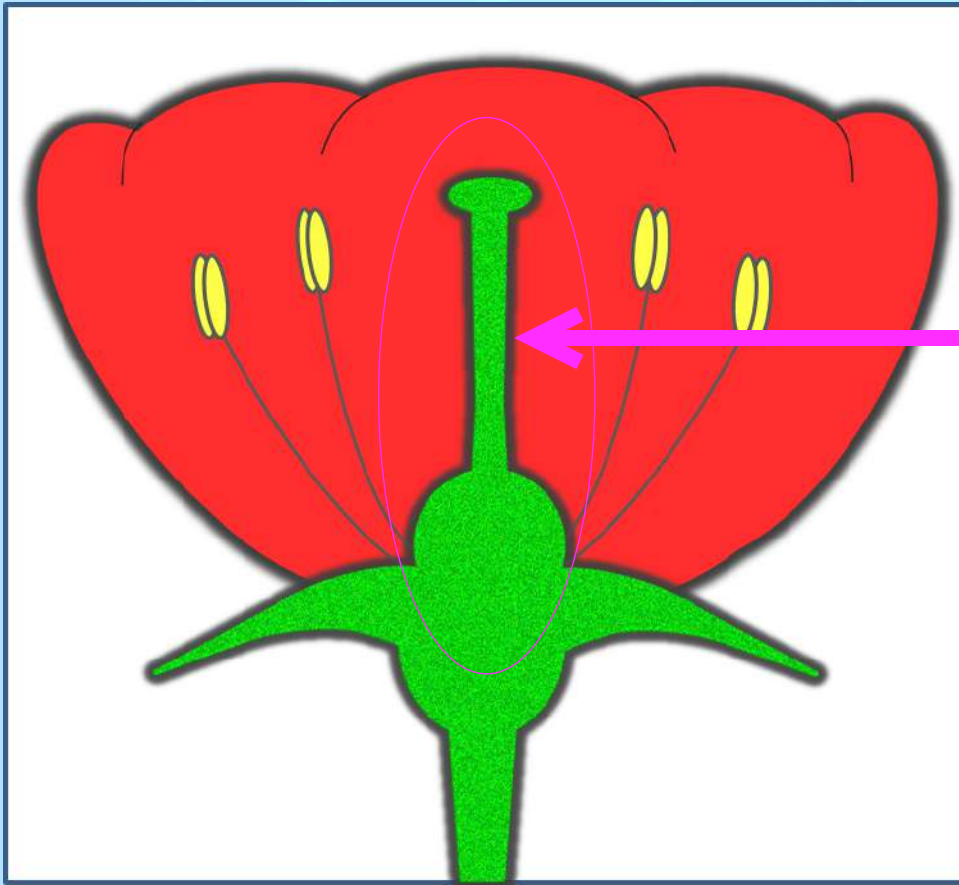
**There is a male and female part of every flower.**



the stamen  
(male)

# Reproduction in Flowering Plants

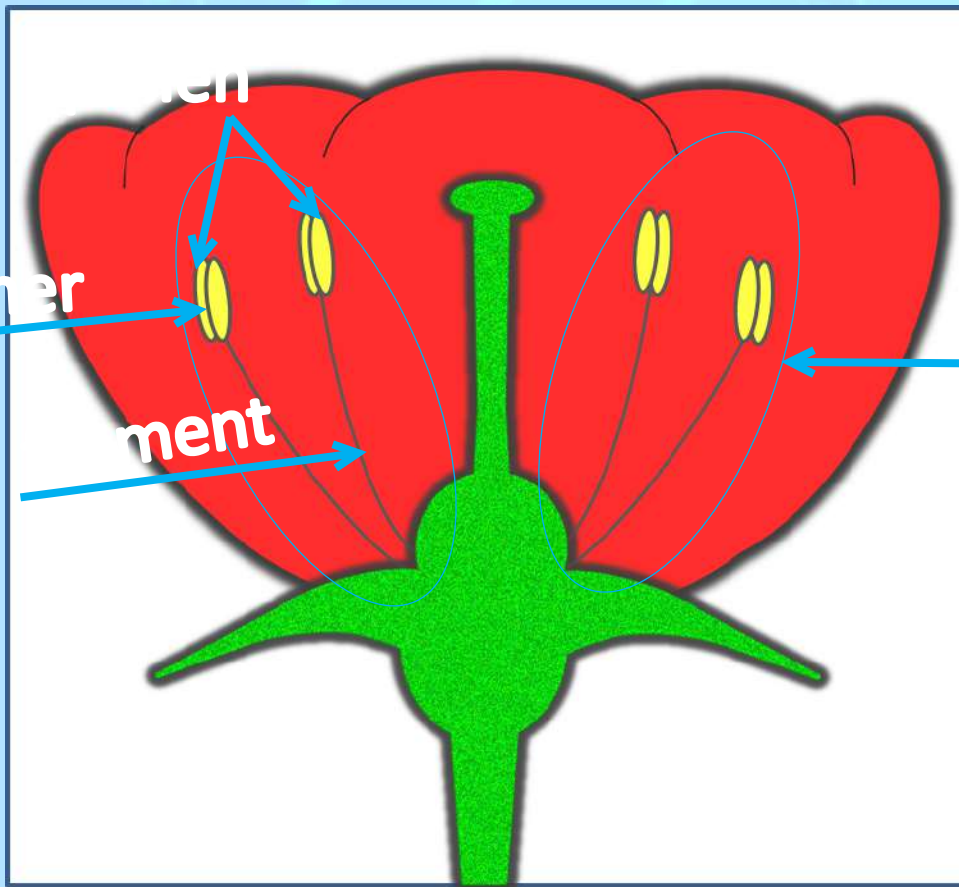
The stamen and the pistil are the two main reproductive parts of the flower.



