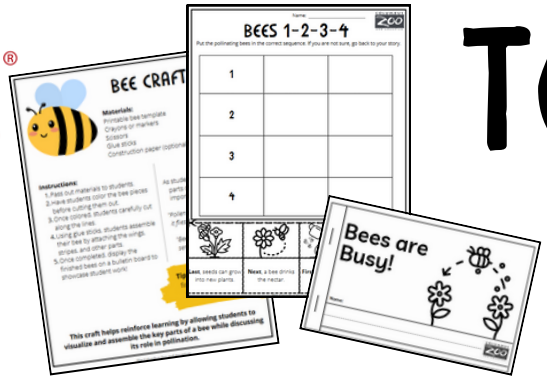
COLUMBUS ZOO AND AQUARIUM

BEES

K-1 LESSON PLANS

COLUMBUS ZOO AND AQUARIUM



TEACHER GUIDE

Objective: Students will develop empathy for wildlife by learning about bees, recognizing the the work and teamwork bees do, and exploring ways humans can help protect these animals. *(See Ohio Standards Connections on Page 2)*

E- ENGAGE	• Begin with a **KWL chart** to assess what students already know about bees and pollination and what they want to learn. • Read aloud a book from the book list (e.g., *Give Bees a Chance* or *Bee Dance*). • Ask students: *Why do you think bees are important? What do they do all day?*
E- EXPLORE	• Provide students with the **mini-book *Bees Are Busy!*** to read and discuss. • Have students complete the **bee sequencing** cut-and-paste activity to reinforce the steps of pollination. • Encourage hands-on learning by acting out pollination with **pollination role-play**, where students pretend to be bees collecting and spreading pollen.
E- EXPLAIN	• Use the **Bee & Teamwork Questions** to guide discussions about how bees work together and why pollination is essential. • Share key **bee facts** and discuss how flowers attract bees, how bees make honey, and how their waggle dance helps them communicate. • Introduce the **bee craft** activity and discuss the parts of a bee as students assemble their craft.
E- EXTEND	• Take learning outside by **planting or observing a pollinator garden**, allowing students to see bees in action. • Have students write a **thank-you letter to bees** (differentiated options available) to express appreciation and understanding of their role in nature.
E- EVALUATE	• Return to the **KWL chart** to fill in the "What I Learned" section. • Have students share one new fact they learned about bees. • Use an exit ticket where students answer: *How do bees help us, and how can we help them?*

Printing Tip: Run your books through the copier on "booklet" staples and then slice in half. Ready to go!

STANDARDS GUIDE

Informational Text	**RI.K.1** – With prompting and support, ask and answer questions about key details in a text. **RI.K.2** – Identify the main topic and retell key details of a text. **RI.K.3** – Describe the connection between two individuals, events, ideas, or pieces of information in a text. **RI.1.1** – Ask and answer questions about key details in a text. **RI.1.2** – Identify the main topic and retell key details of a text. **RI.1.3** – Describe the connection between two individuals, events, ideas, or pieces of information in a text.
Writing	**W.K.2** – Use a combination of drawing, dictating, and writing to compose informative/explanatory texts. **W.1.2** – Write informative/explanatory texts, naming a topic, supplying facts, and providing closure.
Speaking and Listening	**SL.K.1** – Participate in collaborative conversations about topics and texts with peers and adults. **SL.K.2** – Confirm understanding of information presented orally or through other media. **SL.K.5** – Add drawings or other visual displays to descriptions as needed to provide additional detail. **SL.1.1** – Participate in collaborative conversations about topics and texts with peers and adults. **SL.1.2** – Ask and answer questions about key details in a text read aloud or information presented orally. **SL.1.5** – Add drawings or other visual displays to descriptions when appropriate to clarify ideas.
Science	**K.LS.1** – Living things have specific characteristics and traits. **K.LS.2** – Living things develop in predictable patterns. **1.LS.1** – Living things have basic needs, which are met by obtaining materials from the physical environment. **1.LS.2** – Living things survive only in environments that meet their needs.

ACTIVITIES

Pollination Role Play	Let the students act out being busy bees! • Give each child a cotton ball or pom-pom to act as pollen. • Have fake flowers (made from construction paper, plastic, or flower pillows) scattered around the room. • Students "fly" from flower to flower, picking up and dropping off pollen. • This fun, hands-on activity helps children visualize how bees transfer pollen with teamwork.
Plant or Observe a Pollinator Garden	Students can extend their learning by planting or observing a pollinator garden. A pollinator garden has flowers that attract bees, butterflies, and other pollinators. Students can: • Choose flowers that bloom in different seasons to help pollinators all year. • Observe how bees visit flowers and track how many they see. • Record different kinds of pollinators and the colors of flowers they visit. • Plant native flowers in a schoolyard or home garden to provide food for pollinators. • Discuss how pollinators help plants grow and why it's important to protect them. Watching a pollinator garden grow will help students understand the important role of bees and other pollinators in nature!
Discussion Questions	**Questions About Bees:** 1. Why do bees fly from flower to flower? 2. What do bees get from flowers? 3. How do bees help flowers grow? 4. What do bees do with the nectar they collect? 5. What foods do we eat that need bees to grow? 6. How can we make sure bees stay safe? 7. Why do we say bees are helpers? 8. What would happen if there were no bees? **Questions About Teamwork:** 1. How do bees work together in their hive? 2. What are some jobs bees have in their hive? 3. How do you help others when working as a team? 4. What are some ways we can work together like bees? 5. Why is teamwork important? 6. Can you think of a time when you helped a friend? 7. How do bees tell each other where to find flowers? 8. How can we work together to protect bees?
Bee Facts	1. Bees help flowers grow by moving pollen from one flower to another. 2. Honeybees live in groups called colonies, where they work together. 3. Bees make honey from nectar, which they collect from flowers. 4. Pollen is a yellow dust that helps flowers make seeds. 5. Many fruits and vegetables, like apples, pumpkins, and strawberries, need bees to grow. 6. Bees do a special dance called the "waggle dance" to show where flowers are. 7. Flowers attract bees with bright colors, sweet smells, and nectar. 8. Some bees live alone, but honeybees and bumblebees live in big groups. 9. Bees use their legs to carry pollen from one flower to another. 10. Planting flowers helps bees find food and stay healthy!

