

Educator Resource Guide



Part 2: Pollen Palooza

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Pollen Palooza

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Background Information

**"Pollen Palooza" is the second lesson of the Shutterbee Activity Series. To use it as a stand-alone lesson, instruction on the importance of pollinators should be provided from the Part 1 Background Information beforehand, to lend definition and deeper understanding of this activity.*

Pollinators play an essential role in natural ecosystems by helping plant populations reproduce. Eighty percent of the world's plants require pollination by living beings, which is called BIOTIC pollination. Pollination by non-living factors, such as wind or water, is called ABIOTIC pollination.

When an animal collects pollen from one plant species (or kind) and then unintentionally carries the pollen to another plant of that same species, cross pollination occurs. Cross pollination can only occur when the female part of a flower receives the FOCAL (target) pollen from the male flower parts from the same species of a plant. Pollen is considered NON-FOCAL when a pollinator picks up pollen of one plant species and then visits a different unrelated plant species, which would not lead to cross pollination.

A GENERALIST pollinator is an animal that visits many different types of plants. Example: a honeybee first collects pollen from a dandelion but then visits the flower of a clover. GENERALISTS can potentially carry many types of NON-FOCAL pollen to different plant species, making them less effective as pollinators.

A SPECIALIST pollinator has evolved a special relationship with only a select few species of related plants (for example, a sunflower bee feeds only the pollen of the sunflower plant to its young), causing them to more often only carry FOCAL pollen between plants, ensuring better chances of successful cross pollination for that plant species than a GENERALIST!

Bees are some of the world's best animal pollinators, as female bees search for and collect pollen to feed their young. Most other animal pollinators are only accidentally transferring pollen between plants, making them more likely to deliver NON-FOCAL pollen that does not result in successful plant pollination. Many native bees are also pollen SPECIALISTS, making them some of the most reliable pollinators of the plant-based resources that we and so many other types of wildlife depend upon to survive.



Lesson Summary and Learning Goals

This interactive pollination game involves students in modeling the unique relationship between bees and plants while illustrating how sensitive and important those relationships are. Students will simulate one of three different bee species throughout the activity, each with different needs and abilities. Students will have to quickly visit flowers, competing for the available pollen and nectar resources before they are depleted, to survive. Flower pollination determines plant survival as well. Graphing results of each round of the activity allows for visualization of the impact of different scenarios on bee and plant populations.

Students will learn about plant pollination, pollinator roles and diversity, plant-pollinator relationships, and the impact of human behavior on the natural environment.

Lesson length: 50 minutes

Learning Goals

To expose students to and to explore the mechanics of pollination that would include the following topics:

- Specialist versus generalist pollinators
- Human impact on plant and bee diversity



Learning Standards

6-8 Science Missouri Learning Standards: Grade Level Expectations

Life Sciences 1: From Molecules to Organisms

Concept B: Growth and Development of Organisms (6-8.LS1.B.1.)

Construct an explanation for how characteristic animal behaviors as well as specialized plant structures affect the probability of successful reproduction of animals and plants respectively.

Life Sciences 2: Ecosystems: Interactions, Energy, and Dynamics

Concept A: Interdependent relationships in Ecosystems (6-8.LS2.A.1)

Analyze and interpret data to provide evidence for the effects of resource availability on individual organisms and populations of organisms in an ecosystem. 2. Construct an explanation that predicts the patterns of interactions among and between the biotic and abiotic factors in a given ecosystem.

Concept C: Dynamics, Functioning, and Resilience (6-8.LS2.C.1)

Construct an argument supported by empirical evidence that explains how changes to physical or biological components of an ecosystem affect populations.

North American Association of Environmental Education Guidelines for Excellence Grades 5-8

Strand 1: Questioning, Analysis and Interpretation

A. Questioning: Learners are able to develop, focus, and explain questions that help them learn about the environment and do environmental investigations.

F. Working with models and simulations: Learners understand many of the uses and limitations of models.

Strand 2: Environmental Processes and Systems

2.1 Earth's Physical and Living Systems

B. Earth's Living Systems: Learners describe how living things, including humans, are dependent on their environment and are adapted to live in particular ecosystems under particular environmental conditions. They describe major interactions among organisms and populations of organisms and explain the importance of biodiversity to ecosystem health. They describe how humans affect and are affected by the biosphere.

2.3 Environment and society

A. Human-environment interactions: Learners describe human-caused changes that affect the immediate environment as well as other places, other people, and future times.



Supply List and Lesson Set-up

Supply List

- ☐ Three each of large blue, pink and yellow 3-inch paper cups
- ☐ Five sheets of blue, pink and yellow poster board
- ☐ Two or three bags of different shades of pom poms of the following colors: blue, pink and yellow (150 per color for a class of 10-15, 200 per color for class of 16-25)
- ☐ One package of yellow 3-inch paper cups or nine 3-inch clear plastic containers for holding pony beads
- ☐ 27 small bowls (can be color-coded to match the flower) or white coffee filters
- ☐ 1 Large bag of yellow pony beads
- ☐ 4-inch white pots
- ☐ Printer paper (recommended: lamination sheets or printable poster paper)

Lesson Set-up

The lesson starts with a PowerPoint presentation to provide a short re-introduction to pollination and introduce the rules of the game. The students will be acting like different kinds of bees – a generalist who can visit every flower, a specialist who can visit only one, and an intermediate bee who can visit two of the three types of flowers.

The first scenario of the game is a practice round to help them learn the rules and their actions (moving pollen and collecting nectar). Then, the students will model a healthy ecosystem (scenario 1) and graph how many pollen grains and how much nectar each bee collected and how many pollen grains each plant received.

Next, the students will model what happens when pesticides kill the specialist bee (scenario 2) and will again create graphs of their results.

After each scenario, we provide the take home messages and discussion points to be used as formative assessment. A final assessment asks the students to predict how bees and plants might be affected under a new but related scenario.



