



Sunshine & STEM

Welcome to Sunshine & STEM

Thank you so much for being here and for supporting this dream.

Sunshine & STEM was created from a deep belief that childhood should feel magical, filled with books, curiosity, movement, nature, creativity, and wonder.

As a mom and homeschooler, I wanted to create a learning experience that felt meaningful, joyful, and connected to everyday life. I dreamed of days filled with hands-on science, beautiful stories, outdoor adventures, creativity, and space for children to explore their natural curiosity. I wanted learning to feel alive.

I created Sunshine & STEM to bring all of those things together.

Each weekly bundle is thoughtfully designed to help children explore the world through stories, hands-on STEM activities, nature play, process art, sensory experiences, movement, and curiosity-led learning. My hope is that these resources help create peaceful, connected learning moments for your family. Moments your children will remember long after the lesson is over.

Thank you for supporting a small dream with a very big heart.

I am so grateful you are here.

With love,
Brooklyn
Founder of



Core Read Alouds

- Give Bees a Chance

Author: Bethany Barton

ISBN: 978-0451475112



Funny, engaging, and very approachable science.

- Look Inside The World of Bees

Author: Emily Bone

ISBN-13: 978-1474983198



Lift the Flap Book with so much information

- The Magic School Bus Inside a Beehive

Author: Joanna Cole

Illustrator: Bruce Degen

ISBN: 978-0590257211



Always a favorite of my kiddos, great for older ages.

Songs

- The Pollination song by KidGardening.org

https://youtu.be/ISUSrICVA-c?si=9ZOTn-DBBYqZj_p_

- Honey Bees are Cool by Jack Hartman

<https://youtu.be/HNz8unnAbeY?feature=shared>

Videos

- Nature Singalong with John: Pollination Song from Harrison Center

<https://www.youtube.com/live/RKCnZLst2yQ?feature=shared>

- Amazing Time-Lapse: Bees Hatch Before Your Eyes | National Geographic

<https://youtu.be/f6mJ7e5YmnE?si=sUdfNGEMckcyYHdE>

- How Bees Make Honeycomb - It Might Surprise You by Beekeeping Made Simple

<https://youtu.be/ItJksME4fEQ?si=2A5hp2Mk2Zp1npFt>

- Handyman Hal learns about Bees by Handyman Hal

https://youtu.be/pdHzTHs4pZ4?si=rEgXIp1c9je_4kZA

- How do Pollinators Help Plants Grow? By SciShow Kids

<https://youtu.be/obfXY8dT840?si=qT-99cpRbH8tqw8y>

Watercolor Discovery Pages

If printed on cardstock, these make great watercoloring pages. We chose to cut out the bee from the bee anatomy page and attach it to the honeycomb.



BEE ANATOMY

Bees are amazing pollinators!
Here's a look at the parts of a bee and how they help.

ANTENNAE

Bees use their antennae to smell, taste, and feel their way around. They help bees find flowers and talk to other bees.

COMPOUND EYES

Bees have five eyes! Two big eyes help them see movement and color. Three small eyes on top help detect light.

WINGS

Bees have two pairs of wings that beat very fast. This helps them fly from flower to flower.

MOUTH

Bees use their long tongue called a proboscis to sip up nectar from flowers. They also have jaws to chew pollen.

LEGS

Bees have six legs. They use them to walk, clean themselves, and collect pollen. The back legs have special "baskets" (pollen baskets) to carry pollen back to the hive.