the pistil  
(female)

# The Stamen

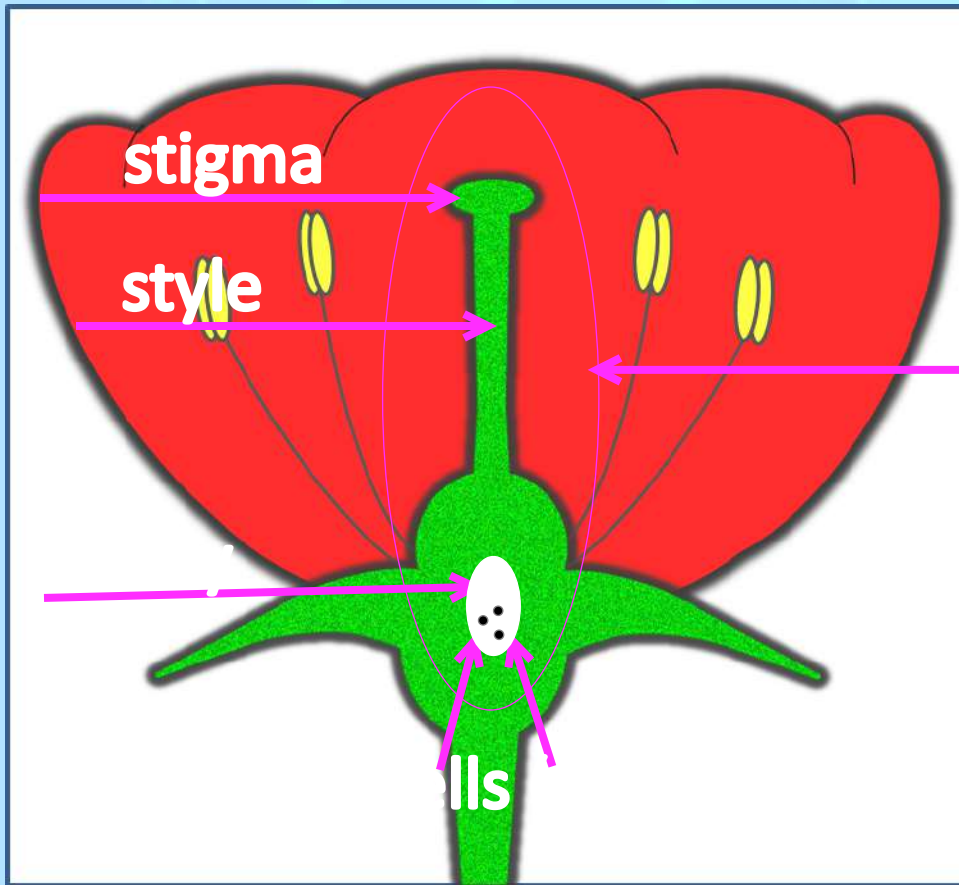
Here is a diagram of the stamen. The tip of the anther is where the pollen is made.



the stamen  
(male)

