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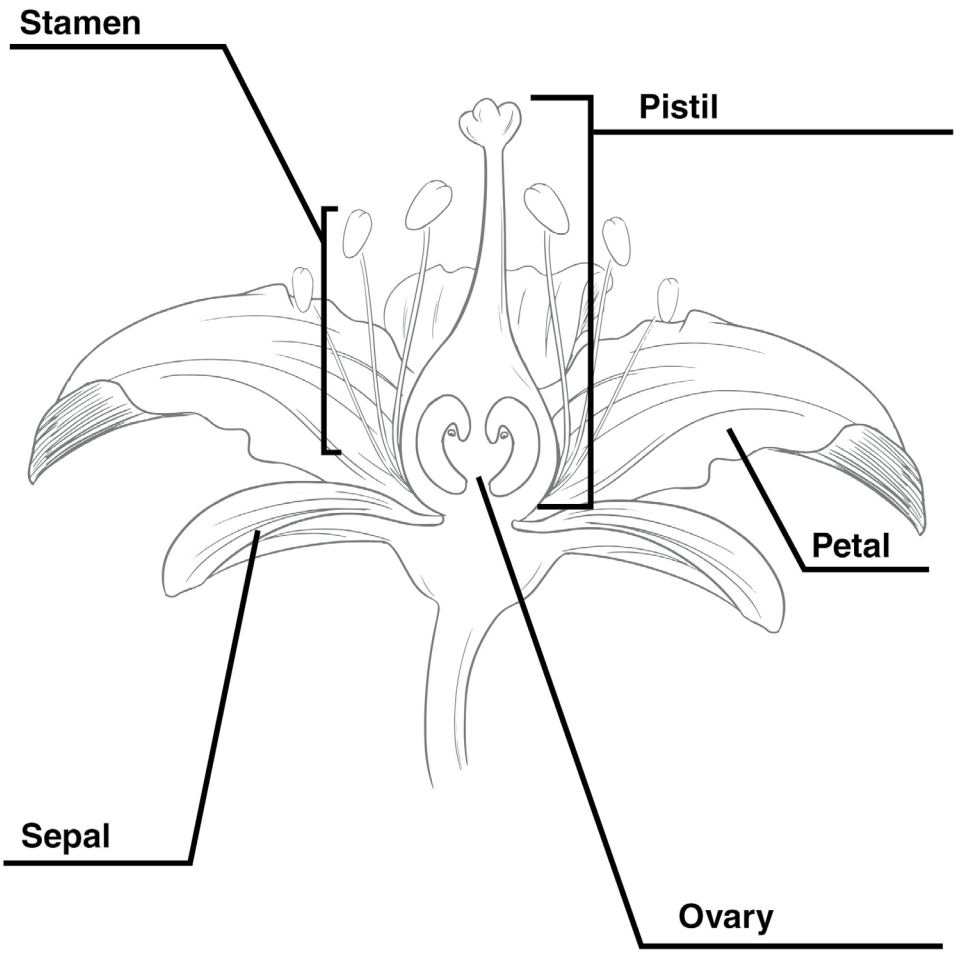
Flower Dissection

Structure and function in plants can be explored easily at any grade level using a single flower. The following activity is adapted from an investigation in the Building Blocks of Science® 4th-grade life science unit ***Plant and Animal Structures***. In this activity, students explore the structures commonly found in a flower. Using a genuine flower as their model, students measure and analyze each structure, determining its function and how it relates to reproduction in the plant. Students use the evidence they collect to argue whether a living thing's internal structures are equally as important as external structures.

Materials Required

Flower (preferably a carnation)
Hand Lens (602276 or similar)
Tape
Metric Ruler
Paper Towel



Investigation

Predict: How do the structures of a flower work together to help a plant reproduce?

Investigate:

1. Carefully observe your flower. Why might the flower look and smell the way it does? Record your answers on the back of this sheet.
2. Carefully remove the sepals from your flower. Count the number of sepals and measure the length of one. Record this information on the back of this sheet.
3. Next, gently remove the petals from your flower without disturbing the remaining internal structures. Count and record the number of petals, and choose one to measure. Why do you think petals are important in a flower? Record your ideas on the back of this sheet.
4. Locate the stamens in your flower. Count and record the total number of stamens, and choose one to measure. Record your observations on the back of this sheet. The stamens contain pollen, which helps the plant reproduce.
5. Locate the pistil. Measure the length of the pistil and record the data on the back of this sheet.
6. At the base of the pistil is an ovary. The ovary contains the plant's eggs, which turn into seeds after they are fertilized by the pollen. How does pollen move from the stamen to the pistil? Record your ideas on the back of this sheet.

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Conclude:

1. How would reproduction be difficult for a flower without petals?
2. How would reproduction be difficult for a flower with no stamens?
3. Using evidence from your investigations, explain why internal structures are equally as important as external structures in plants.

My flower looks like:

Leaf

Leaf Total: _____
Measurement: _____cm

Sepal

Sepal Total: _____
Measurement: _____cm

Petal

Petal Total: _____
Measurement: _____cm

Stamen

Stamen Total: _____
Measurement: _____cm

Pistil

Pistil Total: _____
Measurement: _____cm

Stem

Measurement: _____cm

Additional Information

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