Pollen Palooza Activity

Continued

Overview:

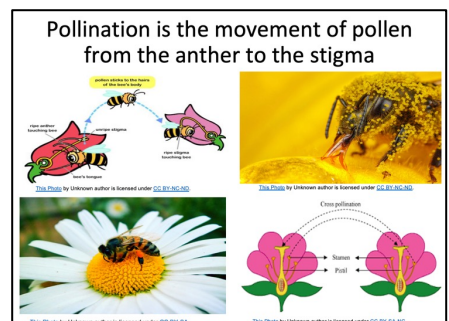
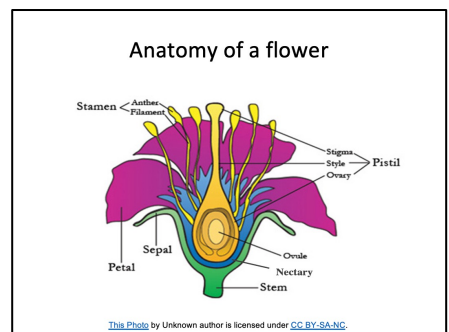
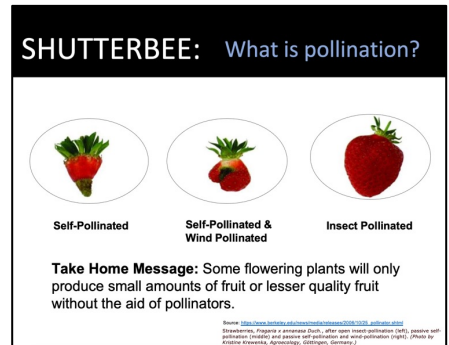
- This activity starts with a slideshow presentation to review pollination concepts and introduce the rules of the model
- Next, the students act as bees visiting flowers to model the importance of having different kinds of bees in a system. There are 3 rounds to the model: one practice round to learn the rules and two scenarios representing (1) a healthy, biodiverse system, and (2) a disturbed system in which a specialist species has gone locally extinct.
- After each round, the class reviews bar graphs illustrating bee survival and pollination.
- The final assessment asks students to make a prediction regarding how bees and plants may be affected by a new but related scenario.

Review of pollination

The first three slides of the presentation provide background for what it is and why it is important. The first slide references Lesson 1 by illustrating the importance of pollination for fruit production. Walk the students through the pictures of a strawberry fruit that has received pollen from itself (**left**; known as self-pollination), wind (**middle**), and insects (**right**). Which would they prefer to eat? The insect pollinated fruit is larger and more appealing, whereas the other two fruits received poor pollination and their fruits are under-developed.

The second slide reviews flower anatomy, with an emphasis on the parts that are relevant to the model that the students will be enacting. Review the following flower parts and their functions. The **stamen** contain the **pollen** which is moved from flower to flower. The **pistil** contains the female parts of the flower. The last trait to review is the **nectary** which produces nectar.

The third slide defines pollination as the movement of pollen from the anthers to a stigma. This is also a great time to get the students thinking about pollen quality. Pollen from a different plant species, for example, is not helpful (a tomato plant cannot create fruit with pollen from a carrot plant). During this lesson, the students will move pollen from the "stamen" to the "pistil" to model pollination. They will also record how much pollen each flower receives that is "focal", meaning it is from a flower that is the same color.





Pollen Palooza Activity

Continued

Description of the model

The next seven slides provide the details (i.e., rules and scenarios) for the model. Using the first three slides, describe the three flower types and their parts. Each **flower type** (i.e., pink, blue and yellow) has three shades of pollen (pom poms). These color differences will help you reset the model between rounds, but they do not have specific biological meaning otherwise.

Describe the 5 parts of the model flowers to the students:

- The placemat represents the petals.
- The nectary is represented by a small yellow cup with pony beads in it. Each pony bead represents one unit of nectar.
- The large cup in the center of the placemat represents stigma.
- The coffee filters or bowls (whichever works for you) stand in for stamen.
- Pollen is represented by pom poms.

Next, describe each of the three types of bees. The **squash bee** is a specialist and can only forage from yellow flowers. At each visit, squash bees will deposit two randomly selected pollen balls to the cup and pick up four pollen balls from the anther. Students should not intentionally choose which pollen grains to place on the stigma, because bees do not choose which pollen types to place on the pistil. **Leafcutter bees** can visit pink and blue flowers, but they only leave one randomly selected pollen grain and pick up three. **Bumble bees** can visit all three flower types, leave one pollen grain on the pistil, and pick up three pollen grains per visit.

Using the next two slides, explain the rules of the model. There are 3 rounds (each 1 minute long), during which students will “visit” flowers. At each flower, they will collect 1 nectar bead, and the 2-3 pollen grains, depending on what type of bee they are.

The bees must visit a different flower before returning to a previously visited flower.

Flower Types

Pink Flower		Blue Flower	
Flower 1 Pollen Color:	Light Pink	Flower 1 Pollen Color:	Light blue
Flower 2 Pollen Color:	Dark Pink	Flower 2 Pollen Color:	Dark blue
Flower 3 Pollen Color:	Sparkly Pink	Flower 3 Pollen Color:	Sparkly Blue

Yellow Flower	
Flower 1 Pollen Color:	Light Yellow
Flower 2 Pollen Color:	Dark Yellow
Flower 3 Pollen Color:	Sparkly Yellow

Flower Set-up Example



Bee Types

Squash Bee	
Flower Color Preference:	Yellow Flowers
# of Pollen balls per visit:	Take 4 pollen balls per visit from any yellow flower; Leave 2 Pollen balls

Leafcutter Bee	
Flower Color Preference:	Pink and Blue flowers
# of Pollen balls per visit:	3 pollen balls per visit to each pink or blue flower; Leave 1 Pollen balls

Bumble Bee	
Flower Color Preference:	Pink, Yellow, and Blue flowers
# of Pollen balls per visit:	3 pollen balls per visit to any color flower; Leave 1 Pollen balls



Rules and Scenarios



- One-minute rounds
- Only visit the correct flower color based on your bee type
- Collect the correct # of Pollen balls (Pom pom)
- Pick up 1 Nectar bead (Yellow Pony Beads)
- Randomly (without looking) select a pollen ball from your cup and place it into the Pollination Cup located in the middle of the flower during every visit.
- You must visit a different flower before returning to a previously visited flower

Rules and Scenarios Continued

Pollen & Nectar Thresholds Required for Survival

	Pollen grains	Nectar
Each Bee	≥ 10 per bee	5 or more
Each Flower	≥ 10 collectively, color of pollen must match the flower color	Not applicable

Before starting, we will practice one round

Scenarios

- Scenario 1: Healthy populations
- Scenario 2: Pesticides kill specialist bee



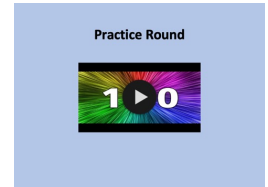
Pollen Palooza Activity

Continued

Bees that collected 5+ nectar beads and 10+ pollen grains survive. Flowers must receive 10+ focal pollen grains (i.e., those of the same color family) to survive. Those that do not, die and sit out the next round.