# The Pistil

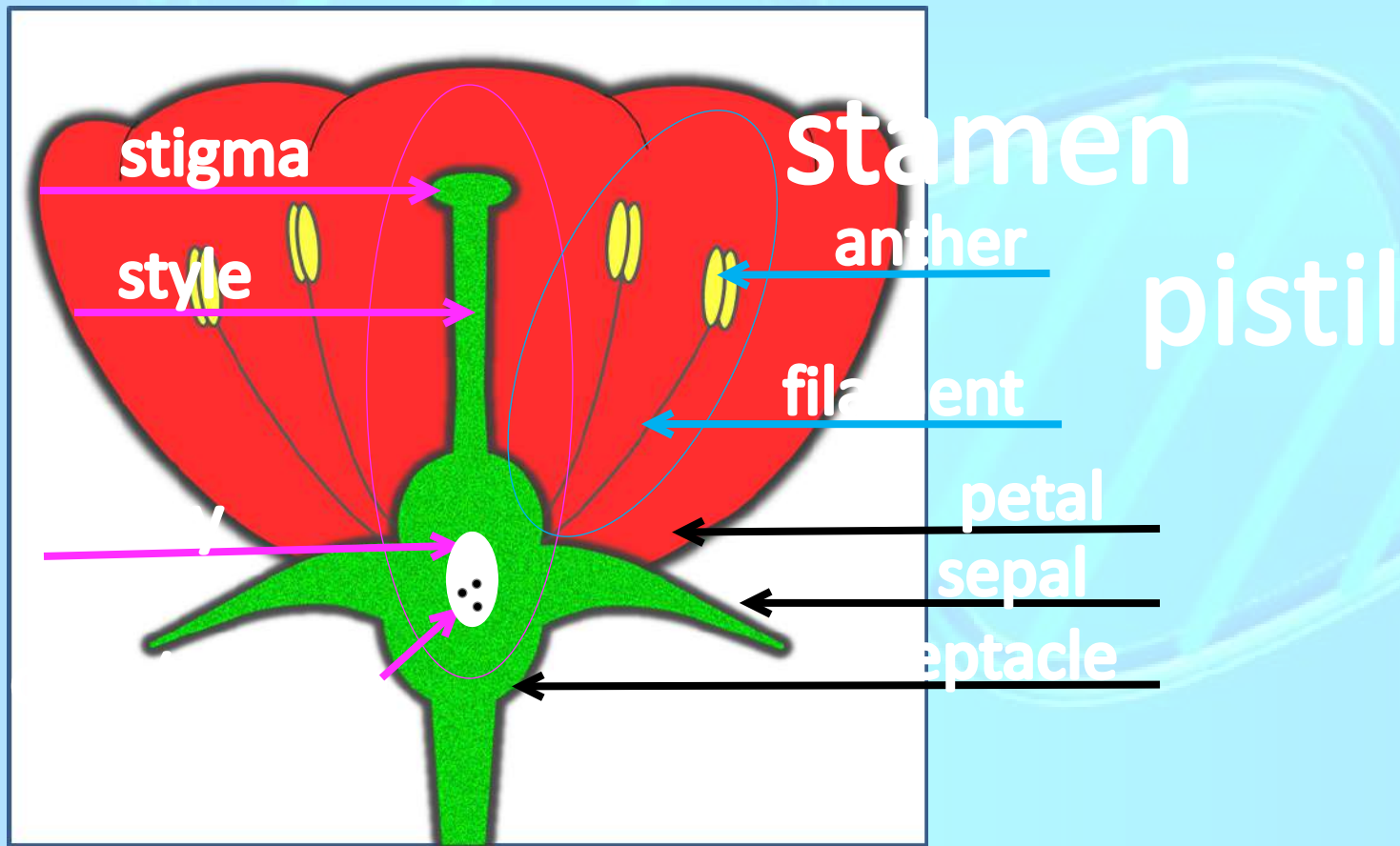
Here is a diagram of the pistil, which grows up from the ovary. The ovary produces egg cells.



the pistil  
(female)