THORAX

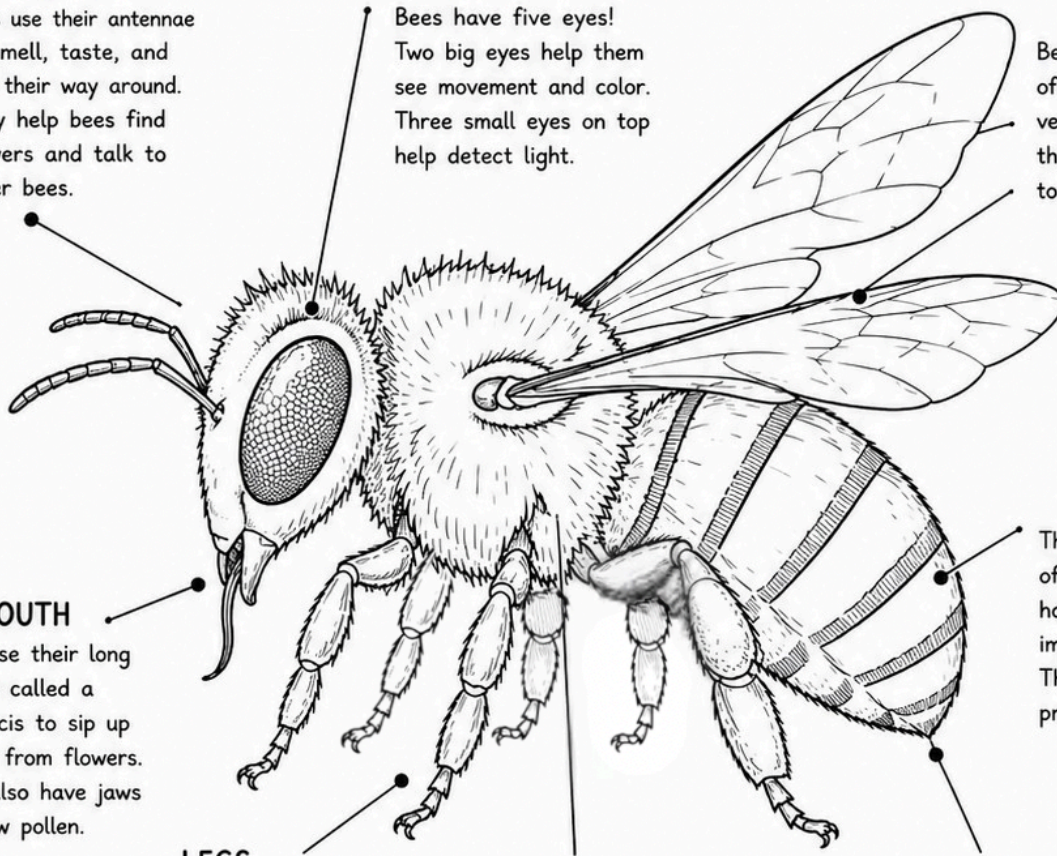
The middle part of the bee where the wings and legs are attached. It contains strong muscles for flying and moving.

STINGER

Female bees have a stinger to protect the hive. They usually only use it if they feel threatened.

ABDOMEN

This is the back part of the bee. It stores honey and holds important organs. The stripes help protect the bee.



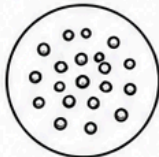
POLLIN & POLLINATION

Pollin is a fine powder made by flowers.
Pollination is how pollen travels from one flower to another to help make new seeds and fruits.



WHAT IS POLLEN?

Pollen is tiny powder made in the anther (the top part) of a flower. It often looks like little yellow grains.