Reset all flower models between the different scenarios.

The last three slides include a one-minute timer for the practice rounds and each of the scenarios.



Practice Round:

Each student goes to two flowers to practice collecting nectar and pollen. Return the pollen to the correct flowers after this round.

- Demonstrate the active pollination process. At the first flower, the students will pick up pollen and nectar. They do not pollinate the first plant.
- They move to the next flower, put a pollen ball into the tall cup (which represents the stigma of the flower), and pick up a nectar bead and pollen from that flower before moving on to the next flower.
- Review the rules and thresholds with the students. Each individual player (bee) needs to collect 10 pollen grains and 5 nectar beads to survive. Each color group of plants must receive a total of 10 pollen grains across all flowers of that color (e.g., pink pollen of any shade for pink flowers).
- Have the students run a 1-minute practice round.

NOTE: It helps to use a sound-based timer (for example:

<https://youtu.be/21vrS6lCb7M>), so the students hear when their time is up.

Pollen & Nectar Thresholds Required for Survival

	Pollen grains	Nectar
Each Bee	≥ 10 per bee	5 or more
Each flower type (color)	≥ 10 collectively, color match the flower color	Not applicable

Take home message and discussion points:

- Discuss the difference between focal and non-focal pollen, so they are familiar with those terms. Focal pollen is pollen that is of the same color family (e.g., pink pollen to a pink flower). Non-focal pollen is pollen of a different color. Non-focal pollen would not result in fruit.
- Field any questions regarding the rules, thresholds or pollination process



Pollen Palooza Activity

Continued

Scenario 1: Healthy populations

Round 1: Everyone has one minute to collect pollen and nectar and pollinate the plant.

- After the one-minute round, have each student “bee” record the final number of pollen grains and nectar levels that they collected. If the bee doesn’t have enough pollen or nectar, that individual bee “dies”. If the plant population (all 3 plants) hasn’t received enough pollen (10 grains, collectively), one plant from that population “dies”. During this round, some bees and plants *may* not survive, just by chance. However, most bees and plants should survive.
- Record the number of each type of pollen grain for each plant. To demonstrate pollination to the plants, you can use pre-made graphs in excel on Smartboard OR place the pollen balls in lines as if they are a bar graph.

Shareable Link: [Pollination Data and Graph Template.xlsx](#)

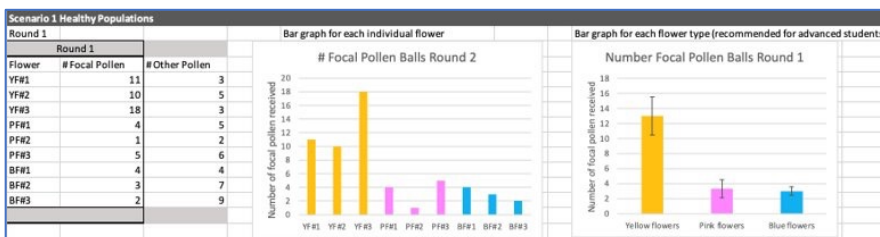
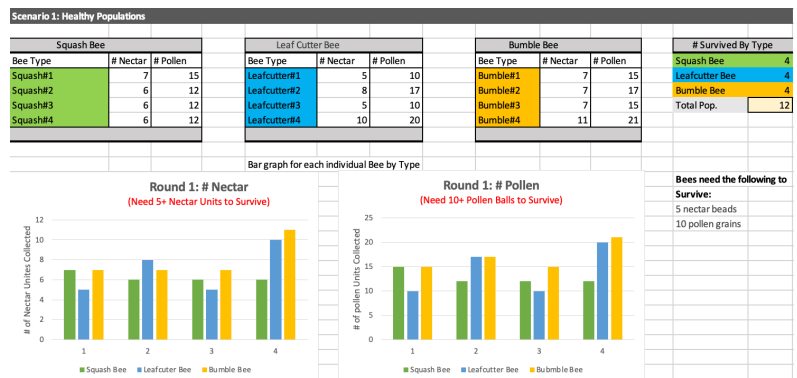
Round 2 (optional): Do not reset the plants. Everyone has one minute to collect pollen and nectar and pollinate the plant. Discuss any observed patterns.

Take home message and discussion points:

- Discuss the differences among the plants. Which plants got the most focal pollen? Which got more non-focal pollen? Why might that matter? *One take home message: Fruits can only be fertilized by focal pollen.*
- Discuss the benefits or costs of each kind of bee (this may become clearer in subsequent rounds). *One take home message: Specialists carry more pollen, so they are great pollinators to their plant, but they don’t help to pollinate the other plants.*

Example results:

NOTE: If the bar graphs are too complicated for your students, you can hide the columns by selecting the column or row headers, right clicking, and selecting “Hide”.





Pollen Palooza Activity

Continued

Scenario 2: Pesticides kill specialist bees

For the next round, we have a new scenario. Pesticides are sprayed to reduce insect pests on squash flowers. However, the bees are accidentally killed, too. Squash bees do not survive this round.

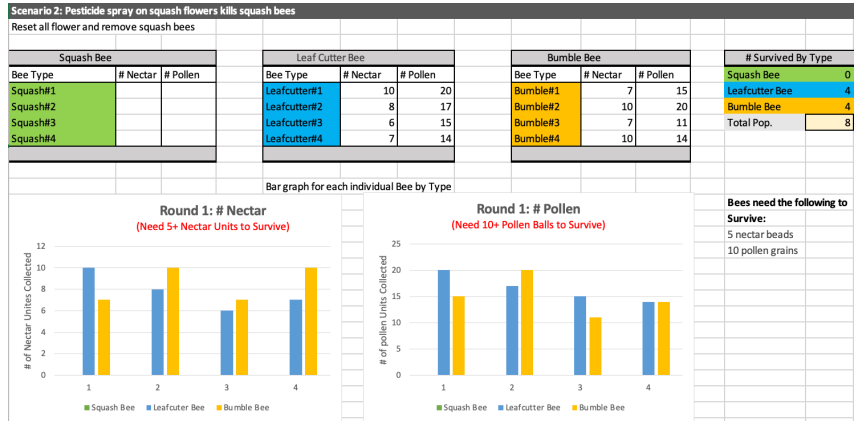
- 1.) Reset the flowers.
- 2.) Remove the squash bees and run the game according to the same rules as in Round 1.
- 3.) Record the number of each type of pollen grain for each plant and use the pre-made graphs to view the patterns.

