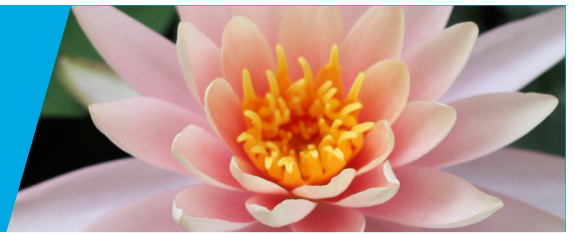


# CURIOSITY AT HOME

## FLOWER DISSECTION



*Stop and smell the flowers! Then take a closer look at what parts make up a flower. Find out where their delightful smell comes from, what bees are buzzing around for, and how a flower can make more plants and sometimes become a fruit!*

### MATERIALS

- A flower
- Science notebook or paper
- Something to write with
- Optional: colored pencils, watercolors, crayons, or other colorful art supplies
- Optional: a pair of scissors

### PROCEDURE

- First, observe your flower. What do you notice about it? Write down your observations in your science notebook. Draw your flower in your science notebook, using lots of colors if you want. Try drawing it from different angles.
- Now let's take a closer look at each part! First, we'll look at the **stem**.
  - What do you notice about your flower's stem? Cut off the end of it and look at the inside. Is it hollow or solid? Does it smell like anything? Is it wet inside? Dry? Sticky? What does the stem do for your flower?
- Now see if you can find **sepals**. These are the little green leaf-like parts that would be under the petals and attached to the stem.
  - How many do you count? Are they the same shape as the petals or different? Why do you think they may be there? Carefully peel them off. Do you notice anything else about them? Do they smell like anything?
- Next, look at the **petals**. These are usually very brightly colored. Why do you think that might be? Carefully peel the petals off of your flower. Write down how many petals are on your flower.
  - Do all the petals look the same? What do they feel like? Do they smell like anything?



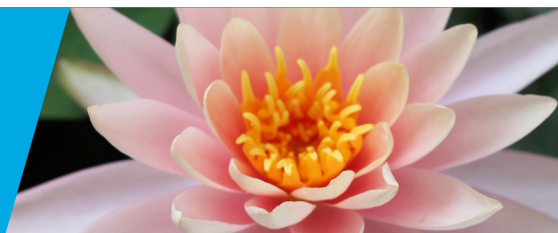
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# CURIOSITY AT HOME

## FLOWER DISSECTION

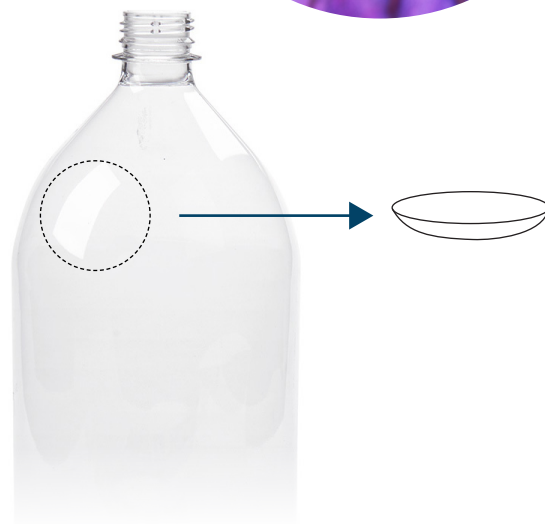


- Now we'll find the **pistil** and **stamens**. You will usually find one pistil in the center, surrounded by multiple, shorter stamens. Not every flower will be arranged this way, and not every flower has both pistil and stamens. At the top of each stamen is an **anther**, a round-ish part that's covered with pollen when it's mature. Carefully pick each pistil and stamen at the base of its stalk and make observations.
  - How many stamens are there? Does your pistil have sections to it? How many? Does either part smell like anything? What do you think these parts are for?
- Next take a closer look at the pistil. It has three different parts called the **ovary**, **style**, and **stigma**. The stigma is at the top of the pistil, the ovary is at the bottom, and the style is the stalk that connects them. Cut the style in half and look at the inside.
  - Is it hollow or solid? Are there parts that look different on the inside? Is it wet or dry?
- If you can, try to cut the pistil in half lengthwise, from the top to the bottom (instead of one side to the other). What do you see inside?
- Draw each part separately in your notebook, and label the parts you just learned! You can also tape your flower directly into your notebook.