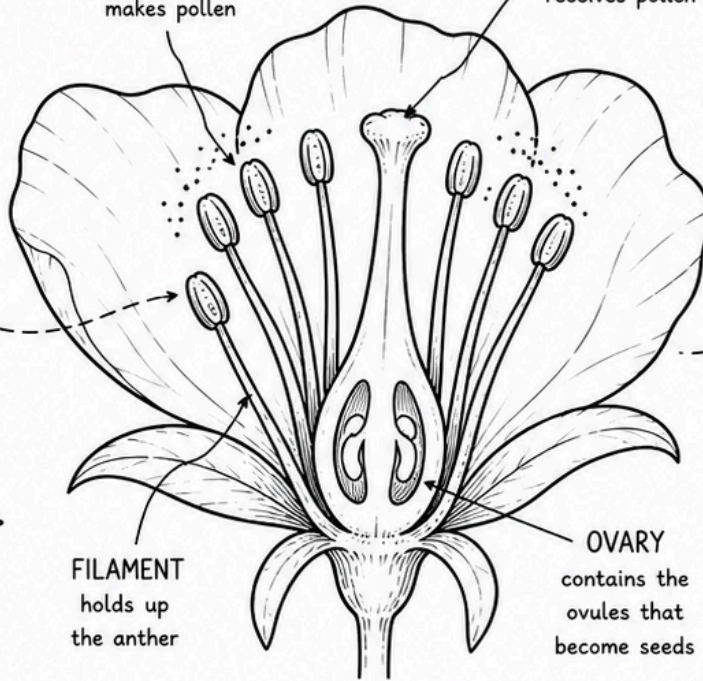


POLLEN GRAINS



ANTHER
makes pollen

STIGMA
receives pollen



FILAMENT
holds up
the anther

OVARY
contains the
ovules that
become seeds

WHAT IS POLLINATION?

Pollination happens when pollen moves from the anther of one flower to the stigma of another flower.

DID YOU KNOW?

Many things can help with pollination! Bees, butterflies, birds, bats, and even the wind help move pollen from flower to flower.

WHY IS POLLINATION IMPORTANT?

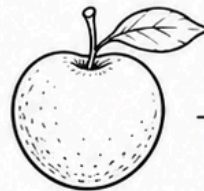
When pollination happens, flowers can make seeds and fruits. This helps plants grow and makes many of the foods we eat like apples, berries, and vegetables!



1. Flower makes pollen.



2. Pollen moves to another flower.



3. Pollination helps the flower grow.

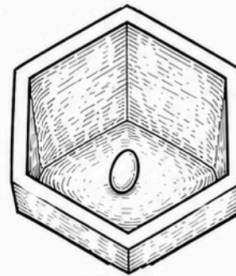
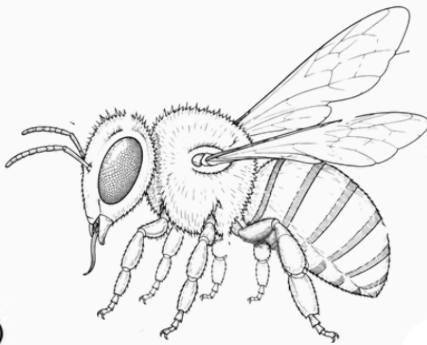


4. Seeds and fruits are formed!

LIFE CYCLE OF A BEE

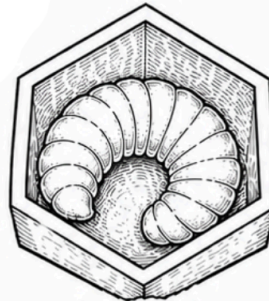
Bees go through four amazing stages
in their life cycle.

The cycle starts over
so new bees can live!



1. EGG

The queen bee lays
a tiny egg in a cell.
It's very small—about
the size of a grain
of rice!



