

CASE

*Curriculum for Agricultural
Science Education*

Principles of Agricultural Science – Plant

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Flower Parts and Function

Unit 4 – Anatomy and Physiology
Lesson 4.5 Flower Power

Value of Flowers

Human value:

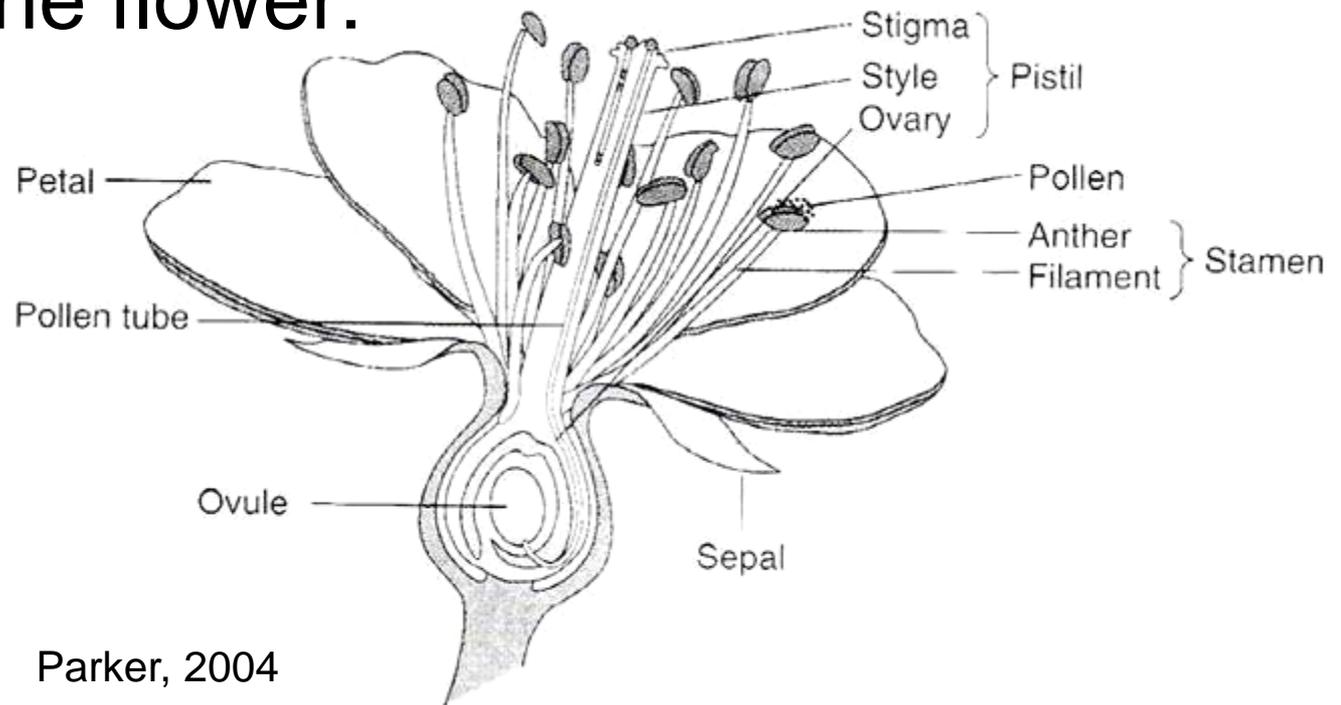
- 🌸 Aesthetics (Beauty)
- 🌸 Career and SAE opportunities

Value to the plant:

