Bee Conservation

Suggested Grade Level: K-2

Time: 60 minutes

Subject: Language Arts, Informational Reading, Research, Speaking and Listening, Science, Biology, Ecosystems, Social Studies, Natural Environments, Food Production, Responsibilities, Farming, Consumer and Producer, Agriculture, Bees and Apiculture

Overview: This lesson focuses on the importance of bees in our world and the need for efforts to save the bees. Students will learn about the impact that bees have on our environment and daily lives through interactive games and discussions.

Objectives:

1. Demonstrate why bees are important in our world through a whole-class game
2. Orally discuss and list actions that humans can take to save the bee population
3. Demonstrate how bees pollinate flowers through a whole-class game

Background Information:
Bees are important to the environment, to animals, and to us. Bees are pollinators, which means that they transfer pollen from plant to plant. This helps plants flower and/or grow fruit. These flowering plants then become food for other insects, animals, and humans. Many major food crops depend on bees, including alfalfa, sunflowers, several fruits and vegetables, and more (Bee).

Humans can also harvest things that bees create. The best example is honey, which humans use to sweeten our food. Honey has also historically been used to heal wounds due to its low pH and its hydrogen peroxide content. Another common bee product is beeswax, which bees use to create honeycombs. Beeswax can be used in cosmetics, candles, and more. Bee pollen, propolis (the “glue” used to construct the hive), royal jelly (which is used to feed baby bees), and bee venom are also sometimes used for health purposes (Anderson).

Kansas Connections:
In Kansas, canola, cotton, sunflower, and alfalfa crops are all dependent on pollinators to produce seeds and fruit. Other crops that are not dependent on pollinators, like corn, still benefit. Corn can produce larger kernels and more kernels per ear when native pollinators are present.

Honeybees pollinate fruit, vegetables, flowers, alfalfa, clover, and seed crops. They also produce honey, wax, and other products. One-third of our diet comes from crops pollinated by honeybees. Each year, honeybees add more than $15 billion to the value of more than 130 crops grown in the United States (U.S.).
Local Honey Finder: http://www.localhoneyfinder.org/KS.php

Materials:
Engagement
- Bee costume: https://smile.amazon.com/Kangaroo-Halloween-Costumes-Bee-Costume/dp/B07532G6QG/ref=sr_1_2?crid=3688JYYUTGL43&keywords=adult+bee+costume&qid=1647456225&sprefix=adult+bee+cost%2Caps%2C1108&sr=8-2
- Bit-O-Honey: https://smile.amazon.com/Bit-O-Honey-Bit-O-Honey-Candy/dp/B07XNG788H/ref=sr_1_7?crid=IAJE26T1BLY1&keywords=bit+a+honey&qid=1647456309&sprefix=bit+a+honey%2Caps%2C112&sr=8-7

Discussion
- "If Bees Disappeared" by Lily Williams, "What If Bees Disappeared?" by Suzanne Slade, or "You Wouldn't Want To Live Without Bees" by Alex Woolf
- Two Post-It notes per student

Activity 1: Musical Chairs
- one chair per child
- cards at the end of this lesson plan

Activity 2: Pollination Game
- 50 construction paper flowers, 4-6 boxes of macaroni & cheese, 1 black pipe cleaner per student, "Flight of the Bumblebee" music

Instructional Format:
1. Review Background Information and Kansas Connections.
2. Conduct an engagement exercise.
3. Complete Activity 1: Musical Chairs.
4. Complete Activity 2: Pollination Game.

Engagement: To begin the lesson, dress as a bee (either with a costume or a paper headband), "fly" around from student to student, and drop off a Bit-O-Honey candy at each child. Every couple of children or so, "fly" back to your desk like it was the main flower that the pollen/nectar came from. Lead a class discussion about what you were doing. Discuss how it is similar to bees landing on flowers, collecting pollen and nectar, and taking it back to the hive or spreading it to other flowers. Watch and discuss this short video. SciShow Kids: Busy Bees! | Bumblebees and Honeybees | Amazing Animals | SciShowKids https://www.youtube.com/watch?v=ta154f5Rp5Y&t=36s

Procedures:

Discussion

1. Say to the class, “Now that we have some background information about bees and what they do, let’s learn about their importance in our world.”
2. Read an informational text (listed in the Materials section) about bees.
3. Give each child a Post-It note and instruct them to write down a fact about bees and bring it up to the board to put around the bee drawn on the board. Discuss a few of these. *(Kindergarten students can draw or say their fact out loud.)*

Activity 1: Musical Chairs

1. Say, “We know that bees are important, but what would happen if bees disappeared? Let’s play a game to find out.”
2. Set up 1 chair (pretend the chair is a flower, fruit, vegetable, or crop) per student in a circle with the seats facing out.
4. Give each child a card (see resource at the end of the lesson plan).
5. Play the song “Flight of the Bumblebee,” and have your students (bees) walk around. When the music stops, they all sit on a chair. The first time, everyone will get a seat and all card items will be safe. Then, take away a chair each time. Every time a student (bee) doesn’t get a chair, the card they are carrying goes away. They will then read their card out loud to the class. At the end of the game, there will be one bee and one card left.
6. Have a class discussion about what happened during the game. Every time a chair (flower) went away, so did a bee, and so did an important item that humans rely on.

Activity 2: Pollination Game

1. Say, “Now, let’s play a game that shows how the pollination process works and the role of bees in that process.”
2. On a large table, put 2-3 construction paper flowers that each have a jar that contains one to two packets of the cheese powder from boxed macaroni and cheese. You can also use smashed up Cheetos, but the cheese powder works GREAT!
3. Across the room, place 2 construction-paper flowers without jars.
4. Line students up in a row and hold a black pipe cleaner for them to bend in half. (Pretend this line of students is the hive.)
5. Play the “Flight of the Bumblebee,” then have one student go to a jar and dip their pipe cleaner in it, then go over to the other side of the room and shake the pipe cleaner (they might have to use fingers to tap it) onto one of the plain construction paper flowers. Since this flower was pollinated, add another plain flower to that side of the room. Then, have them “waggle/dance” back to the hive, tap 2 friends, and go to the end of the line.