2. LARVA

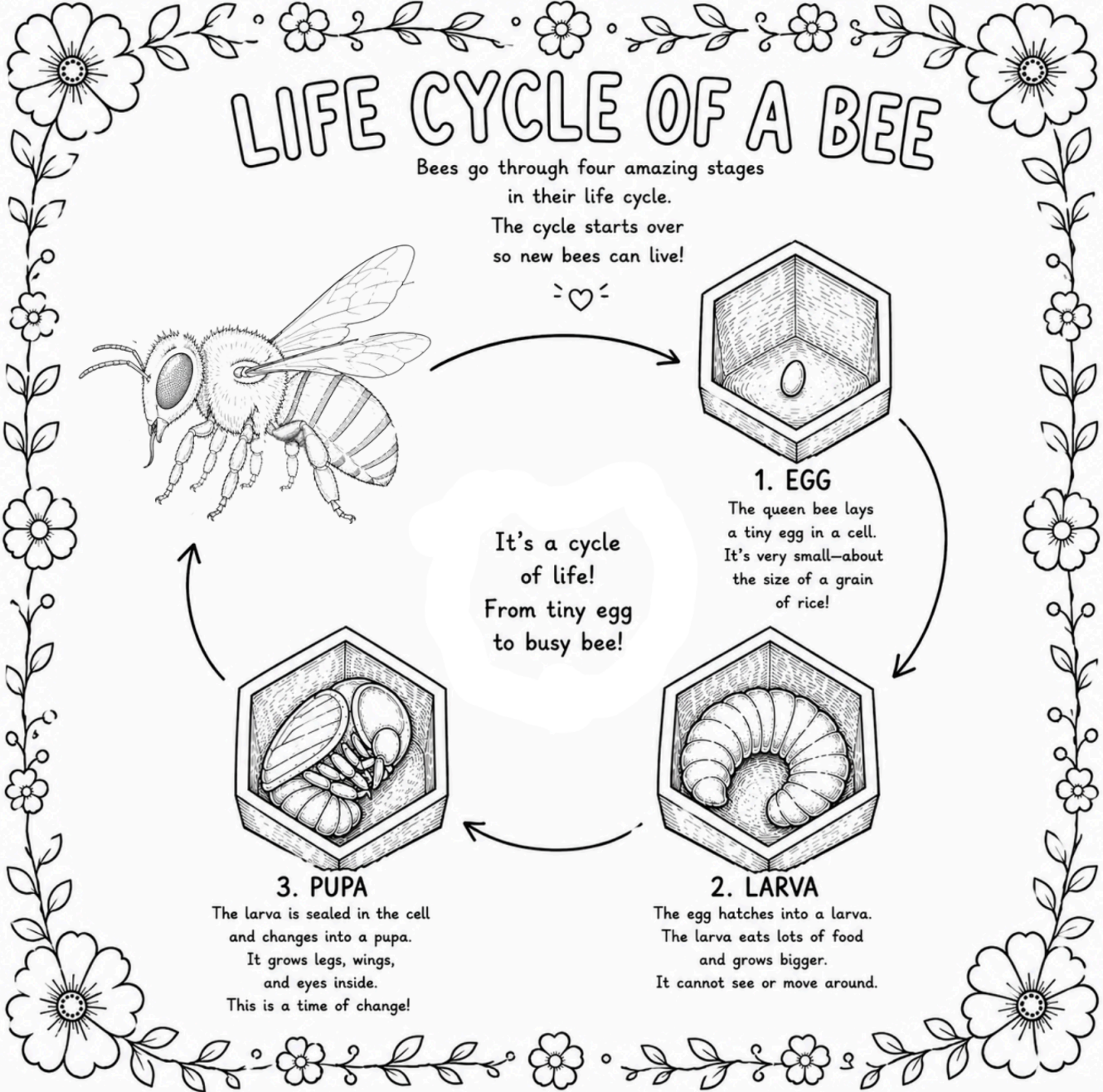
The egg hatches into a larva.
The larva eats lots of food
and grows bigger.
It cannot see or move around.



3. PUPA

The larva is sealed in the cell
and changes into a pupa.
It grows legs, wings,
and eyes inside.
This is a time of change!

It's a cycle
of life!
From tiny egg
to busy bee!



Invitation

Bubble Wrap Honeycomb Printing

STEM Connections

- Hexagons in nature
- Honeycomb design
- Patterns & repetition

Materials

- Bubble wrap
- Paint and brushes
- Paper hexagon cutout
- Paint tray
- Optional: Watercolor honeybee from printable (scissors and tape required)



Invitation

1. Paint the textured side of the bubble wrap
2. Stamp the hexagon with the painted bubble wrap
3. Optional: Cut out the bee from the bee anatomy sheet and attach to the hexagon

