

Powdery Pollinators

It's National Pollinator's Week! Celebrate by learning how bees transfer pollen and why these pollinators are so important to our food supply.

Collect

- 1 large craft stick
- 3 black pipe cleaners
- Markers
- Sidewalk chalk, at least 4 colors
- Hammer
- 4 heavy duty zip-top bags
- 4 shallow bowls



Make a bee

1. Use the markers to decorate the craft stick like a bee. There are many different types of bees found in our area. Honey bees and squash bees have brownish bodies with light and dark bands on their abdomens, while bumblebees have black abdomens with a yellow thorax.
2. To make the legs, fold the pipe cleaners in half and twist them around the craft stick. Fold the remaining ends so they are sticking down below the stick.

Make some pollen

3. Place one piece of chalk inside each zip-top bag and seal the bag.
4. Take the bags outside and gently smash the chalk with the hammer until it's a powdery consistency.
5. Pour each color of powdered chalk into its own bowl.

Visit the flowers

6. Imagine each bowl is a different flower. Take your bee and dip the pipe cleaner legs into the powder in one of the bowls. Did any pollen stick to your bee?
7. Fly your bee to the next flower. Dip the pipe cleaner legs into the new bowl and observe what happens.
8. Repeat steps 6 & 7 until you've visited each flower twice. Observe the powder in each bowl. What happened to all of the colors? Did the colored powder stay in its own bowl?

What's happening?

One of the ways that flowering plants reproduce is by being pollinated by insects like bees. When a bee visits a flower looking for nectar, pollen gets stuck to its body (usually the legs or abdomen). When the bee flies from flower to flower, the pollen stuck to the bee's body gets transferred from one flower to the next. Once pollinated, plants can start producing new seeds.

Since your flower bowls were filled with different colored chalk, after a few rounds you should be able to see how each color was transferred to other flowers. Lots of fruits and veggies come from flowers that need to be pollinated before they produce the apples, tomatoes, squash, or beans that we want to eat.



Take it further!

There are also bees in our area, such as leafcutting bees and mason bees, which carry pollen on their abdomens instead of their legs. Try using the same types of materials (craft sticks and pipe cleaners) to make a model of one of these bees. Use the markers to decorate your new bee. Leafcutting bees are mostly black with some lighter colored bands on their abdomens, while mason bees can even be a bluish-green color. Since these bees collect pollen on their abdomens, where should you attach the pipe cleaners?

Different bees help pollinate different plants!

Even though honey bees are the most familiar bee for many people, there are many other bees in our area that help pollinate our favorite fruits and veggies. Bumblebees are great at pollinating plants like tomatoes, because the vibration of their wings helps shake the pollen loose. Squash bees can frequently be found near plants that are part of the cucurbit family such as cucumbers, pumpkins, and squash. One type of mason bee, the blue orchard bee, is well known for pollinating fruits that come from orchards like apples and cherries.