Take home message and discussion points:

- Squash flowers will have reduced pollination and likely will not have enough pollen to survive.
- What are the pros and cons of this specialized relationship? *One answer: Squash bees are fantastic pollinators, but if they have a bad year, so do the flowers.*

Example results:

NOTE: If the bar graphs are too complicated for your students, you can hide the columns by selecting the column or row headers, right clicking, and selecting "Hide".

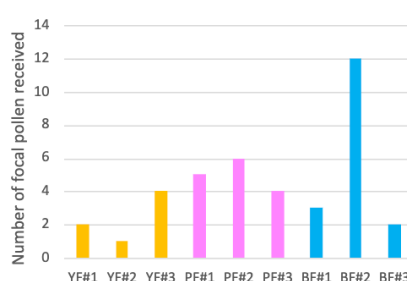


Scenario 2: Pesticide spray on squash flowers kills squash bees

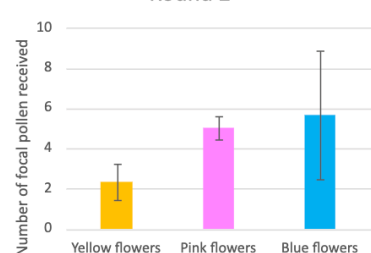
Reset all flower and remove squash bees

Scenario 2		
Flower	# Focal Pollen	# Other Pollen
YF#1	2	4
YF#2	1	6
YF#3	4	2
PF#1	5	6
PF#2	6	7
PF#3	4	7
BF#1	3	3
BF#2	12	15
BF#3	2	5

Focal Pollen Balls Round 2



Number Focal Pollen Balls Round 2





Pollen Palooza Activity

Continued

Scenario 3: Herbicide spray on squash flowers kills squash plants

In scenario 2 we examined what happens when the squash bees goes locally extinct. For this scenario we will model what happens when a plant doesn't receive enough pollen. In this scenario herbicide was sprayed on a field to kill weeds. Unfortunately, it also effected the squash plants.

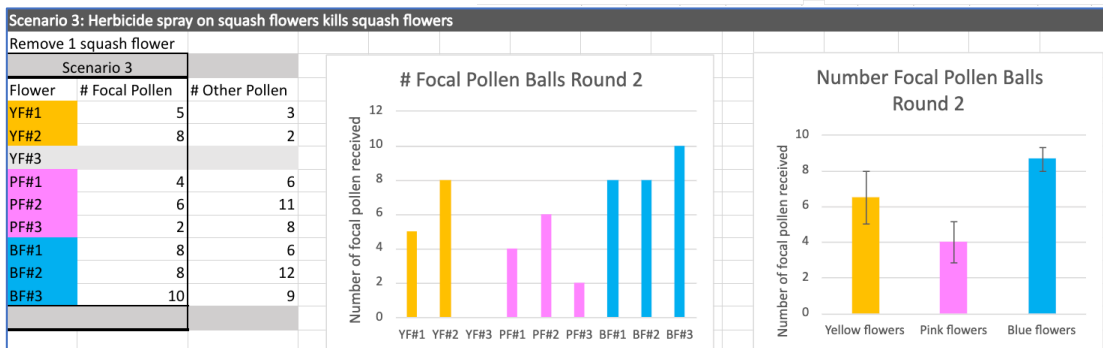
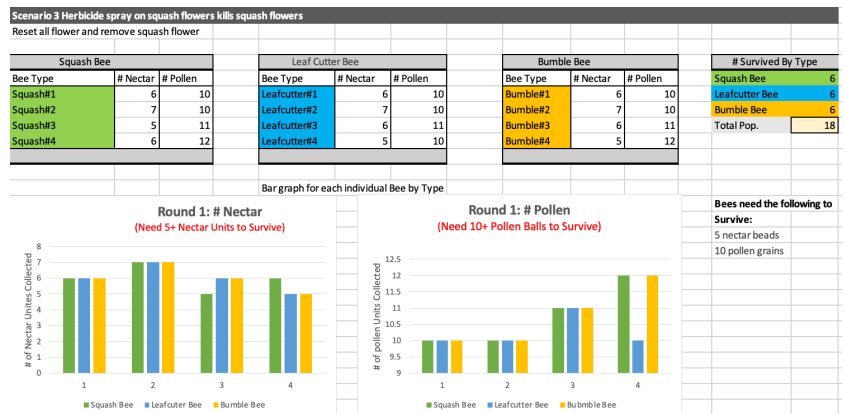
- 1.) Reset the flowers.
- 2.) Remove one squash flower, add back the squash bees and run the activity following the rules from previous scenarios.
- 3.) Record the number of each type of pollen grain for each plant and use the pre-made graphs to view the patterns.

Take home message and discussion points:

- Fewer flowers means more competition for limited resources. That may lead to bees that do not receive enough pollen and/or nectar to survive.
- How did having fewer flowers impact the bees? *One answer: fewer flowers meant less food for bees and more competition.*
- What would you predict for the future of the bees in this area? *One answer: fewer bees in the next generation (which may reduce pollination to the specialist plant).*

Example results:

NOTE: If the bar graphs are too complicated for your students, you can hide the columns by selecting the column or row headers, right clicking, and selecting "Hide".





Assessment of Student Learning

Final wrap-up questions for discussion

Break the students into three to eight groups and have each group pick one of the following chance card scenarios:

1. Due to global climate change and increasing temperatures, bees need more nectar to help them stay cool. Bees that did not collect six or more nectar visits did not survive this round.
2. Plant stems are left standing all year, so leaf cutter bees can build more nests. That means more leaf cutter bees survive to the next round. All leaf cutter bees survive this round (regardless of the amount of nectar they collected).
3. A natural area with lots of flowers is replaced with lawn, so there are fewer flowers this round. Remove one flower per plant species.
4. Pesticides are sprayed to reduce insect pests on squash flowers, but the bees are accidentally killed, too. Squash bees did not survive this round.
5. A local park just put in a large prairie with lots of pollinator-friendly flowers. Add one flower per plant species.
6. A garden store has a free give-away of the pink flowers, and many people plant them in their yards. Allow the bees to collect one extra pollen grain per visit at pink flowers.
7. The weather is perfect for nectar production! All flowers are producing more flowers this year. All bees can collect one extra nectar ball per visit.
8. Bumble bees are infected by a disease from captive-reared honeybees, and most colonies do not reproduce. Bumble bees do not survive this round.