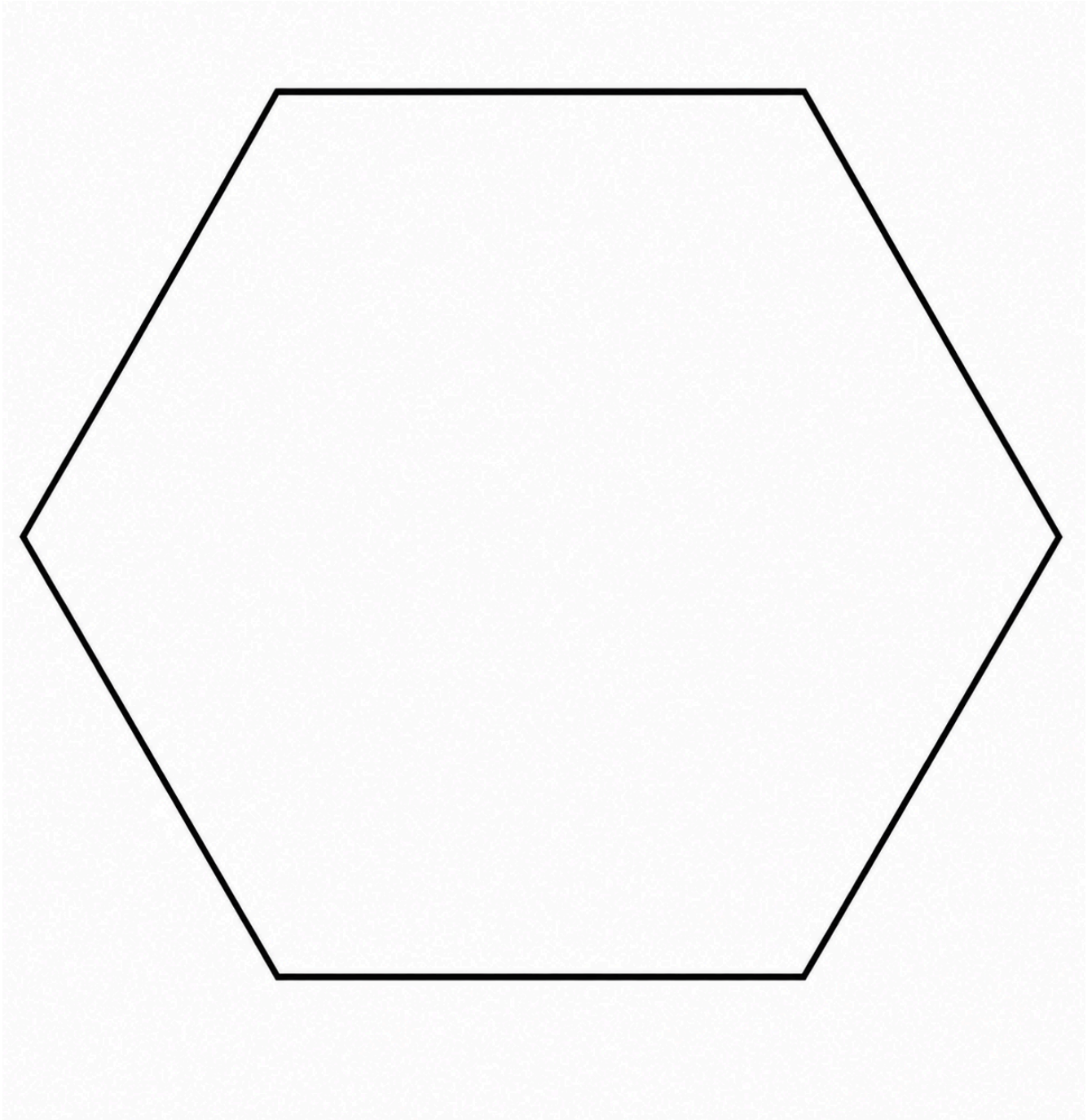


Did You Know?

Bees build honeycombs using hexagons because the shape is strong, efficient, and fits together perfectly, with no gaps.

Wonder Together

- Can you count the sides of a hexagon?
- How many angles are in a hexagon?
- What happens when hexagons fit together?
- Do they leave empty spaces?
- Why might bees build their honeycombs this way?



Busy Bees Nectar Transfer Race

Stem Connection

Children become hardworking honey bees as they collect “nectar” from flowers and carry it back to the hive using pipettes in this active STEM and fine motor game. As children run between flowers and the hive, they’ll strengthen hand muscles, coordination, and early scientific understanding while exploring how bees gather nectar to help make honey.