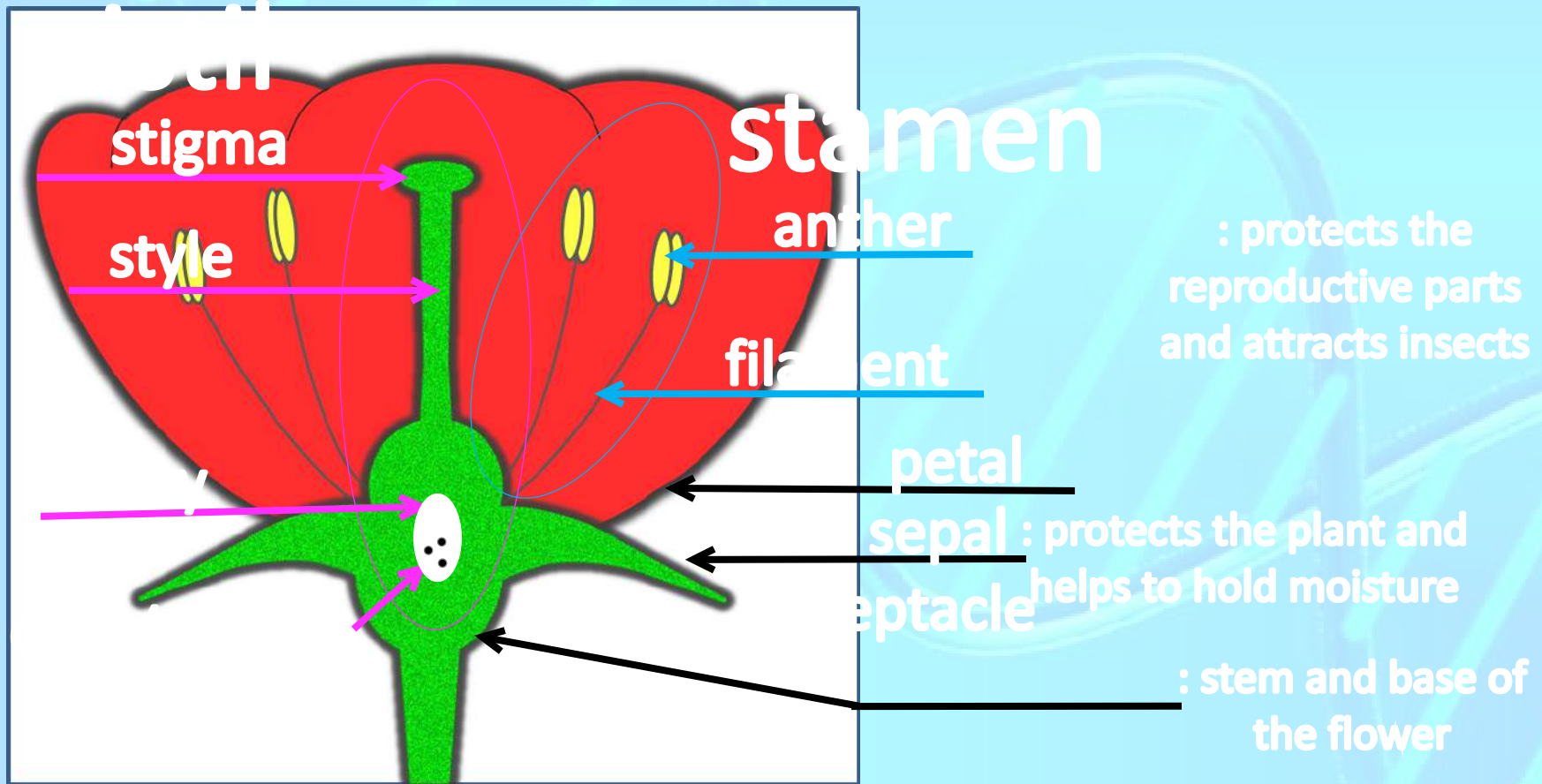
# Full diagram

Of course, not all parts of the flower have reproductive functions, like the petal, sepal and receptacle.



# Functions

Even though the petal, sepal and receptacle don't have reproductive purposes, they are all still important functioning parts of the flower.