Have each group make a prediction about how bee survival and/or plant pollination may change based on their chance card. The students can either explain their predictions verbally or the student draw their prediction in the form of a figure (like those used during the activity) or diagram.

For advanced students:

- Test their predictions using the model system

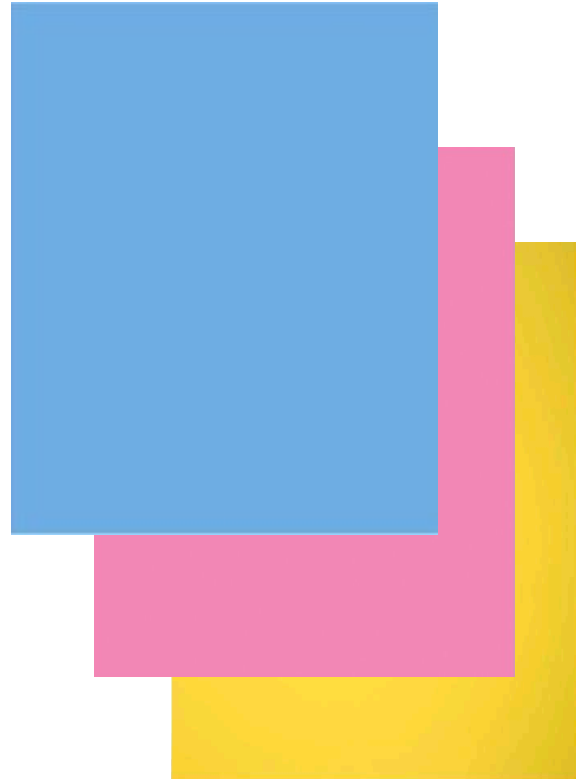


Supply Descriptions

Three each of large blue, pink and yellow 3-inch paper cups



Five sheets of blue, pink and yellow poster board



Two or three bags of different shades of pom poms of the following colors: blue, pink and yellow.

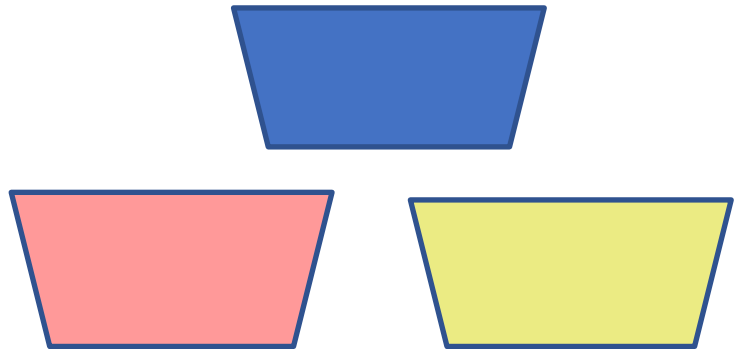




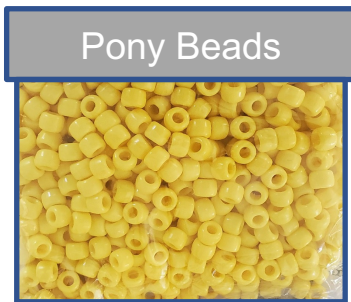
Supply Descriptions

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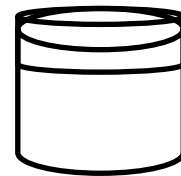
27 small bowls (can be color-coded to match the flower)
or white coffee filters



One large bag of
yellow pony beads



One package of yellow 3-inch paper
cups or nine 3-inch clear plastic
containers for holding pony beads



Twenty-four
4-Inch White Pots



Recommendation: Use hand sanitizer before and after the activity



Activity Set-up

Flower Types

In this activity, there will be three different types of model flower stations that students can visit designated by a different color. Each flower color will represent a different flower species. There will be a total of three flower models for each color, making a total of 9 stations that can be visited for pollen collection. Each of the three flowers that represent a color will have its own shade of the flower pollen. For example, each pink flower (total of three) will have a different shade of pink pollen balls to represent a different individual flowers of that plant species. Below is a list of recommended colors and corresponding pollen ball colors.

Pink Flower	
Flower 1 Pollen Color:	Light Pink
Flower 2 Pollen Color:	Dark Pink
Flower 3 Pollen Color:	Sparkly Pink

Blue Flower	
Flower 1 Pollen Color:	Light blue
Flower 2 Pollen Color:	Dark blue
Flower 3 Pollen Color:	Sparkly Blue