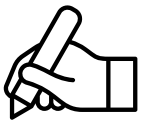
FAVORITE BOOKS

Give Bees a Chance By Bethany Barton	A fun and engaging book that introduces kids to the importance of bees through humor and colorful illustrations. It explains why bees are not scary but helpful, teaching about pollination, honey-making, and why we need to protect them.
Bee Dance By: Rick Chrustowski	This beautifully illustrated book explains the "waggle dance," a special way bees communicate to find flowers. With simple text and vibrant pictures, it helps young readers understand how bees work together as a team.
The Bee Book By: Charlotte Milner	A visually stunning book filled with facts about bees, their life cycle, and their role in pollination. It also includes ways we can help bees thrive, making it a great mix of science and conservation for young learners.
Honeybee: The Busy Life of Apis Mellifera By: Candace Fleming	A beautifully detailed nonfiction book that follows the life of a single honeybee from birth to her final flight. This book brings science to life with engaging storytelling and fascinating bee facts.
The Thing about Bees By: Shabazz Larkin	This heartfelt and rhythmic book shares the importance of bees while also addressing fears about them. The author's playful illustrations and personal story make this a great read-aloud choice for young learners.
Flight of the Honey Bee: Read and Wonder By: Raymond Huber	An engaging story that follows Scout, a brave honeybee, as she searches for flowers. This book combines storytelling with science, showing how bees work together to survive.
What if There Were No Bees? By: Suzanne Slade	A thought-provoking book that explores what would happen if bees disappeared. It highlights their importance in ecosystems and encourages kids to think about conservation and protecting pollinators.

Name: _____

KWL

Record what you know, what you want to know, and then what you learn about bees.



K **What I <u>Know</u> About Bees**		
W **What I <u>Want</u> to Know About Bees**		
L **What I <u>Learned</u> About Bees**		

ANSWER KEY
SAMPLE

Name: _____

KWL

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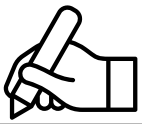
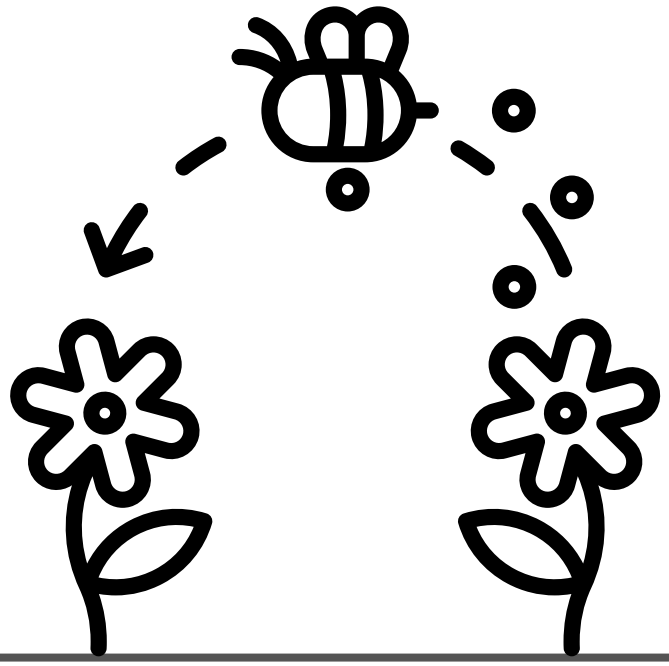


K **What I <u>Know</u> About Bees**	Bees fly Bees make honey Bees help flowers	
W **What I <u>Want</u> to Know About Bees**	How do bees help the flowers? Do we need bees? How do bees make honey?	
L **What I <u>Learned</u> About Bees**	Bees go between flowers and spread pollen. Flowers need bees to grow. The pollen sticks to the bee legs.	

Bees are Busy!



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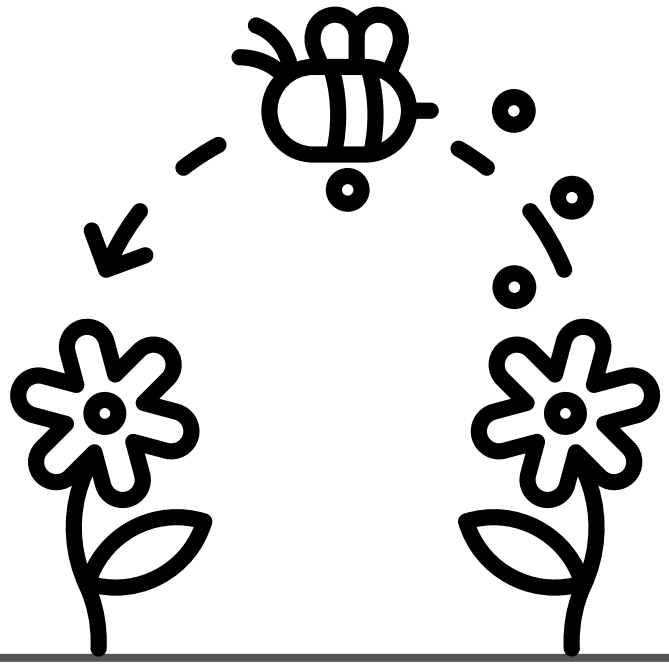

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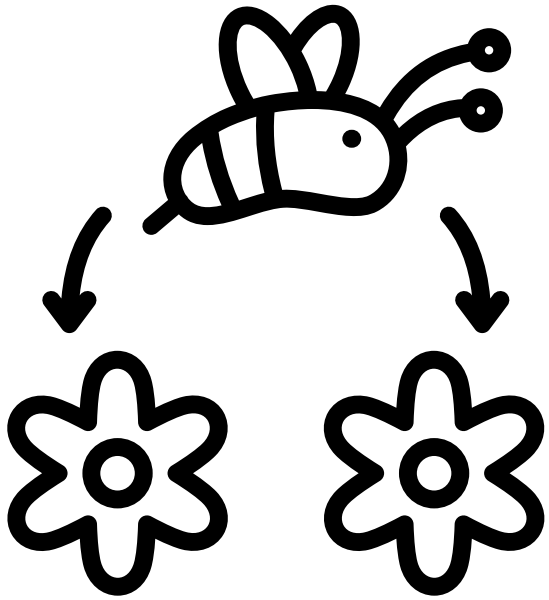
Bees are little insects.

