

Building Complex Understandings through Inquiry Activities

NSTA

San Francisco

March, 2011

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Building Understanding

Content Development
through inquiry

Example: dissect
flower to learn
parts

Embedding Content
Knowledge through
Peer Activity

Example: Jigsaw
drawing and
labeling of
flower parts

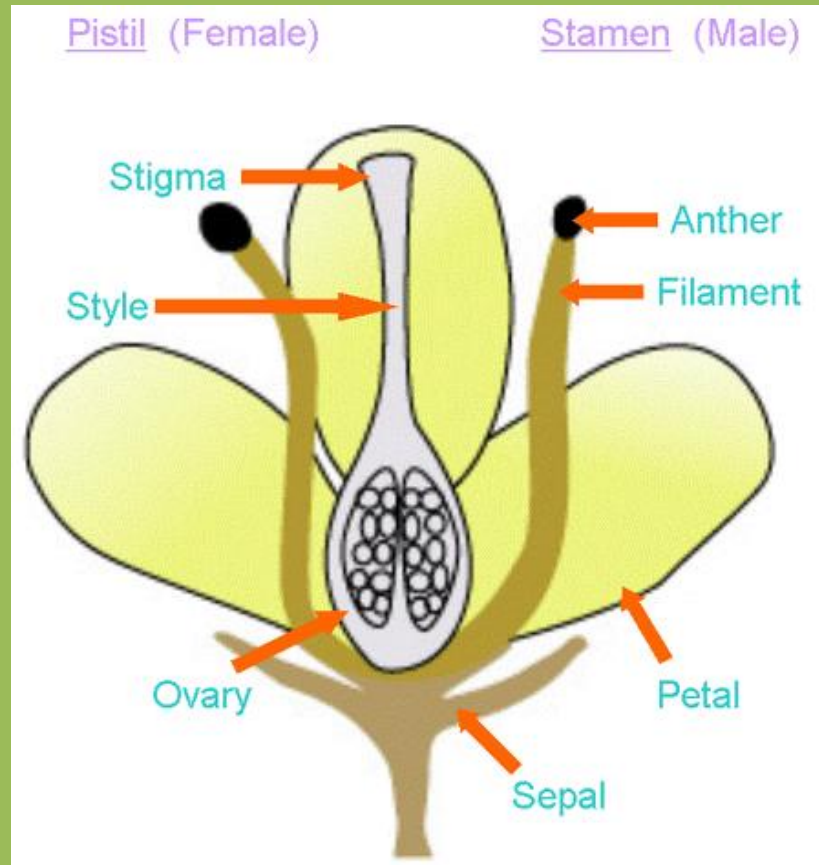
Transferring Content
Knowledge through
Application to Enhance
Understanding

Example: Design and Construct
model flower with all appropriate
structures necessary for survival
in selected environment

Deconstruct Flower

- Review parts of flower
- Set up flower parts folder
- Dissect flower
- Label parts in folder
- There are approximately 230,000 species of described flowering plants in the world, and they range in size from diminutive alpine daisies only a few inches tall to massive eucalyptus trees in Australia over 300 feet (91 m) tall. But the undisputed world's smallest flowering plants belong to the genus **Wolffia**, minute rootless plants that float at the surface of quiet streams and po

Flower Parts

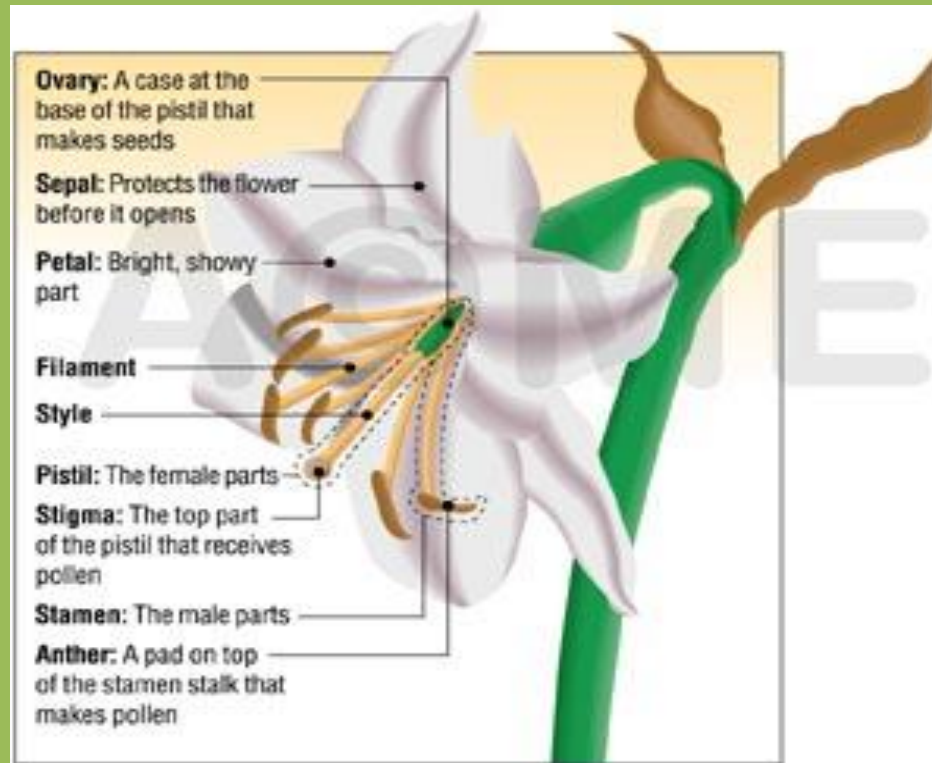


Embedding Content

- Put aids aside
- Reconstruct flower on poster paper through jigsaw
- Label flower parts
- Group assessment correction and additions

Further Embedding

- Construct bookmark with flower parts in correct circles
- Laminate bookmark



Reconstruct Flower

- Create flower (single or in group)
- Use provide materials
- Add all parts of a generic flower
- Be prepared to name flower, where it lives and identify parts
- Continuation Activity: set up botanical garden based on ecosystems

Diversity of Flowering Plants

- Flowering plants (angiosperms) comprise about 90 percent of the Kingdom Plantae. The total number of described species exceeds 230,000, and many tropical species are as yet unnamed. During the past 130 million years, flowering plants have colonized practically every conceivable habitat on earth, from sun-baked deserts and windswept alpine summits to fertile grasslands, freshwater marshes, dense forests and lush mountain meadows. Although a number of flowering plants live in aquatic habitats and have adapted to the saline conditions of dry lake beds and salt marshes, relatively few species live submersed in the oceans. True marine angiosperms are found throughout the oceans of the world, although most species are distributed in tropical regions. They are sometimes referred to as "seagrasses" and include about 50 species in 12 genera. Virtually all flowering plants produce some type of functional floral organ, although in some families such as the Lemnaceae, the flowers are microscopic and are seldom seen by the casual observer. Certain grasses and specialized cultivars apparently do not produce flowers, although they may still have rudimentary flowers (vestigial floral parts)

<http://www.fastplants.org/intro.lifecycle.php>