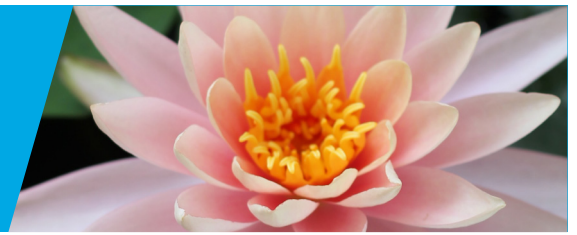
### EXPLORE MORE

- Find a few different kinds of flowers to dissect using the same process. What was the same between each flower? What was different?
- Make a magnifying glass to get a closer look at your flower! Find something circular about 2 inches across, and an empty plastic bottle. Trace the circle over the rounded area at the top of the bottle, and carefully cut it out. You should have a shape like a small, shallow bowl. Fill it with a small amount of water, and look through it! What can you see that you couldn't see with your bare eyes?



# CURIOSITY AT HOME

## FLOWER DISSECTION



### DID YOU KNOW?

Not all flowers have a smell, and not all flowers that do have a smell will smell good to us! Some of the world's biggest flowers are also some of the smelliest, like the titan arum. That's because the animals they need to pollinate them think that they smell really good! One smelly flower you might be able to find near you is often called skunk cabbage. It grows in really wet areas in North America, and its smell attracts flies that pollinate it.

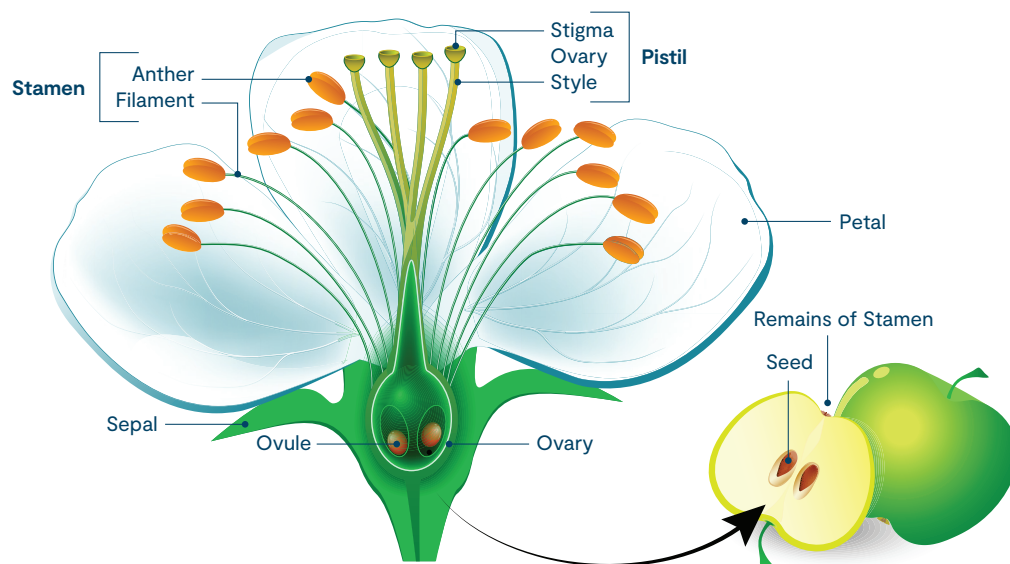


### WHAT'S HAPPENING?

Each part of the flower is important! The **stem** brings water and nutrients to the flower from the roots and leaves of the plant. This is how the flower has the energy to make each different part, to open, and to grow seeds! The **sepals** are the part of the plant that held the flower before it bloomed, when it was just a little beginning of a bud. The flower's colorful **petals** help to attract bees and other pollinators, like butterflies and sometimes flies! They also make oils that give the flowers their smell, which also helps to attract pollinators. The **anthers** on top of the **stamens** make the pollen, which is important to the flower's reproduction. The **pistil** collects the pollen with the help of a pollinator. It goes in at the **stigma**, travels through the **style**, and ends up in the **ovary**.