They fly from flower to flower.

Bees are very busy!



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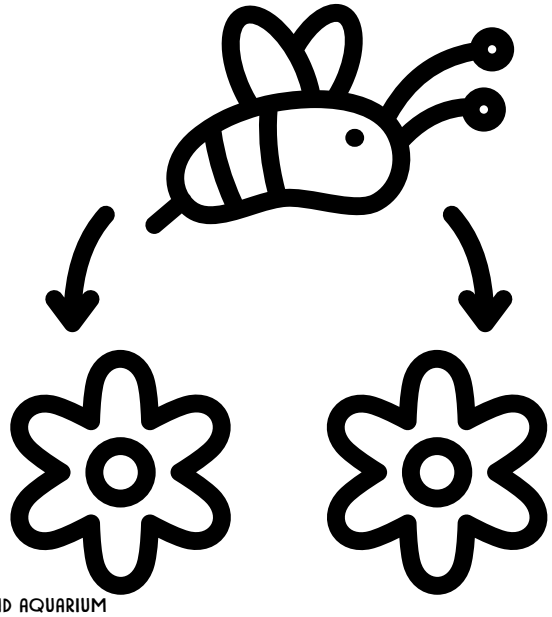

THE COLUMBUS ZOO AND AQUARIUM

Flowers have sweet juice.

The juice is called nectar.

Bees love nectar!

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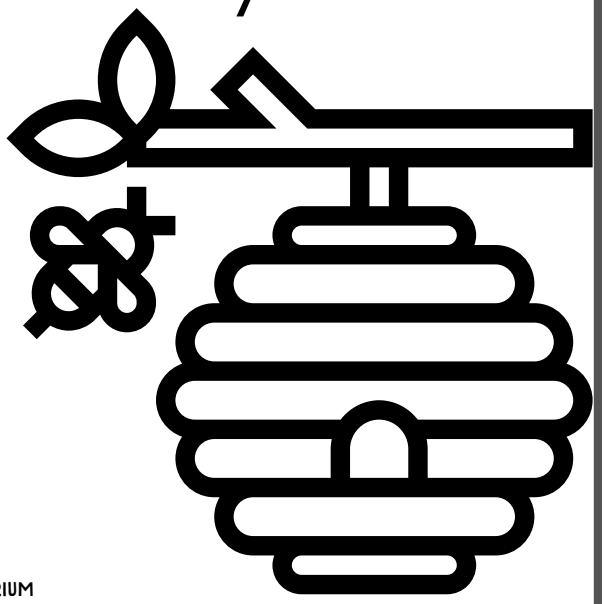
Bees love nectar!

Bees drink the nectar.

They take it back to the hive.

Bees use nectar to make honey.



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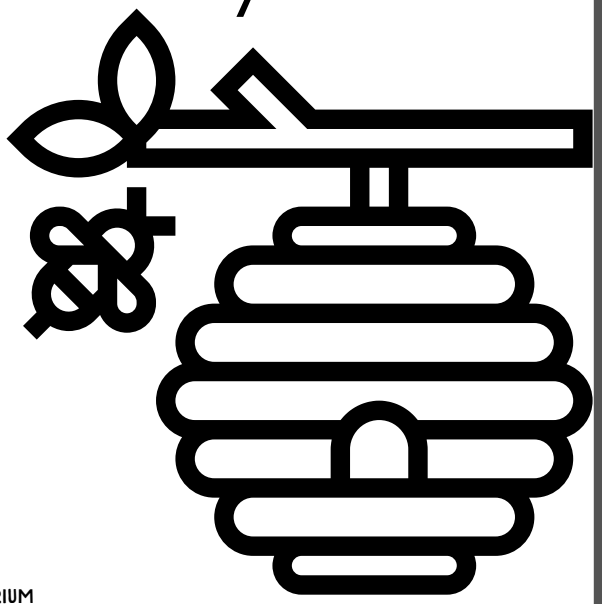
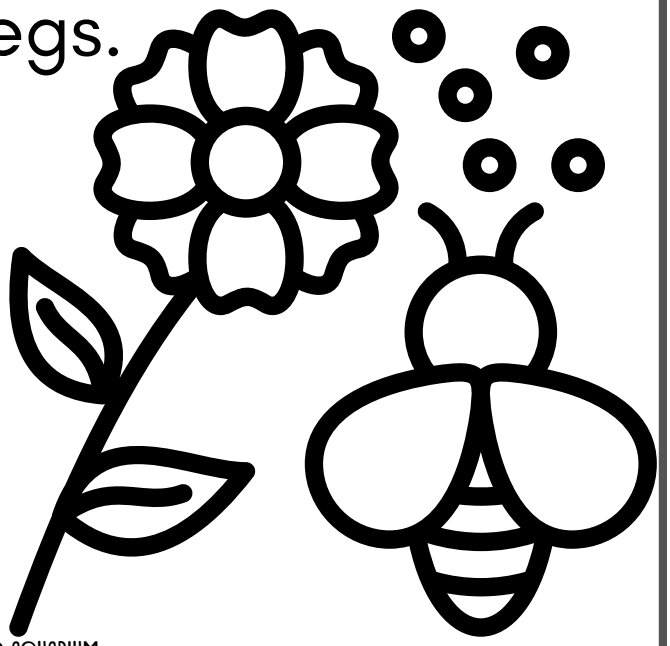


THE COLUMBUS ZOO AND AQUARIUM

When bees fly, they carry pollen.
Pollen is yellow dust from flowers.
It sticks to the bees' legs.