You’ll Need

- Small cups or bowls (We placed felt cut like flowers inside)
- Water tinted with food coloring
- Pipettes or droppers
- Plastic egg container, small containers, or cups for the “bee hive.”

Setup

1. Fill several cups with colored water to represent flower nectar.
2. Spread the nectar cups around the play area or park.
3. Place a plastic egg top or a small container in a central location to become the “bee hive.”

The Invitation to Play

Children run to a flower cup, squeeze nectar into their pipette, and race back to carefully transfer the nectar into the hive.

Then they run back to collect more nectar again and again, just like busy bees visiting flowers throughout the day.

Continue until the hive is filled with colorful “nectar!”



Wonder Together

- Why do bees visit flowers?
- What do you think nectar tastes like to a bee?
- Was it easy or difficult to carry the nectar carefully?
- Why do bees need to work together in a hive?
- What might happen if flowers disappeared?
- How many trips did it take to fill the hive?
- Why do you think bees are important for gardens and farms?

Pollinator Pollen Transfer Race

STEM Connection

Children become pollinators in this active, hands-on STEM game inspired by the important work of bees. Using tweezers to collect “pollen” pom poms from flowers around the play space, children work on fine motor skills, hand muscles, and coordination while exploring how pollen travels from flower to flower during pollination.

You'll Need

- Small cups or bowls
- Glitter in different colors
- White pom poms
- Tweezers or tongs
- One empty collection cup per child

Setup

1. Add a small amount of glitter into each flower cup.
2. Place white pom poms inside and gently shake to coat them with “pollen.”
3. Spread the flower cups around the room or outdoor play area.
4. Give each child a pair of tweezers and an empty collection cup.

The Invitation to Play

Children travel from flower to flower using tweezers to carefully collect one pollen pom pom at a time.

As the game continues, glitter begins transferring between pom poms – just like pollen sticks to a bee’s fuzzy body and spreads between flowers while bees search for nectar.

At the end, gently shake the cups and observe all the colorful pollen that transferred during play.

Wonder Together

- What happened to the white pom poms after visiting the flowers?
- Why did the glitter move from one pom pom to another?
- How are the pom poms similar to bees?
- Why are pollinators important for gardens and farms?
- Did some pom poms collect more pollen than others?
- What kinds of foods do we eat because of pollinators?



Honeycomb Sensory Invitation

STEM Connection

This hands-on sensory invitation encourages children to explore the world of bees through texture, movement, fine motor play, and imaginative discovery. Children use tweezers to grab and sort bees into their matching honeycomb hives while scooping, pouring, digging, and exploring the sensory materials with pipettes and their hands.

The sensory base was created using soft quinoa layered over golden “honey” jello, with pasta pieces arranged to resemble honeycomb inside the hive.



Setup

- Cooked yellow or orange jello
- Quinoa or another sensory filler
- Bee manipulatives or small bee toys
- Tweezers or tongs
- Pipettes or droppers

Large pasta tubes to create honeycomb shapes

- Honeycomb color-matching board or tray

The Invitation to Play

There is no “right way” to explore; sensory invitations encourage curiosity, creativity, and open-ended learning. Sensory play also helps children learn through hands-on exploration by engaging multiple senses at once.

Wonder Together

- Why do bees build honeycomb shapes?
- What does the sensory bin feel like?
- Can you find all the bees?
- Which textures feel smooth, rough, soft, or sticky?
- Why might bees store honey inside the hive?
- What colors do you notice in the honeycomb?

Extra Invitation: Honey Tasting Exploration



Stem Connection

Flowers make sugary nectar to attract pollinators like bees. Bees collect the nectar, carry it back to the hive, and slowly transform it into honey.

Inside the hive, bees mix nectar with special enzymes and fan it with their wings to help water evaporate. As the nectar thickens, it becomes the golden honey we know and enjoy.

Honey is naturally sweet because nectar contains plant sugars like fructose and glucose.

Wonder Together

- Why do you think flowers make nectar sweet?
- Why might bees need honey?
- Have you ever tasted different kinds of honey?
- Do you think honey would taste different from different flowers?