Once there, the pollen combines with an ovule, and together they grow into a seed.

The ovary of a flower can sometime grow much larger after it has been pollinated and become a fruit. The fruit protects the seed, and sometimes provides water and nutrients for the seed after it lands on the ground and starts to grow. Other times, however, the fruit is there to attract animals that eat the fruit and seed. The animal will then walk somewhere else and poop out the seed, spreading the plant far and also providing fertilizer for the seed to grow in. Once the seed is in the ground, it will grow into a plant of the same species as the parent plants.



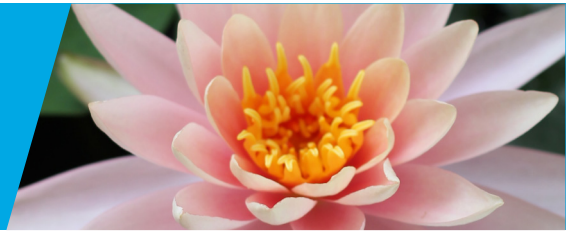
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# CURIOSITY AT HOME

## FLOWER DISSECTION



### K-2 GRADE EXPLORATION

- Why do you think bees like flowers? Are there some flowers that bees like more than other flowers?
- If you were a bee and could design your own flower that you wanted to fly to, what would it look like? What would it smell like? Draw it in your science notebook! Don't forget to include all of the different parts of a flower in your dream flower.
- Have you seen animals other than bees hanging around flowers? What were they? Do you think they were helping pollinate the flowers?



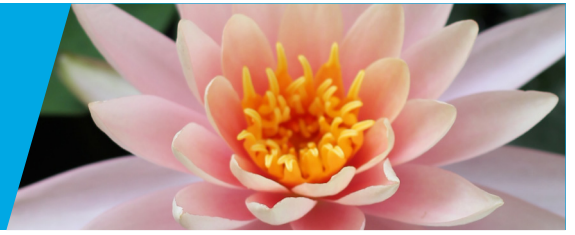
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# CURIOSITY AT HOME

## FLOWER DISSECTION



### 3–5 GRADE EXPLORATION

Explore the following questions and write your observations in your science notebook.

- Look at different flowers from the same species of plant, and compare them. What's the same? What can you find that's different?
- If you were a bee, what kind of flower would you want to find while you're flying around? Design your own flower! Make it as wacky as you want, but don't forget to give it each of the different flower parts. Draw close-ups of the pistil and stamen. What shape are they? How many are there? How many petals are there? Does it grow into any kind of fruit after it's been pollinated?
- Look up time-lapse videos of flowers blooming or fruit growing, such as dahlias, blackberry and pear. What do you notice? What part of the flower emerges first? What part of the fruit grows first? What part of the flower does the fruit seem to be growing from?



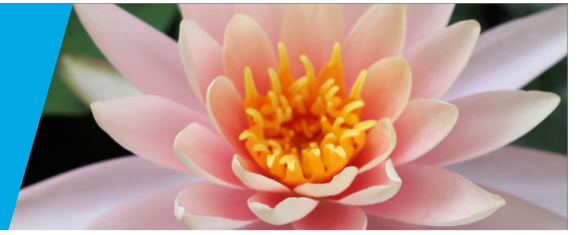
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# CURIOSITY AT HOME

## FLOWER DISSECTION



### 6–8 GRADE EXPLORATION

Explore the following questions and write your observations in your science notebook.

- Compare multiple flowers from the same species. What individual differences can you find? Try measuring and counting specific parts of the flower to find out what's the same through the whole species and what changes from flower to flower.
- If you have access to a microscope and slides, examine the pollen up close. Compare pollen from a few different species of flowers. What similarities and differences do you notice?
- Many plants reproduce using flowers, but there are other ways for plants to create offspring! Try dissecting a pinecone by pulling off the scales and examining them. What do you notice that reminds you of a flower? What is different? When you're done, look up a diagram of a pinecone to find out more.



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