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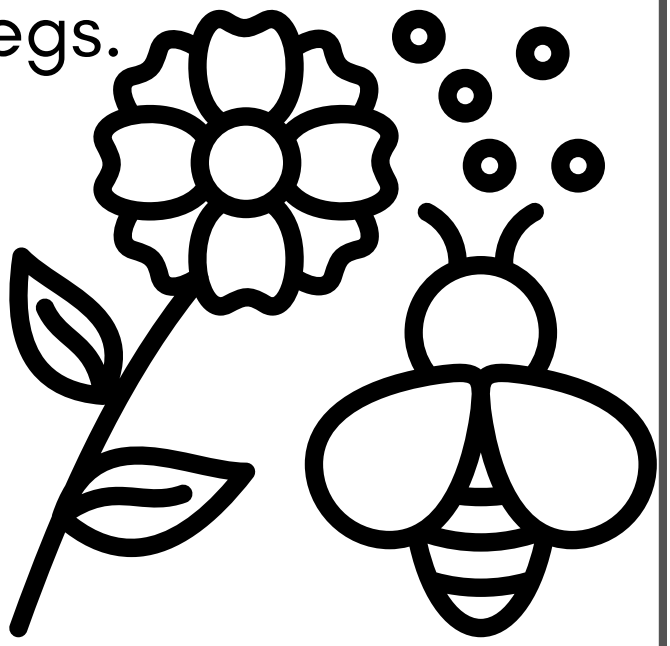

THE COLUMBUS ZOO AND AQUARIUM

Bees take pollen to other flowers.
This helps flowers make seeds.
Bees are helpers!

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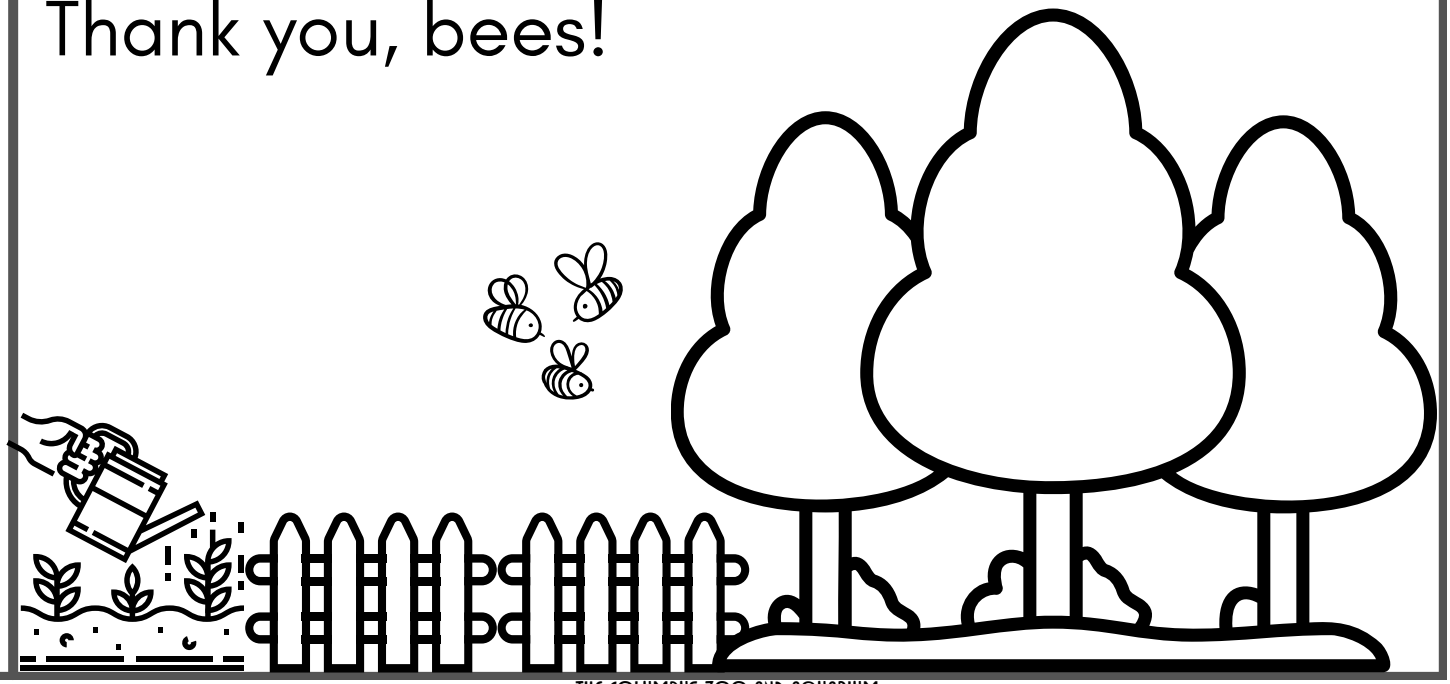
THE COLUMBUS ZOO AND AQUARIUM

Seeds grow into new plants.
Plants grow food for us to eat.
Thank you, bees!