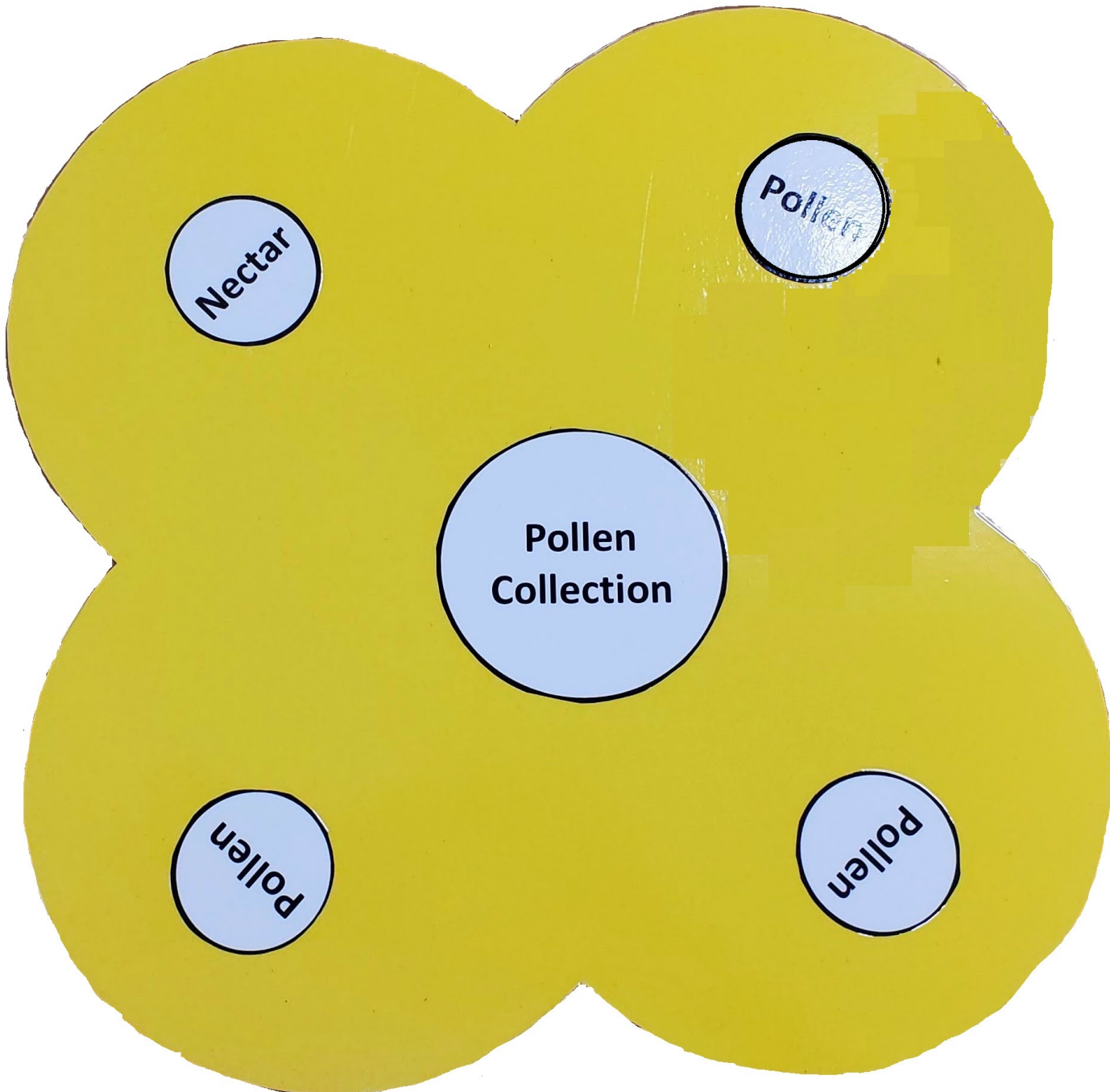
Yellow Flower	
Flower 1 Pollen Color:	Light Yellow
Flower 2 Pollen Color:	Dark Yellow
Flower 3 Pollen Color:	Sparkly Yellow



Activity Set-up

Continued

Flower Mat Example



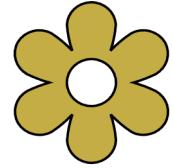


Activity Set-up

Continued



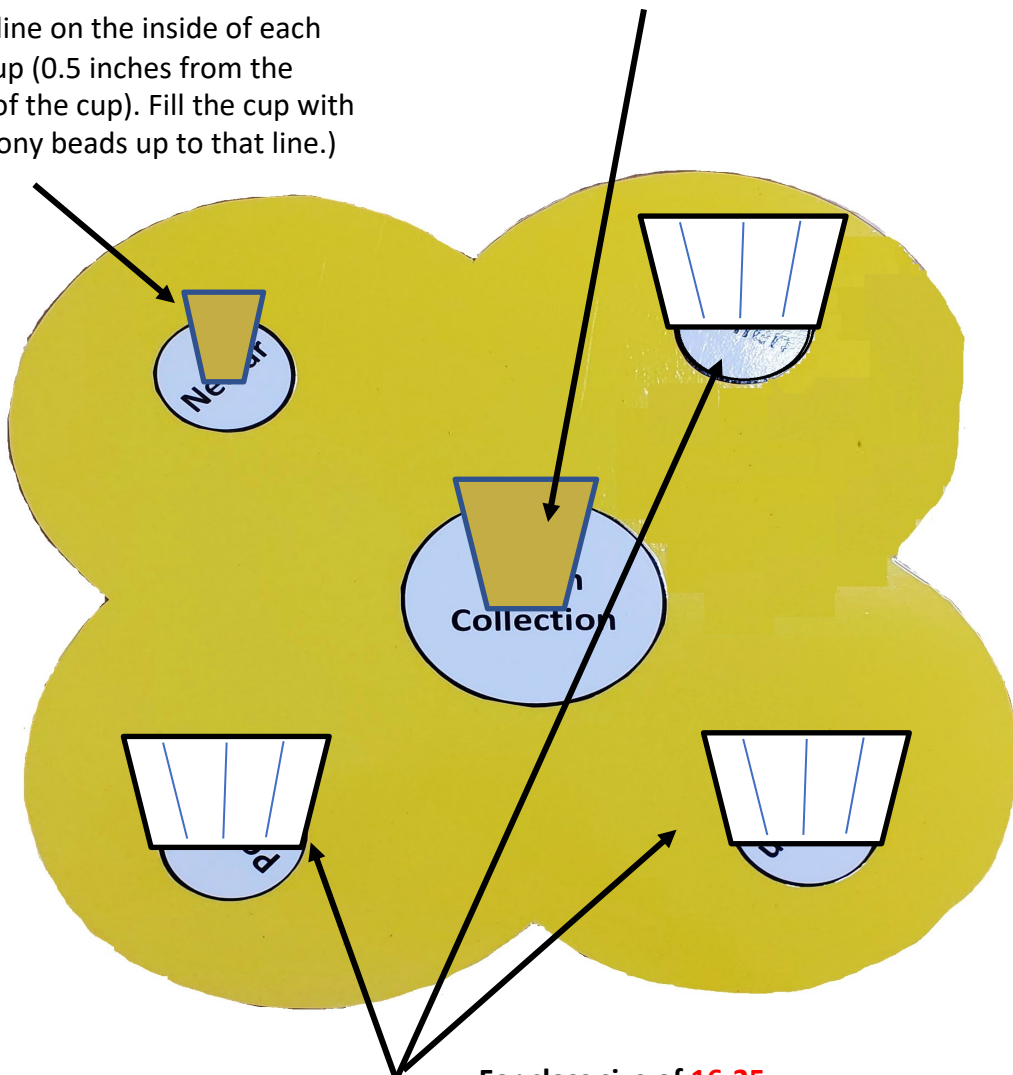
Tabletop Flower Construction Example



Nectar Cup

(Draw a line on the inside of each nectar cup (0.5 inches from the bottom of the cup). Fill the cup with yellow pony beads up to that line.)