- 🌸 Pollination
- 🌸 Fertilization
- 🌸 Seed development

Parts of the Flower

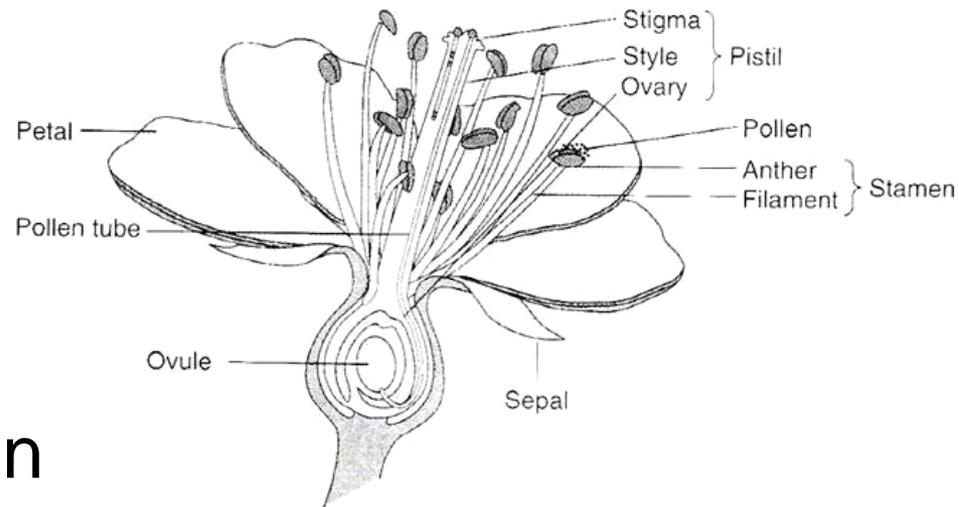
Let's take a minute to review the following parts of the flower:



Parker, 2004

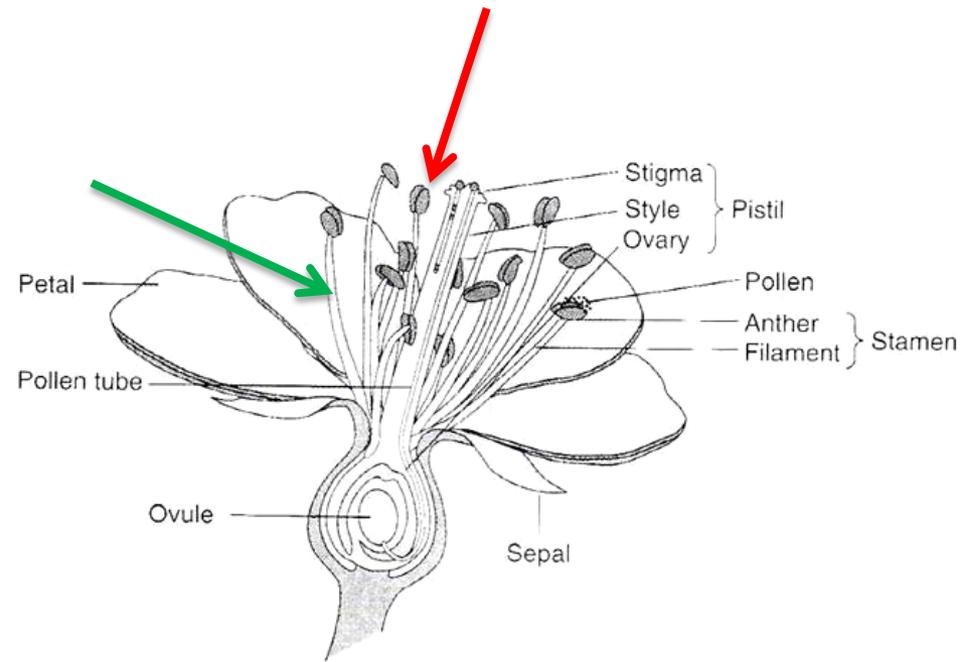
Female Flower Parts

- **Ovule:** “egg cell” of the plant. Becomes the seed when fertilized
- **Pollen tube** transfers pollen from stigma to ovule
- **Pistil**
 - **Stigma** collects pollen
 - **Style** supports stigma
 - **Ovary** contains one or more ovules