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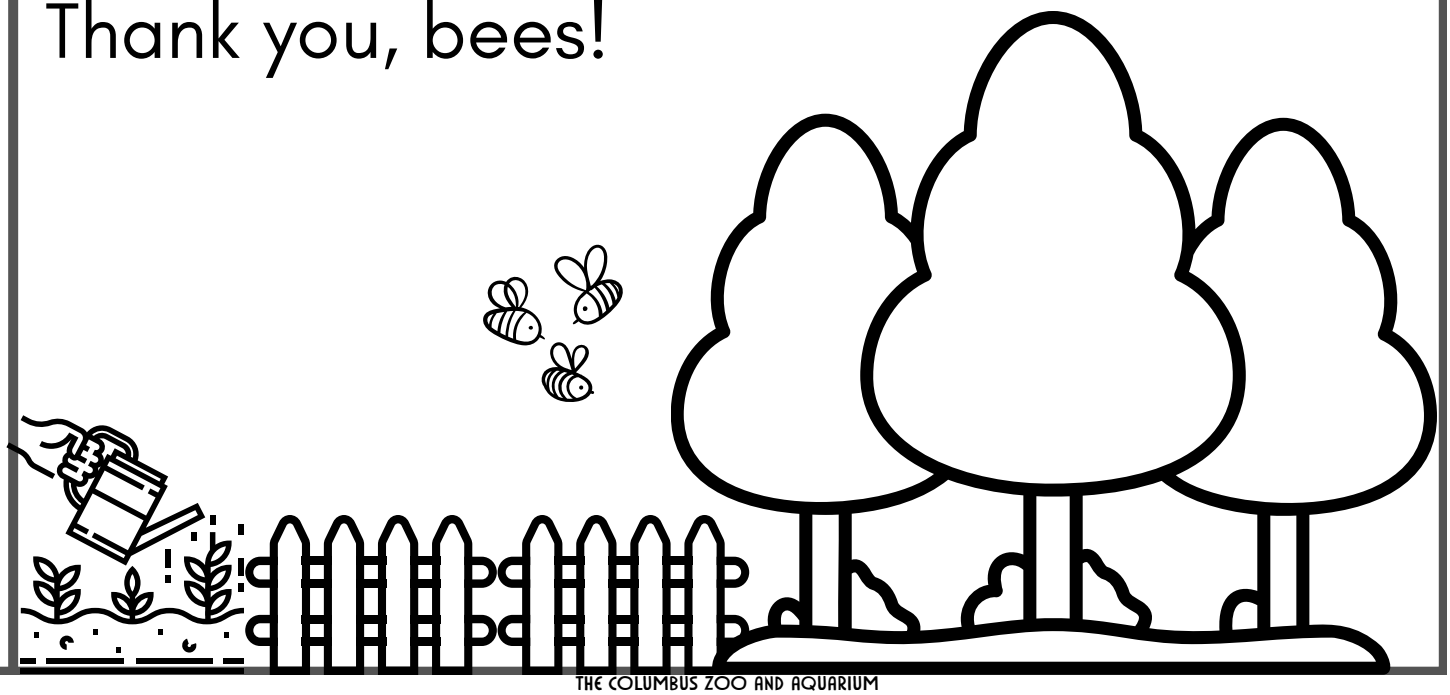
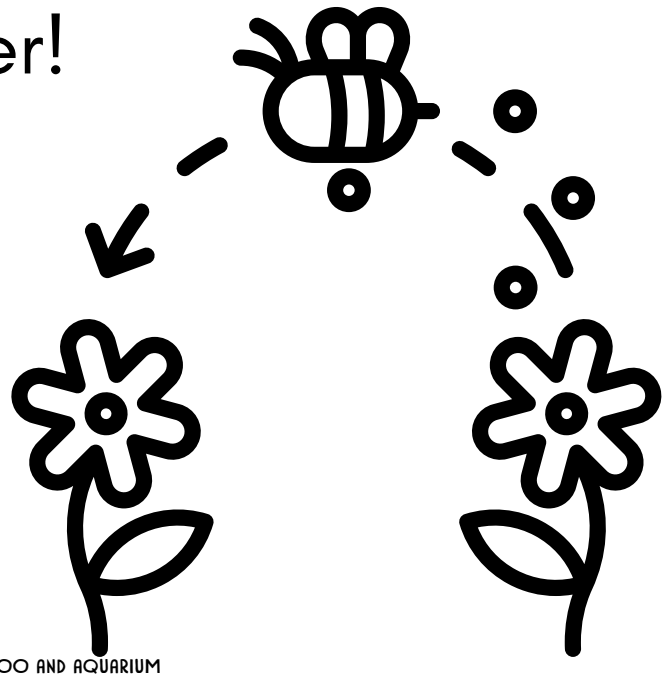


THE COLUMBUS ZOO AND AQUARIUM

Bees need flowers to live.

Flowers need bees to grow.

They help each other!



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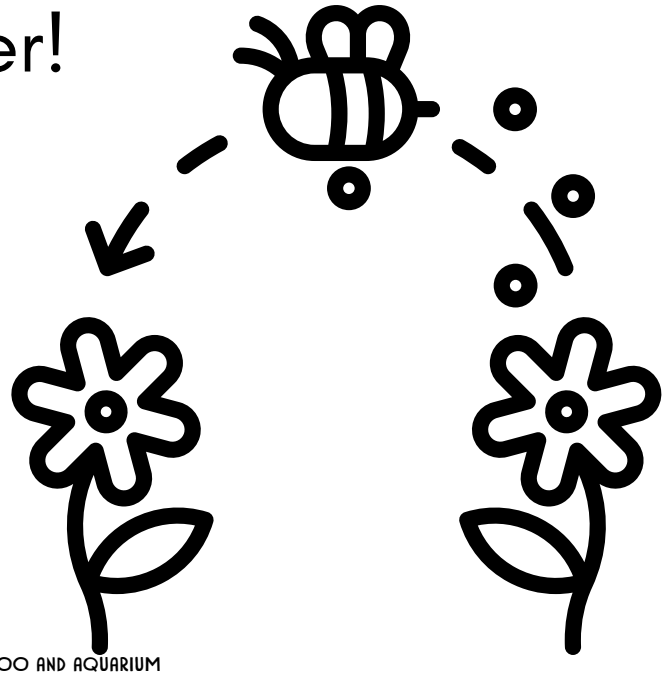
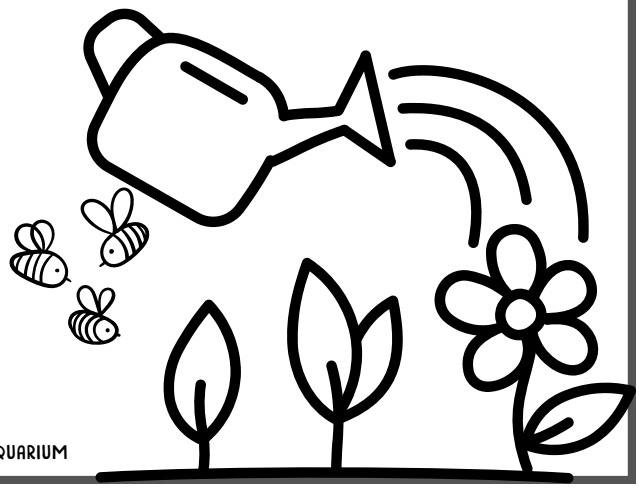


THE COLUMBUS ZOO AND AQUARIUM

What can we do to help bees?
We can plant flowers.
We can keep bees safe.
Let's take care of bees!