Pollen Ball Receptable Cup



Coffee Filter Pollen Ball Baskets

For class size of **16-25**:
20 pollen balls per basket

For class size of **10-15**:
15 pollen balls per basket



Activity Set-up

Continued



Tabletop Flower Construction Example



Pollen Collector Example

Front View

Side Views



Squash Bee

Flower Color Preference:
Yellow



Pollen at each flower:

- Take 4 pollen balls
- Leave 2 pollen balls

Nectar at each flower:

Take 1 nectar bead

Squash Bee

Flower Color Preference:
Yellow



Pollen at each flower:

- Take 4 pollen balls
- Leave 2 pollen balls

Nectar at each flower:

Take 1 nectar bead



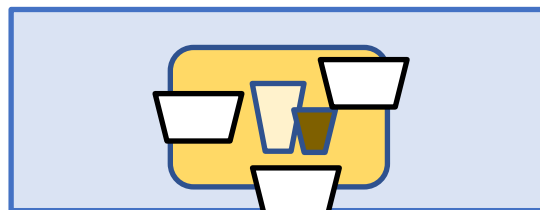
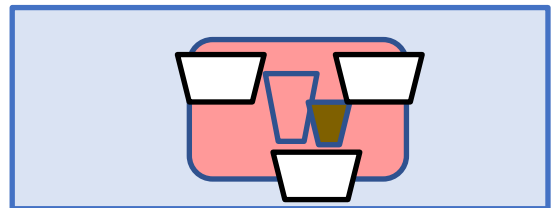
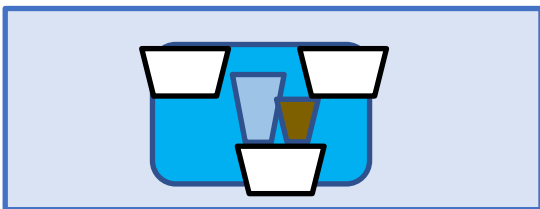
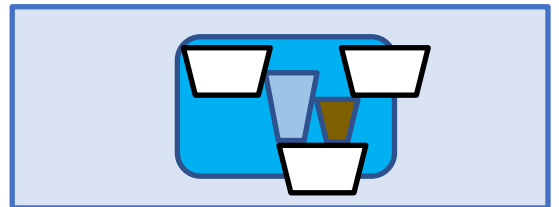
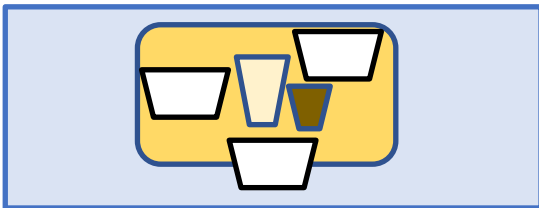
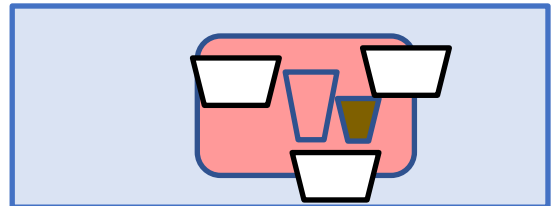
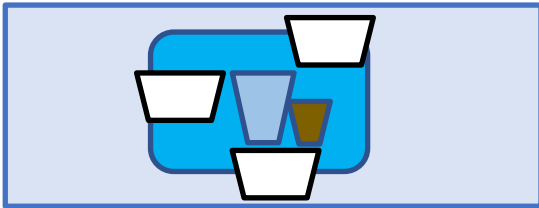
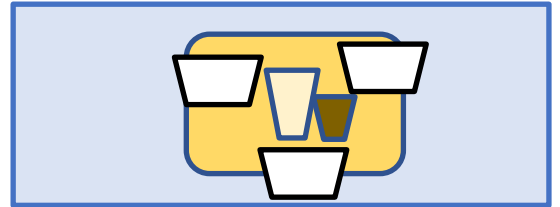
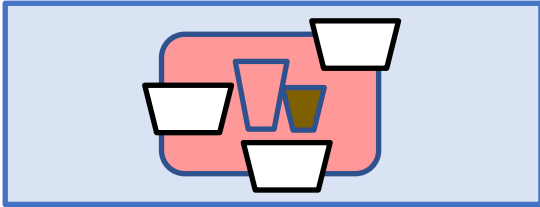
Activity Set-up

Continued



Room Set-up Example

One flower per table





Activity Set-up

Continued

Bee types and rules

Each student will represent one of three different types of bees in a population. Each of these types of bees possess different pollen collecting adaptations. These adaptations will affect the types of flower (flower color) they are attracted to and visit and the amount of pollen balls they can collect per flower visit. We recommend dividing your class evenly into the three types of bees listed below and prepare materials accordingly.

Squash Bee	
Flower Color Preference:	Yellow Flowers
# of pollen balls per visit:	4 pollen balls per visit from any yellow flower; leave 2 pollen balls

Leafcutter Bee	
Flower Color Preference:	Pink and Blue flowers
# of pollen balls per visit:	3 pollen balls per visit to each pink or blue flower; leave 1 pollen ball

Bumble Bee	
Flower Color Preference:	Pink, Yellow and Blue flowers
# of pollen balls per visit:	3 pollen balls per visit to any color flower; leave 1 pollen ball



Pollen Palooza

- Pollen Collector Cards
- Chance Cards
- Flower Mat Template



Information Cards



Information Cards for Pollen Collectors

Squash Bee



Flower Color Preference:

Yellow



Pollen at each flower:

- Take 4 pollen balls
- Leave 2 pollen balls

Nectar at each flower:

Take 1 nectar bead

To survive

Each bee must collect:

- 10 or more pollen balls
- 5 or more nectar beads

Each flower type

must have:

- 10 same color pollen balls across all 3 flowers

Bumble Bee



Flower Color Preference:

Yellow, Pink, and Blue



Pollen at each flower:

- Take 3 pollen balls
- Leave 1 pollen ball

Nectar at each flower:

Take 1 nectar bead

To survive

Each bee must collect:

- 10 or more pollen balls
- 5 or more nectar beads

Each flower type

must have:

- 10 same color pollen balls across all 3 flowers

Leafcutter Bee



Flower Color Preference:

Pink and Blue Only



Pollen at each flower:

- Take 3 pollen balls
- Leave 1 pollen ball

Nectar at each flower:

Take 1 nectar bead

To survive

Each bee must collect:

- 10 or more pollen balls
- 5 or more nectar beads

Each flower type

must have:

- 10 same color pollen balls across all 3 flowers

Print and laminate 9 copies of each card



Chance Cards



Chance Card

Front of Card

Due to global climate change and increasing temperatures, bees need more nectar to help the stay cool.

