

CURIOSITY AT HOME

PAINT ME POLLINATED



How does pollination work? Try it for yourself using colorful chalk or paint to mimic pollen as it travels on the bodies of bees, butterflies and birds. In this activity, you'll use paper or cotton balls to model how pollen is carried from plant to plant, and see how successful plant reproduction occurs!

MATERIALS

- 2+ colors of chalk
OR: chalk pastel, 2+ colors of juice powder, watercolors, or wet paint
- Paper, or sidewalk if using chalk
- Cotton balls
OR: wadded up tissue, Q-tip, toilet paper, or paper towel)
- Science notebook or paper
- Something to write with

PROCEDURE

- Find a stretch of sidewalk (if using chalk) or large piece of paper (if using water colors or paints) and draw some flowers in different colors. Make sure you heavily color in the middle of the flower so you have chalk dust or wet paint to work with!
- Using the cotton balls as pollinators, "land" in the center of your flower and walk around a bit. If using water colors or paints, be sure to do this step before they dry.
- Have your pollinator travel to the next flower and land again. What happens to the colors on your pollinator and in the center of the flowers?

TRY THIS

Make some art by taking your "pollinator" after it has visited your flowers, and dab it on your science notebook. Draw a flower with it, or draw a flower around it! What color is the strongest? The first flower it visited or the last one? What if it goes back to the first flower it visited?



Experiment continued on next page...



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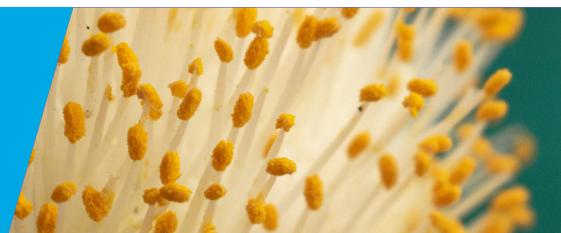
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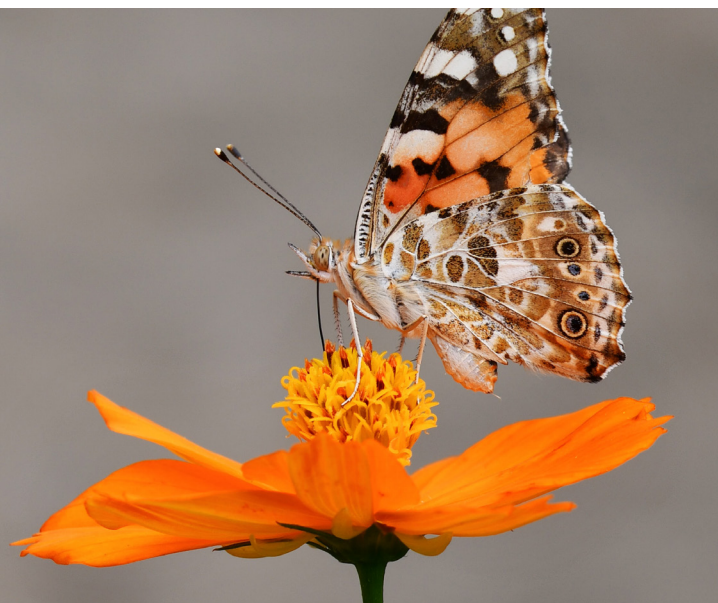


TRY THIS *continued...*

Try drawing a whole field of flowers using at least two different colors, with each color representing a different kind of flower. Flowers need pollen from another flower of the same kind in order to reproduce. Have another member of your household pick 4 random flowers to visit in your field. How many of those flowers will successfully reproduce? What if your pollinator is really picky, and only goes to special flowers? Have your helper now visit four flowers that are their favorite color. How many flowers will be successful now?

DID YOU KNOW

Pollination is the process that allows plants to reproduce. Because plants can't move, they require insects (like bees and butterflies), birds, the wind, or other pollinators to transfer pollen between plants. A flower's bright color and scent attract animal pollinators, who usually are looking for a sweet liquid called nectar to feed on. As the animal visits the flower and drinks the nectar, pollen grains rub off onto its body and are transported to the next flower. This pollen transfer between the same type of plant creates new plants of the species.



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K-2 GRADE EXPLORATION

Here are some questions you can explore together:

- Do bees and other pollinators usually have fuzzy-looking bodies or smooth-looking bodies? Your pollinator was fuzzy, but what would happen if it was smooth? Try this activity again with the back of a paint brush, your finger, or something else smooth and see how much color it picks up. Compare it to your fuzzy cotton ball pollinator.
- How do you think the pollinator feels about carrying around all that pollen? Do you think they notice? How much pollen do you think they can move around in one day?
- What different kinds of animals do you think can be your pollinator? Are they only insects or could other kinds of animals help spread pollen from one flower to another? Can you be a pollinator for real flowers? Do you think you could pollinate more flowers or fewer flowers than a bee in one day? Why?



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3–5 GRADE EXPLORATION

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

- Some plants rely on animals to pollinate them, while other have pollen that is carried by wind or water to other plants. Why do you think animals make such good pollinators? What might be a downside or risk of animal pollination?
- The bodies of bees, butterflies, and other pollinators are often fuzzy, which helps pick up and spread pollen grains. Try this activity with your finger or the back of a paintbrush instead. Does the paint spread as well? Why or why not?



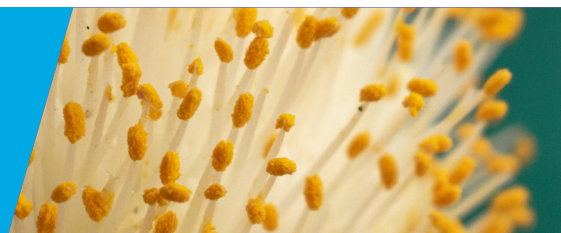
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6–8 GRADE EXPLORATION

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

Draw more flowers in your science notebook in a row. Now use different objects as your “pollinator” for each flower, such as a Q-tip, paint brush, toothpick, or other small item. Write down what object you’re using above each flower, then rub the object on the flower to pick up “pollen”. Rub again below the flower to mark how much pollen was picked up and transferred. Which object transferred pollen the best? What qualities of it do you think made it best? Write down your theory. Try again with a different material for the “pollen” and the same collection of “pollinators.” Is the same pollinator still the best, or is a different one better for this different pollen?



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