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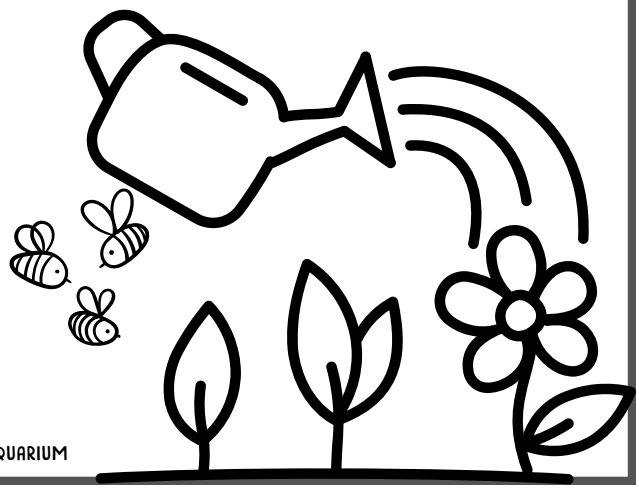


THE COLUMBUS ZOO AND AQUARIUM

Name: _____

THANK YOU BEES

After reading your book, write a short thank you note to bees using a new fact you learned. Bees are so important!

Dear Bees,

Your Friend,

Name: _____

THANK YOU BEES

After reading your book, write a short thank you note to bees using a new fact you learned. Bees are so important!

Dear Bees,

Thank you for

Your Friend,

Name: _____

THANK YOU BEES

After reading your book, write a short thank you note to bees using a new fact you learned. Bees are so important!

Dear Bees,

Thank you for your help pollinating the flowers so we have food to eat.

ANSWER KEY SAMPLE

Your Friend,

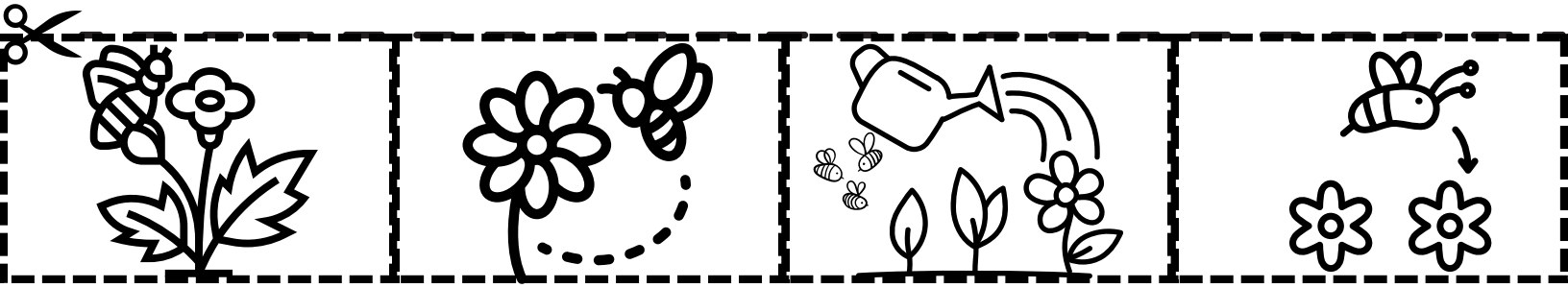
Name

Name: _____

BEES 1-2-3-4

Put the pollinating bees in the correct sequence. If you are not sure, go back to your story.

1		First, a bee flies to a flower.
2		Next, a bee drinks the nectar.
3		Then, pollen sticks to the bee's leg.
4		Last, seeds can grow into new plants.



Name: _____

BEES 1-2-3-4

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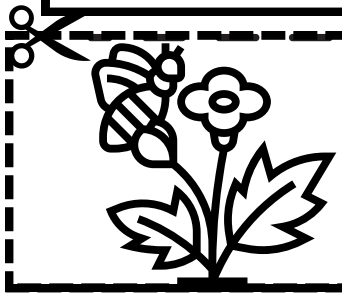
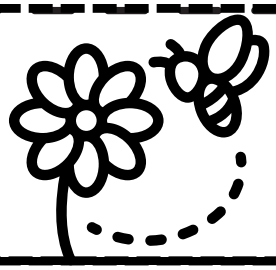
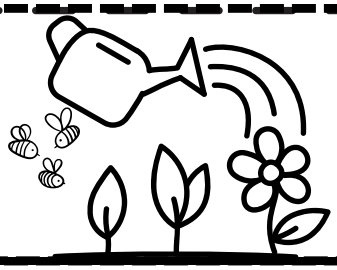
1		
2		
3		
4		



Last, seeds can grow into new plants.



Next, a bee drinks the nectar.



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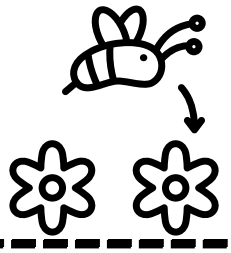

Then, pollen sticks to the bee's leg.

Name: _____

BEES 1-2-3-4

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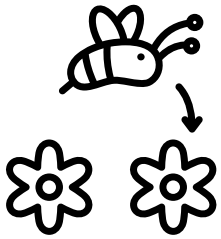
1		First, a bee flies to a flower.
2		Next, a bee drinks the nectar.
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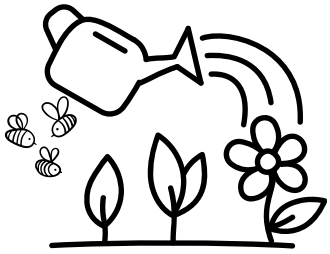
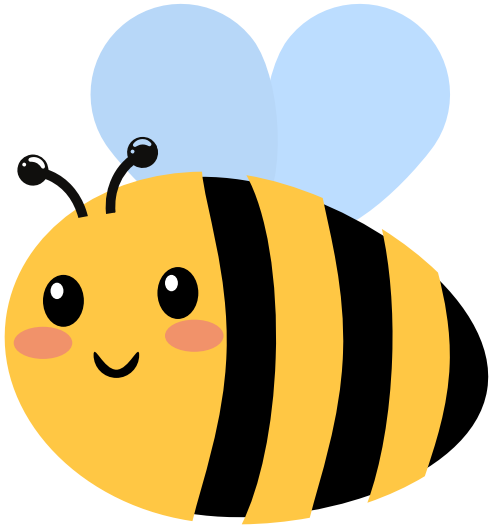
4		Last, seeds can grow into new plants.