# Pollen

**Pollen is the fine, dust like powder that contains the male reproductive cells of seed-bearing plants.**

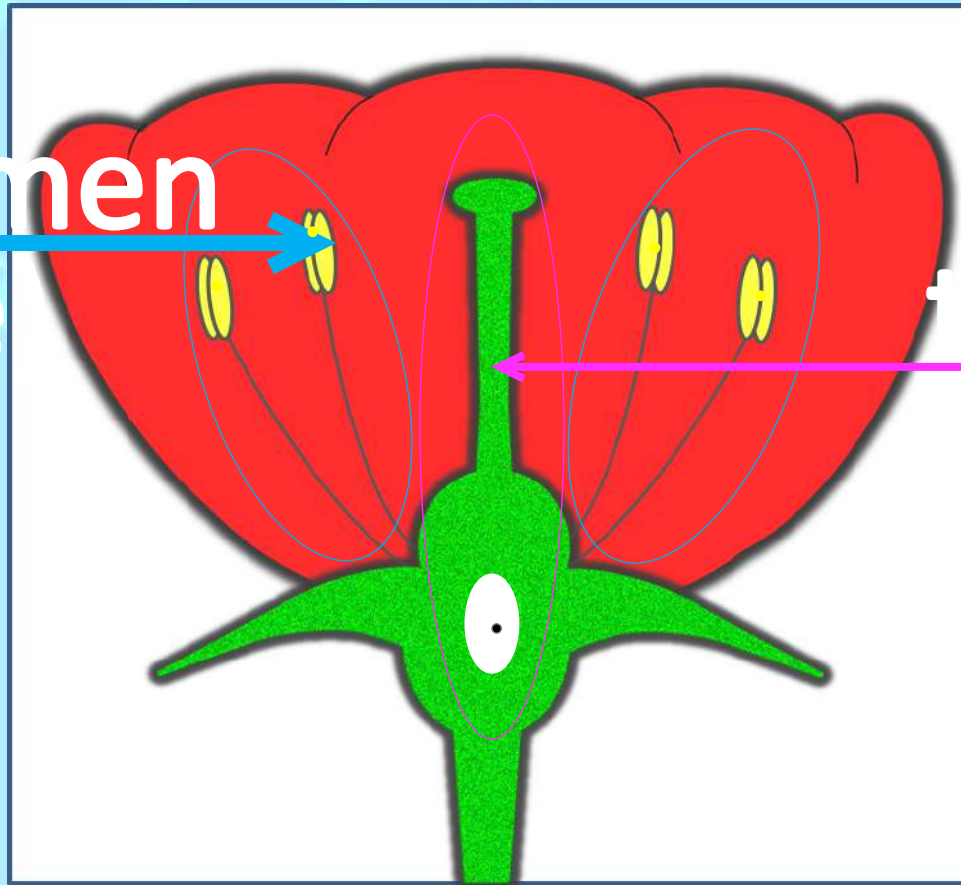


**As this bee collects pollen from the stamen, the female organs in the pistil are fertilized by the pollen.**

# Pollination

**Pollination is the transfer of pollen from the stamen (male) to the pistil (female) in a flower.**

the stamen  
(male)

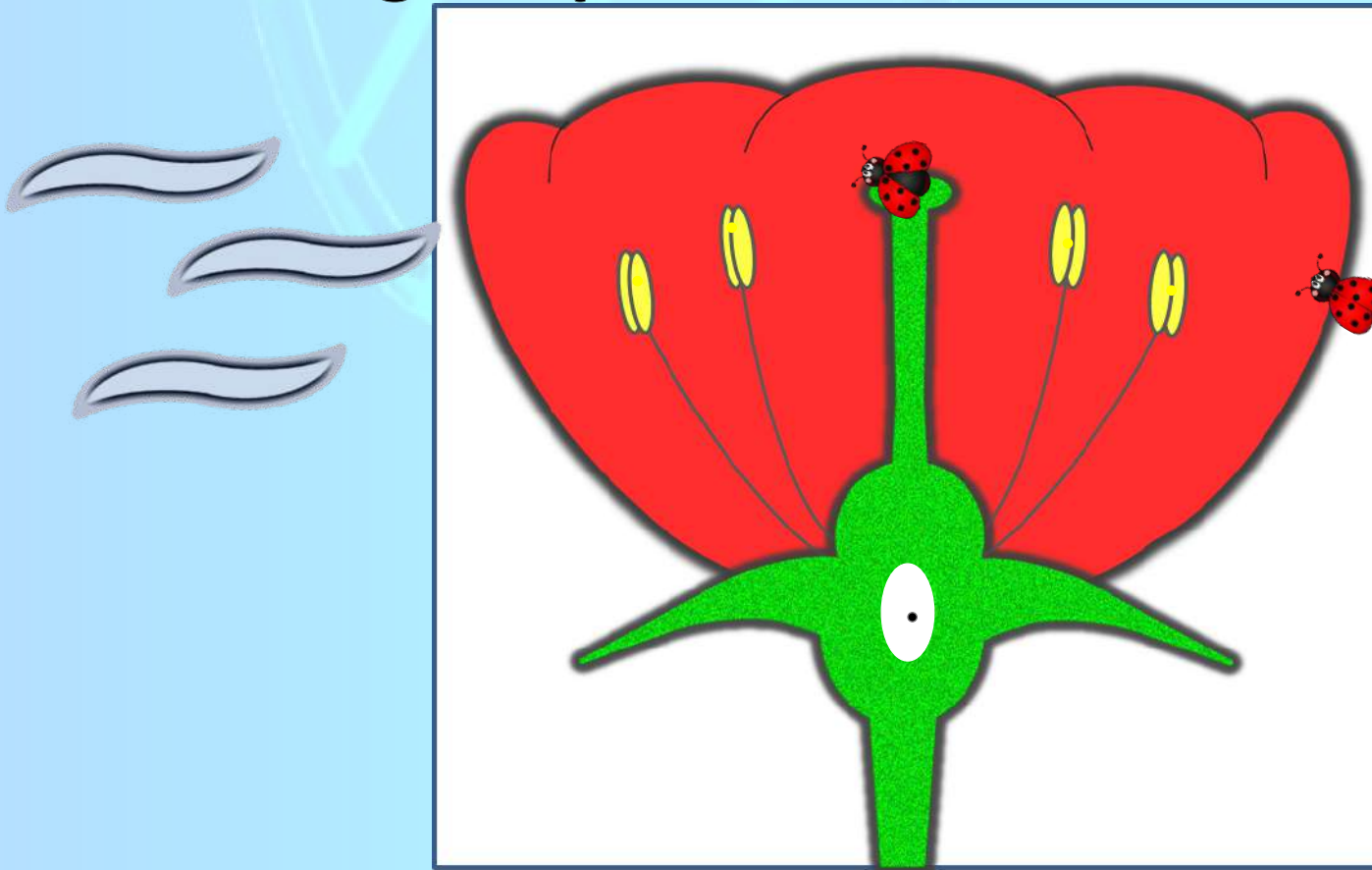


the pistil  
(female)



# Pollination

The process of pollination can happen from wind, insects, birds, and other animals carrying and transferring the pollen from the stamen to the pistil.