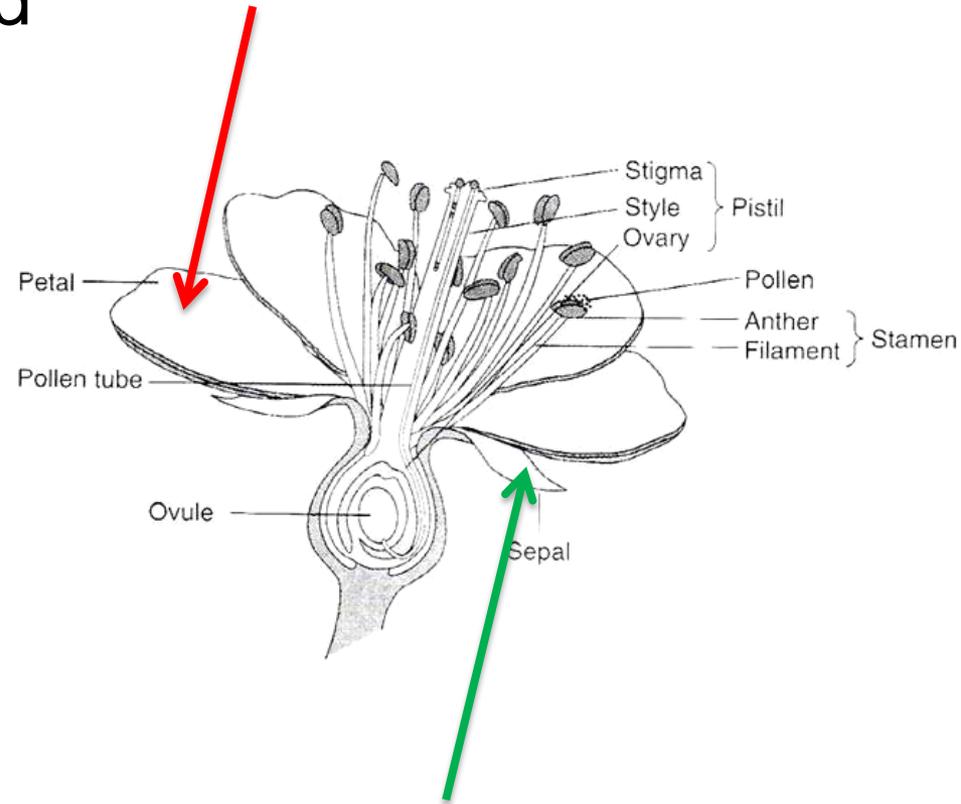
Male Flower Parts

- **Stamen:**
 - **Filament** supports anther
 - **Anther** develops and contains pollen.
 - **Pollen** – male sex cell



Supporting Parts

- **Petal:** Protects pistil and stamens, and attracts insects for pollination.
- **Sepal:** Outermost leaves protecting the flower during the bud stage.



Types of Flowers

- **Complete:** Contains all major flower parts including petals, sepals, and both reproductive organs.
- **Perfect:** Includes both female and male reproductive parts.
- **Incomplete:** Missing one or more of the sepals, petals, stamens, or pistils.
- **Imperfect:**
 - Pistillate
 - Staminate

Pistillate Flowers

- The flower is lacking stamens.



The ear on a corn plant is an example of a pistillate flower.

Staminate Flowers

- The flower is lacking a pistil.



The tassel on a corn plant is an example of a staminate flower.

References

- Parker, R. (2004). *Introduction to plant science* (Rev. ed.). Clifton Park, NY: Delmar.
- Parker, R. (2010). *Plant and soil science: Fundamentals and applications*. Clifton Park, NY: Delmar.
- United States Department of Agriculture. (2006). *Floriculture and nursery crops yearbook*. Retrieved from <http://usda.mannlib.cornell.edu/usda/ers/FLO-yearbook//2000s/2006/FLO-yearbook-06-23-2006.pdf>