ANSWER KEY



BEE CRAFT

Materials:
Printable bee template
Crayons or markers
Scissors
Glue sticks
Construction paper (optional for background)

Instructions:

1. Pass out materials to students.
2. Have students color the bee pieces before cutting them out.
3. Once colored, students carefully cut along the lines.
4. Using glue sticks, students assemble their bee by attaching the wings, stripes, and other parts.
5. Once completed, display the finished bees on a bulletin board to showcase student work!

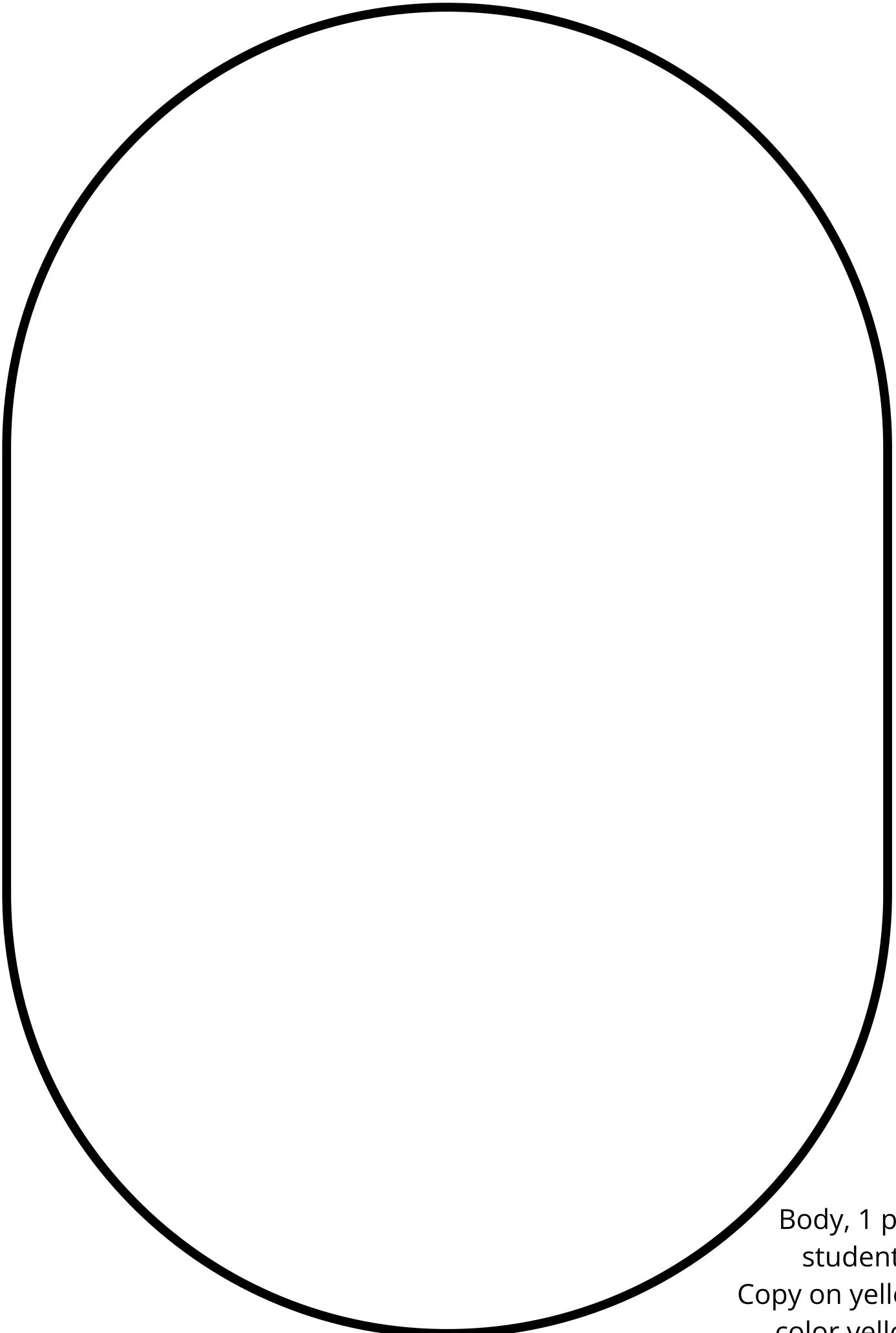
As students work, discuss the parts of the bee and their importance to pollination:

"Pollen sticks to a bee's legs as it flies from flower to flower."

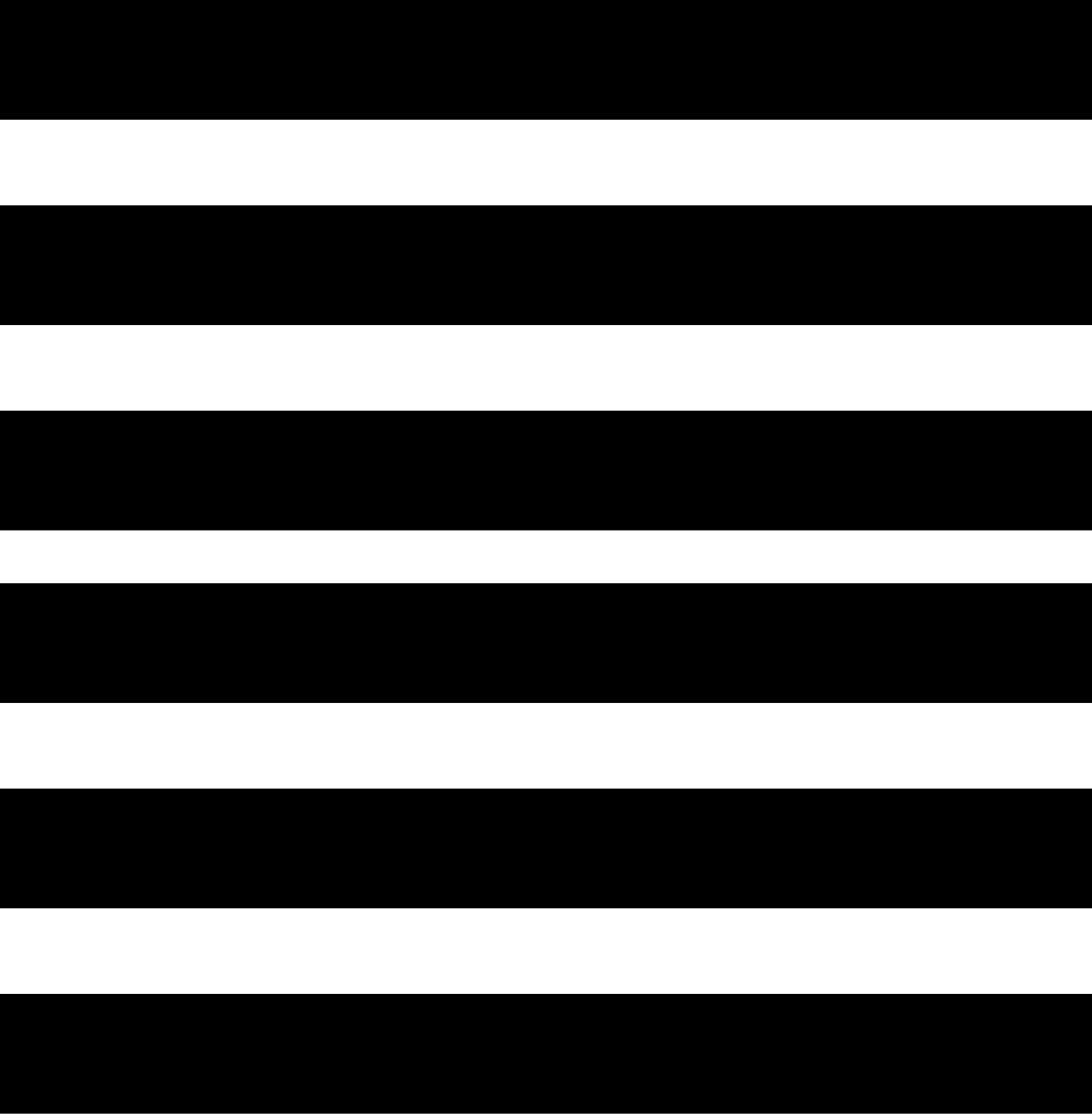
"Bees use their antenna to sense their environment."