Bees that did not collect 6 or more nectar visits did not survive this round.

Back of Card

Print and
laminates
2 copies of
each card



Chance card

Front of Card

Plant stems are left standing all year, so leaf cutter bees can build more nests. That means, more leaf cutter bees survive to the next round.

All leaf cutter bees survive this round (regardless of the amount of nectar they collected).

Back of Card



Chance Cards



Chance card

Front of Card

A natural area with lots of flowers is replaced with lawn, so there are fewer flowers this round.

Remove one flower per plant species.

Back of Card



Chance card

Front of Card

Pesticides are sprayed to reduce insect pests on squash flowers, but the bees are accidentally killed, too.

Squash bees did not survive this round.

Back of Card

Print and
laminate
2 copies of
each card



Chance Cards



Chance card

Front of Card

A local park just put in a large prairie with lots of pollinator-friendly flowers.

Add one flower per plant species.

Back of Card



Chance card

Front of Card

A garden store has a free give-away of the pink flowers, and many people plant them in their yards.

Allow the bees to collect one extra pollen grain per visit at pink flowers.

Back of Card

Print and
laminate
2 copies of
each card



Chance Cards



Chance card

Front of Card

**The weather is perfect for nectar production!
All flowers are producing more flowers this year.**

All bees can collect one extra nectar ball per visit.

Back of Card



Chance card

Front of Card

Bumble bees are infected by a disease from captive-reared honey bees, and most colonies do not reproduce.

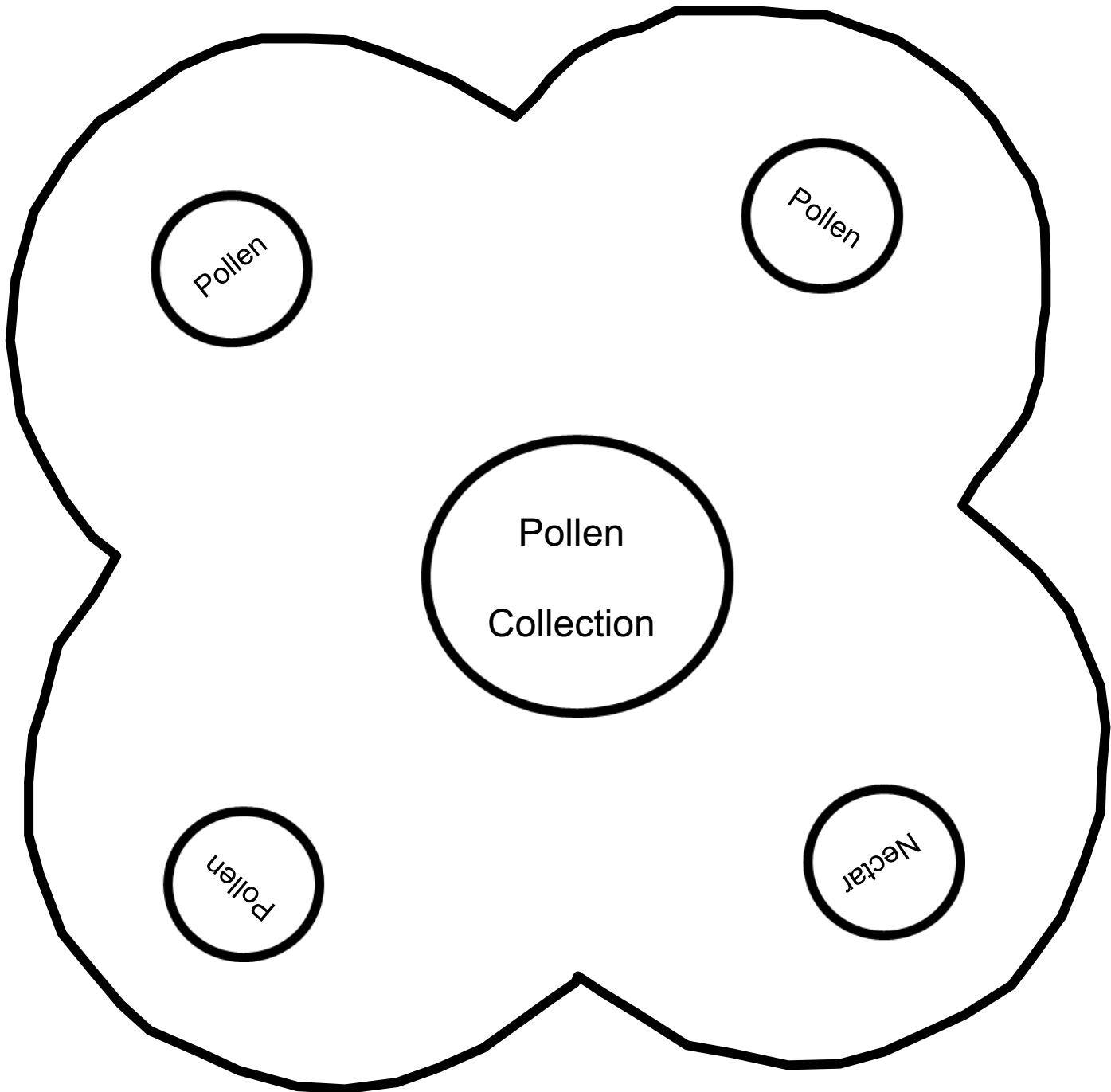
Bumble bees do not survive this round.

Back of Card

Print and laminate
2 copies of
each card



Flower Mat Template



Thank you for joining!

