

Flower Dissection

Introduction

The different parts of flowers are specialized to help plants reproduce as efficiently as possible. There is a female part of the flower, and a male part of the flower. The female part of the flower is in the centre (point), and is made up of the ovary, the style, and the stigma. The stigma is sticky and captures the pollen from other flowers (sometimes carried on the legs and abdomen of bees). The pollen germinates on the stigma and travels down the inside of the style, toward the ovary. Once the pollen reaches the ovary, it combines with the female gamete to make a seed, or ovule. The male part of the flower is the anther, stamen and filament. The anther (like the antler of a male moose) carries the pollen, which fertilises the female parts of the flower. The stamen and the filament hold up the anther.

The petals are the colourful structures that help the flower to attract pollinators. Sepals are like petals, usually attaching below the petals on the receptacle. The receptacle is the part of the flower that is left once the flower has been fertilized, and the petals fall off. This part of the flower swells as the seeds develop. The peduncle is the junction between the receptacle and the stem of the flower.

Divide the class into groups of two.

As a class, go over the parts of the flower and the vocabulary using the flower parts overhead.

Setting up the activity

- Demonstrate how to dissect the flower.

Procedure: Dissecting the flower

- Each group needs to have one flower, a hand lens, and a ruler.
- Each group member needs to draw a general picture of his or her flower. Note the colour, texture, size, and odour.
- Place the flower on plain white paper.
- Use the Flower Part hand out to identify the petals, sepals, anther, stamen, filament, stigma, style and ovary. Discuss the function of each part.
- Using the hand lens, carefully examine the anther to see if it is producing pollen.

Carefully remove the petals. Can you taste any nectar? Remove the stamen, then the stigma. Using your finger nail carefully cut into the ovary to open.

- Look inside the ovary. Can you see the ovules. The ovules will become the seeds once fertilised and pass on the genetic information for this plant.
- If you are able to see pollen or ovules make note of that on your drawing.

Cleanup

- Collect plant material and dispose of it in the designated area.

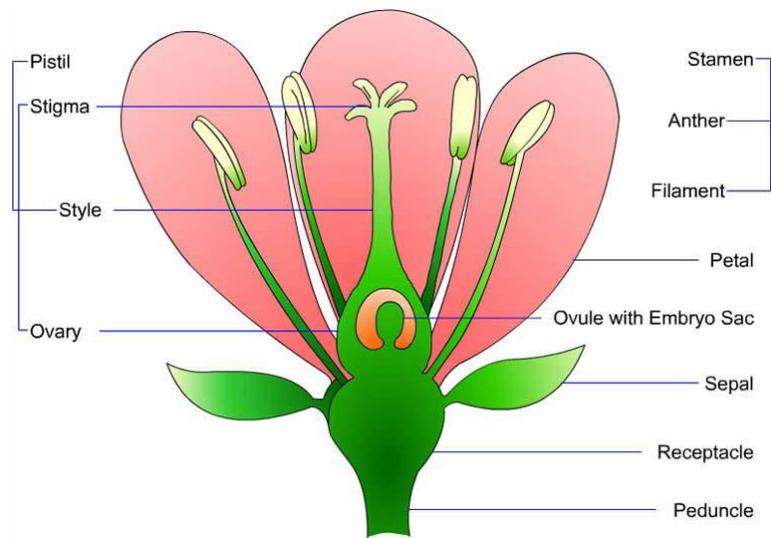
Extension questions

1. How do different flower parts function? For example, what is the function of the petals?
2. How does this relate to a plants survival?
3. Why is pollination important to a plants survival?
4. How do you think colour, shape, texture, patterns, odours, and food rewards affect pollination?

Adapted from

http://www.toshiba.com/taf/common/docs/Bees_and_Flowers.pdf

Flower Parts Handout

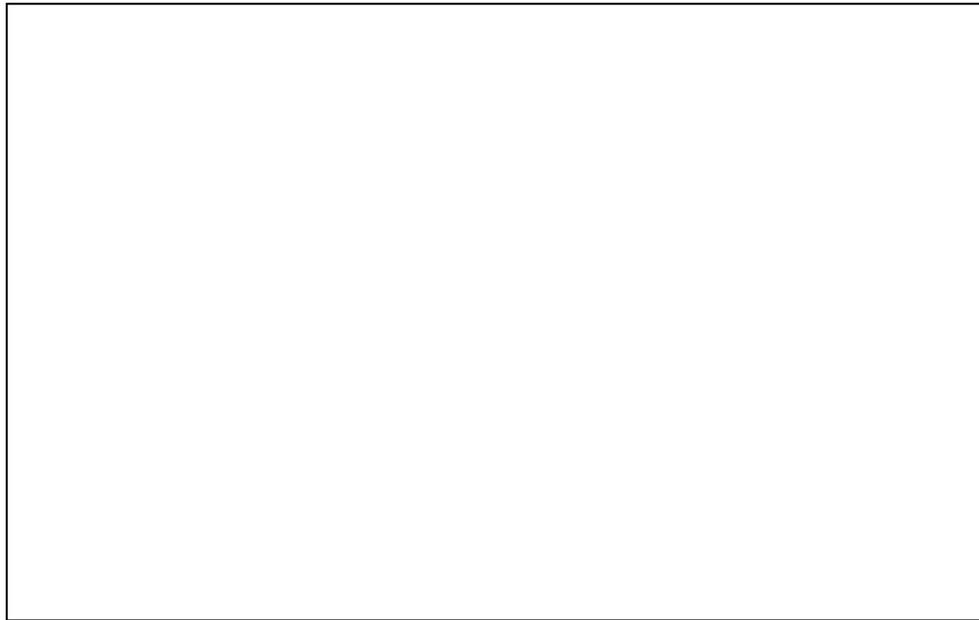


Source: <http://teachart.msu.edu/pila/images/flower.jpg>

Flower drawing data sheet

Flower drawing should be in colour and represent the flower accurately enough that somebody in the field would be able to identify a flower from your drawing.

General flower drawing



Scientific name:

Common name:

Colour _____ Texture _____ Size (cm) _____ Odor _____

Count the number of:

Petals _____ Sepals _____ Anthers _____ Stigma _____

Label

- Petals
- Sepals
- Stigma
- Style
- Stamens
- Filament
- Anther

Questions about your flower

1. Did you notice any pollen on the anthers of your flower? How does the pollen stick to the stigma (hint feel the tip of the stigma)?
2. What part(s) of your flower attract pollinators to the flower?
3. What part(s) of the flower are used in pollination and how?

[Reinforcement activity- matching words with correct function.](#)