Although bees are the insect who are most famous for pollination, many other insects also help to pollinate plants. Without insects doing this very important job, the world would look much different!

# Pollination

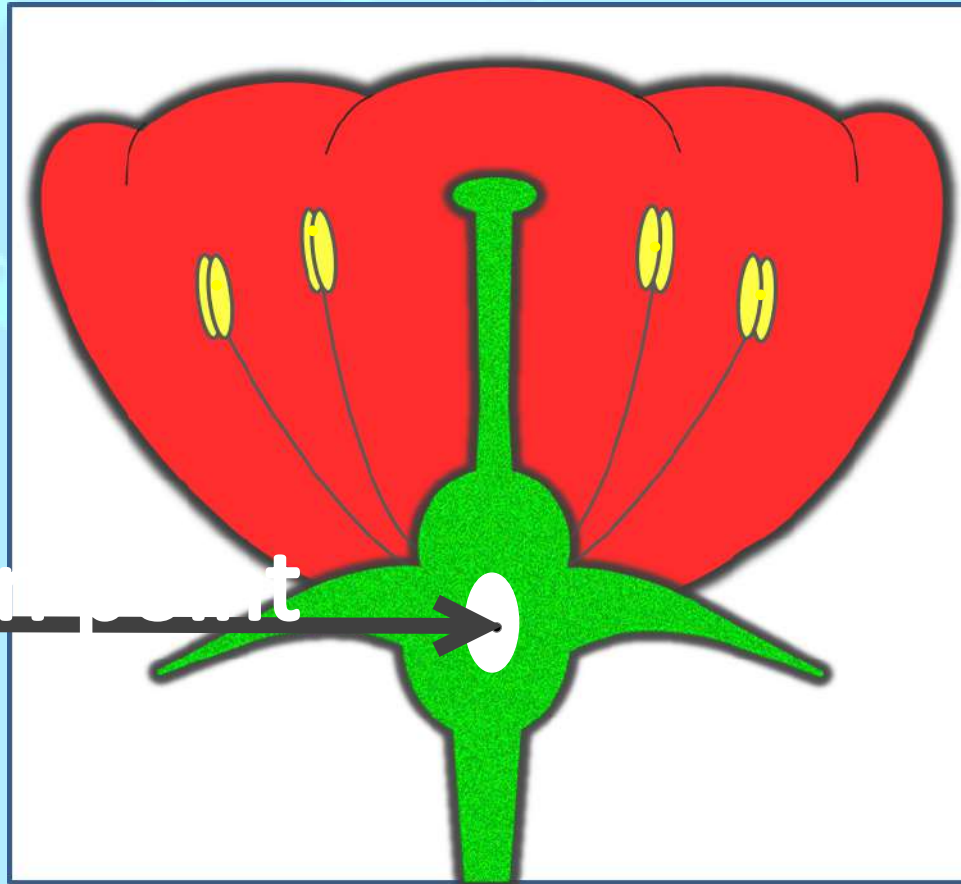
**Without pollination, flowers could not reproduce, and therefore could not survive.**



**Birds also transfer pollen for the flowers,  
and are rewarded with tasty nectar.**

# Fertilization

Fertilization is the process by which the female reproductive cell (egg) is united with the male reproductive cell (sperm or pollen).

