

Creating the Model

To create the bee models, each student needs one pre-notched popsicle stick (pre-notched sticks are available for purchase at local craft stores or online. Teachers are also welcome to use regular non-notched sticks as needed.), one length of string (30cm), three pom-poms (assortment of black and yellow), one white chenille stem (pipe cleaner), and glue. To quickly distribute materials, we suggest placing the materials for each student in a separate paper bag. Students begin by gluing three pom-poms together to form the body of the bee. They can alternate yellow-black-yellow to create the typical banded coloration found in bees. Although school glue will work to hold the pom-poms together, it may take a while for this glue to dry. A glue gun works best to quickly create bee bodies. When using glue guns, always have an adult do the gluing, use low-temperature guns, wear safety goggles and heat resistant gloves, and only allow students to handle the model once the glue has cooled and dried.

After the glue has dried, students use a chenille stick to create the wings and head of the bee. Place the chenille stick perpendicular to the pom-poms so that there is a single pom-pom above the stick to represent the head and two pom-poms below to represent the body. Next, adjust the chenille stick so that an equal length extends on each side. Then, fold both sides of the stick upwards to create a V-shape that wraps about the pom-poms and twist the two exposed ends of the stick together to secure the bee. Finally, fold each of the remaining portions of the chenille sticks into a loop to create the bee wings. Students may want to twist the loose ends at the base to secure each wing.

Students can use additional chenille sticks to add other features to their bee, such as a stinger or antennae if desired. Last, take a piece of string and tie one end onto a pre-notched popsicle stick and the other end onto the base of the bee wings. The string should be tied to the chenille stick itself and not the pom-pom body to help the bee balance correctly when suspended from the string. Students can now make their bee “fly” by holding up the popsicle stick and using the bee as a string puppet. Instruct students to wear safety goggles whenever they are moving their popsicle sticks around.

Who is my best pollinator?



Who else might like me?

Who is my best pollinator?



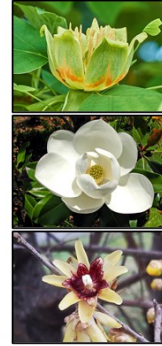
Who else might like me?

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Who else might like me?

Who is my best pollinator?

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Hummingbird Friend

Usually likes **RED, ORANGE, YELLOW, WHITE,** and sometimes **MAGENTA** flowers



FLOWERS **BEST** FOR HUMMINGBIRDS...

- are long and tubular shaped for their beaks
- have LOTS of nectar!
- are not usually scented

Bee Friend

Usually likes **BLUE, PURPLE, YELLOW,** and **WHITE** flowers



FLOWERS **BEST** FOR BEES...

- have a sturdy flower or place for bees to land (like a landing pad!)
- have a strong minty or sweet smell
- have invisible **UV** light nectar guides!

Moth Friend

Usually likes very **PALE** or **WHITE** flowers



FLOWERS **BEST** FOR MOTHS...

- are easy to see at all hours
- smell sweet and fragrant
- are tubular shaped with nectar deep inside

Beetle Friend

Usually likes **WHITE, LIGHT GREEN, EARTHY-COLORED,** or **YELLOW** flowers



FLOWERS **BEST** FOR BEETLES...

- smell **fruity** or **funky** (like rotting fruit)
- are bowl shaped and easy to climb into
- have lots of pollen to roll in

Bat Friend

Usually likes **WHITE** colored flowers, but also sometimes **LIGHT GREEN** or **LIGHT PURPLE** flowers



FLOWERS **BEST** FOR BATS...

- are light colored (easy to see at night)
- smell **musty** at night with lots of pollen
- can hang down or face upwards

Fly Friend

Usually likes **BROWN, DARK PURPLE, DARK RED,** and sometimes **WHITE** flowers with flecks or spots



FLOWERS **BEST** FOR FLIES...

- are various shapes to get pollen on the fly
- smell like dung, dirt, or rotting things
- have nectar (flies like it, too!)

Butterfly Friend

Usually likes lots of **BRIGHT** colors like **RED** or **PURPLE** or **PINK,** but also **WHITE** flowers



FLOWERS **BEST** FOR BUTTERFLIES...

- have a nice wide place to land that won't hurt their wings
- smell sweet or fresh
- can use **UV** nectar guides, like bees!

Other Pollinator Friends



Activity	Time	Key Questions
<i>Building a Bee</i>		
Construct a Model Bee	20 min	<p>What does/doesn't the bee model show about the structure of a bee?</p> <p>Why do animals such as bees travel to flowers?</p> <p>How bees might choose which flowers to visit?</p>
<i>Finding Pollinator Friends</i>		
Pollinator Friend Cards	20–30 min	<p>Which flower will attract this pollinator?</p> <p>Which pollinator will be attracted to this flower?</p> <p>What features of the flower attract that pollinator?</p>
Optional Outdoor Flower Hunt	30–40 min	<p>Which types of flower or pollinators did you find most often?</p> <p>What pattern did you find about which pollinators were on flowers of a given shape, color, or smell?</p>
<i>Growing a Flower Garden</i>		
Construct a Model Flower	30 min	<p>What features of the flower would be likely to attract your pollinator?</p> <p>How is the flower model similar to and different from the actual living flowers?</p>

Concerns Areas that need improvement	Rubric Criteria	Advanced Areas that exceed expectations
	Describes why a pollinator might visit a flower (e.g., to gather nectar for honey)	
	Describes how a pollinator is attracted to specific aspects of a flower's form (e.g., the color)	
	Describes how a pollinator might transfer pollen from one flower to another	
	Describes how pollination is important for flowering plants to form seeds and fruit for reproduction	