Tip: Glue on the black stripes first, then trim off any extra paper for a cleaner look.

This craft helps reinforce learning by allowing students to visualize and assemble the key parts of a bee while discussing its role in pollination.

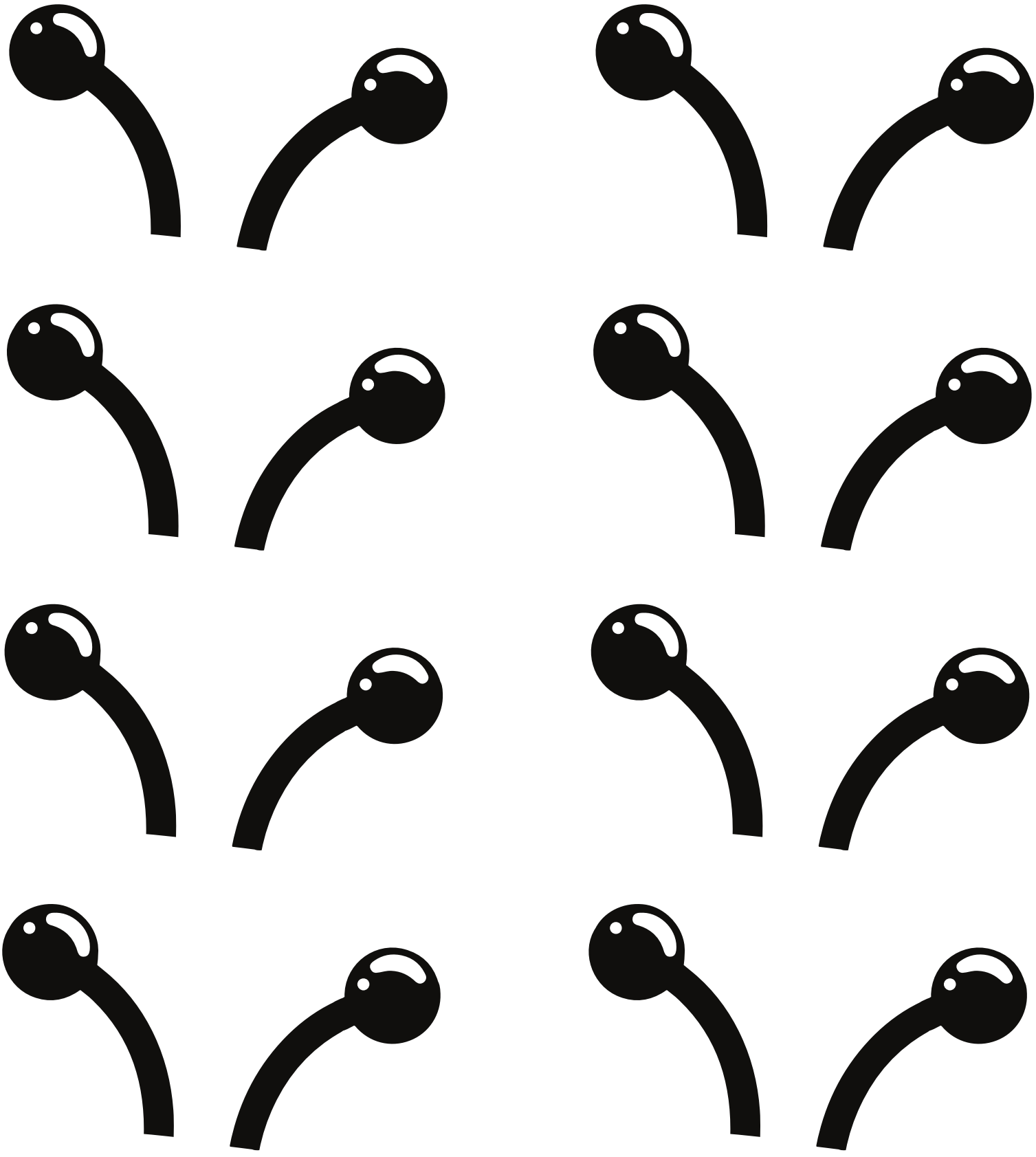


Body, 1 per student
Copy on yellow or color yellow



Stripes, about 3 per student
(2 sets on this page)

Wings, 1 pair per student
(2 sets on this page)



Atenna, 1 pair per student
(8 sets on this page)