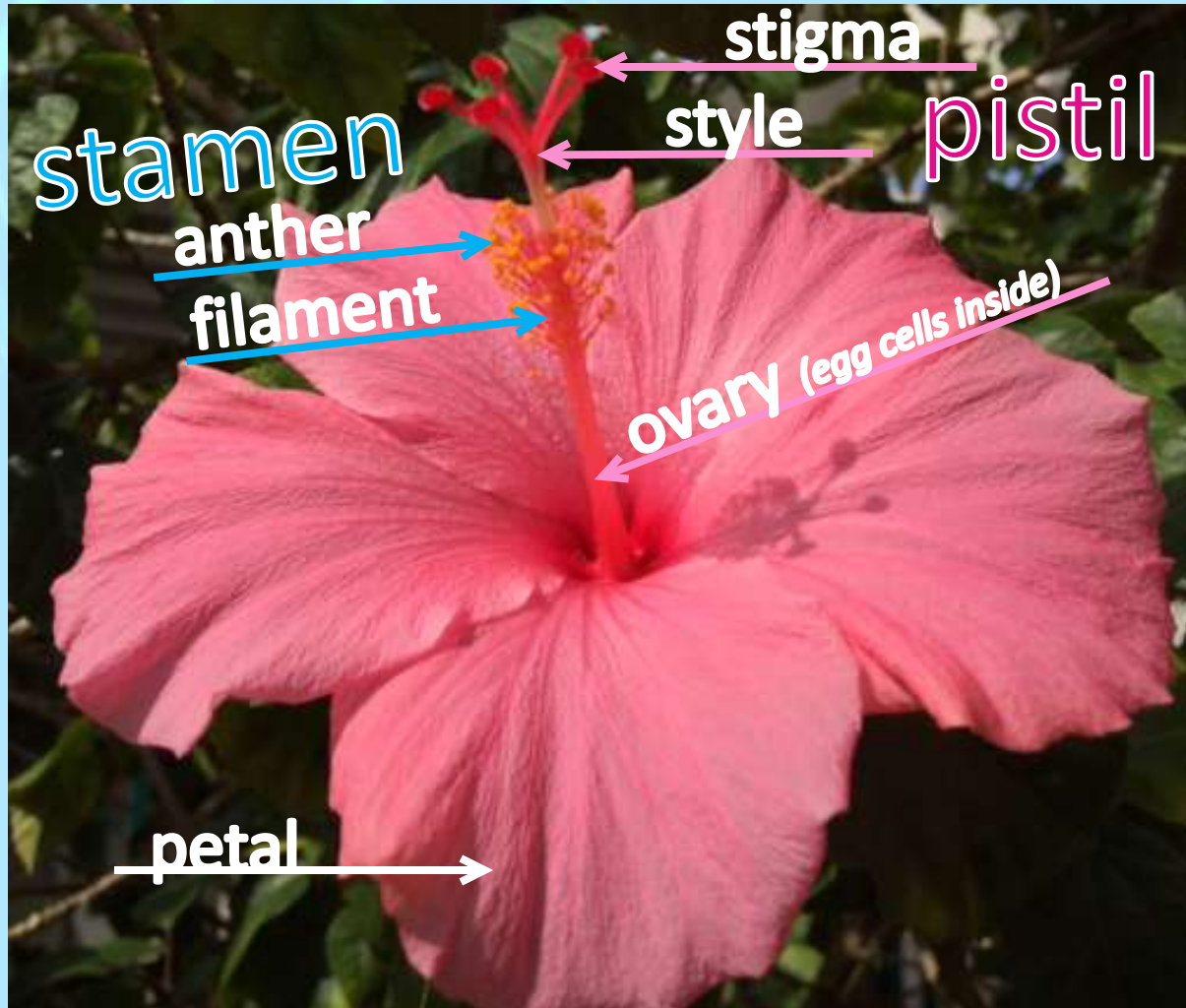


After the fertilization point occurs, reproduction is already under way, and a new seed (and more plants) can be created.

fertilization point

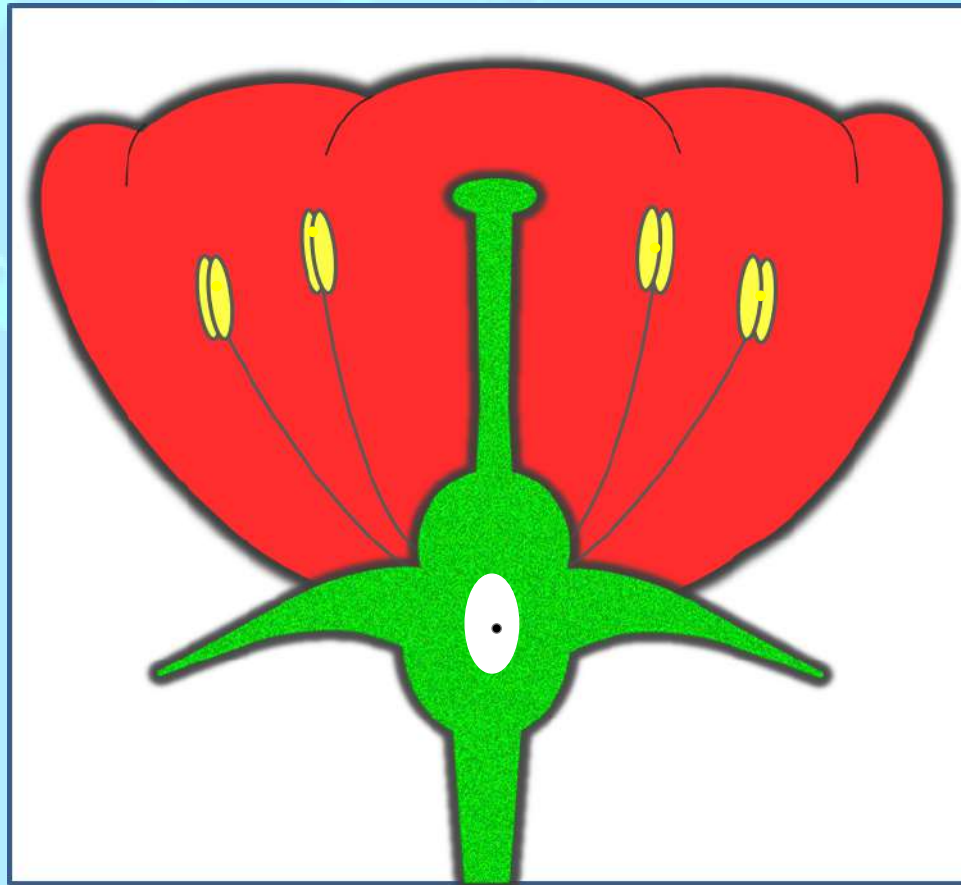
# Flower Parts

This is the flower of the hibiscus plant. You can easily see the reproductive parts of the flower with the hibiscus.



# Summarizer

In paragraph format, explain how flowering plants can reproduce.



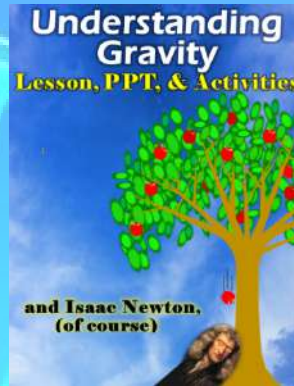
Make sure to discuss terms such as:

stamen (male)  
anther  
filament  
pollen  
pistil (female)  
style  
stigma  
ovary  
egg  
pollination  
fertilization

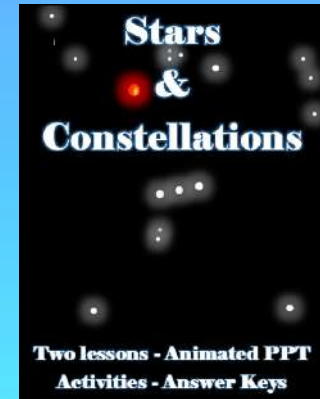
# Check out these other great resources!



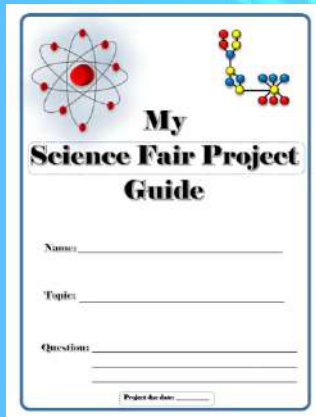
Earth in Space & Time  
Mega Unit Bundle



Understanding Gravity  
Lesson & Powerpoint



Stars & Constellations  
Two Lessons and PPT



Science Fair  
Project Guide  
Grades 4-7



Solar & Lunar Eclipse  
Mini-Unit



MrJacksBackPack  
TPT Store

# Photo Source Page

*\*Note: All images included in this presentation are not subject to copyright and are within the public domain, were taken by myself, or were created using power point image formatting by ©MrJacksbackpack*

## Lesson 1:

- "The Sun by the Atmospheric Imaging Assembly of NASA's Solar Dynamics Observatory - 20100819" by NASA/SDO (AIA) - [http://sdo.gsfc.nasa.gov/assets/img/browse/2010/08/19/20100819\\_003221\\_4096\\_0304.jpg](http://sdo.gsfc.nasa.gov/assets/img/browse/2010/08/19/20100819_003221_4096_0304.jpg). Licensed under Public Domain via Commons - [https://commons.wikimedia.org/wiki/File:The\\_Sun\\_by\\_the\\_Atmospheric\\_Imaging\\_Assembly\\_of\\_NASA%27s\\_Solar\\_Dynamics\\_Observatory\\_-\\_20100819.jpg#/media/File:The\\_Sun\\_by\\_the\\_Atmospheric\\_Imaging\\_Assembly\\_of\\_NASA%27s\\_Solar\\_Dynamics\\_Observatory\\_-\\_20100819.jpg](https://commons.wikimedia.org/wiki/File:The_Sun_by_the_Atmospheric_Imaging_Assembly_of_NASA%27s_Solar_Dynamics_Observatory_-_20100819.jpg#/media/File:The_Sun_by_the_Atmospheric_Imaging_Assembly_of_NASA%27s_Solar_Dynamics_Observatory_-_20100819.jpg)
- By John Severns = Severnjc - Photo by John Severns., Public Domain, <https://commons.wikimedia.org/w/index.php?curid=1438935>
- By Steve Maslowski - Cropped from U.S. Fish and Wildlife Service Digital Library System, Public Domain, <https://commons.wikimedia.org/w/index.php?curid=48297>

• [Clipart created by ©MrJacksBackPack](#)