7. After being tapped, the two friends go to the jars, dip their pipe cleaners in, and fly over to the plain flowers. Then, each of them pollinates a flower. Add two more blank flowers to that side of the room. They'll waggle/dance back to the hive, tap 2 friends, and go to the end of the line.
8. The game continues with those 4 kids, then 8, then 16.
9. At the end of the game, lead a class discussion about how important it is to have a lot of bees in a hive that are available to pollinate flowers, foods, and crops. Discuss how it's a circle of flowers-bees-pollination, and it's critical to our world food supply and more. Watch "Bee Dance Language" video: https://www.youtube.com/watch?v=pb1IRI-YePU&t=4s
10. To wrap up this lesson, hand out Post-It notes again and have students add new facts to the board. *(For kindergarten, have students blurt answers.)* As a class, make a list on the board of things that humans can do to save the bee population.

Extension:

1. To extend this activity, create a bee snack for your students. Collect pipe cleaners, clothespins, googly eyes, Ziploc bags, and honeycomb cereal to recreate the image below.

2. Or, get your students engaged with a bee-related craft. Ideas: 15 Bee Crafts for Kids: https://buggyandbuddy.com/15-bee-crafts-kids/, 30 Buzzworthy Bee Crafts: https://www.kidsartncraft.com/buzzworthy-bee-crafts-kids/

Vocabulary:

- **Bee Dance**: used to show other bees where nectar/flowers are.
- **Beekeeper**: someone who cares for and raises bees.
- **Colony**: a group of bees living together.
- **Hive**: a bee's home, where it lives with other bees and produces honey.
- **Honey**: food produced by bees.
- **Honeycomb**: an area where honey is stored, also called cells.
- **Insect**: an animal with an exoskeleton, 3 body parts, and 6 legs.
- **Pollen:** small spores from a plant that appear as dust and are necessary for plant reproduction.
- **Pollination**: the act of transferring pollen from one flower to another.
- **Queen Bee**: the only bee that produces eggs.
- **Beeswax**: produced by bees to make the hive cells.

- **Worker Bee**: guards the hive, gathers nectar, makes honey, repairs the hive, and cleans it. All workers are female bees.

Career Information: Beekeeper
Beekeepers take care of bees and their hives. They also collect honey and beeswax from the hives, which they can sell to other people to make food, candles, art supplies, and more.

Use these resources to introduce your students to beekeeping.
"The Bee Man" book by Laurie Krebs and Valeria Cis
https://www.agfoundation.org/books/the-beeman
"The Littlest Beekeeper" book by Abby Chatfield
https://www.amazon.com/Littlest-Beekeeper-Abby-Chatfield/dp/1638373604/ref=tmm_hrd_swatch_0

Assessment: This is an introductory lesson to the role of bees in our world. There is no formal assessment.

Kansas Standards:
Language Arts
Kindergarten
Reading
Reading: Informational
Key Ideas and Details
RI.K.1 With prompting and support, ask and answer questions about key details in a text.
RI.K.2 With prompting and support, identify the main topic and retell key details of a text.
Craft and Structure
RI.K.4 With prompting and support, ask and answer questions about unknown words in a text.
Language in Reading: Informational
RI.K.11 Determine or clarify the meaning of unknown and multiple-meaning words and phrases in reading and content to expand language comprehension.
Range of Reading and Text Complexity
RI.K.13 Actively engage in individual or group readings of informational text with purpose and understanding.
Writing
W.K.2 Use a combination of drawing, dictating, and writing to compose informative/explanatory texts in which they name what they are writing about and supply some information about the topic.
Research to Build and Present Knowledge
W.K.8 With guidance and support from adults, recall information from experiences or gather information from provided sources to answer a question.
Speaking and Listening
Comprehension and Collaboration
SL.K.1 Participate in collaborative conversations with diverse partners about topics and texts with peers and adults in small and larger groups to expand language comprehension.
1st Grade
Reading
Reading: Informational
Key Ideas and Details

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.
Craft and Structure
RI.1.4 Ask and answer questions to help determine or clarify the meaning of words and phrases in a text.
Writing
Research to Build and Present Knowledge
W.1.8 With guidance and support from adults, recall information from experiences or gather information from provided sources to answer a question.
Speaking and Listening
Comprehension and Collaboration
SL.1.1 Participate in collaborative conversations with diverse partners about topics and texts with peers and adults in small and large groups to expand language comprehension.
SL.1.2 Ask and answer questions about key details in a text read aloud, information presented orally, or through media.
2nd Grade
Reading
Reading: Informational
Key Ideas and Details
RI.2.1 Ask and answer such questions as who, what, where, when, why and how to demonstrate understanding of key details in a text.
Craft and Structure
RI.2.4 Determine the meaning of words and phrases in a text relevant to a second-grade topic or subject area.
Language in Reading: Informational
RI.2.11 Determine or clarify the meaning of unknown and multiple-meaning words and phrases to expand language comprehension.
Writing
Research to Build and Present Knowledge
W.2.8 Recall information from experiences or gather information from provided sources to answer a question.
Speaking and Listening
Comprehension and Collaboration
SL.2.1 Participate in collaborative conversations with diverse partners about topics and texts with peers and adults in small and larger groups to expand language comprehension.
SL.2.2 Recount or describe key ideas or details from a text read aloud, information presented orally, or through media.

Next Generation Science Standards
Kindergarten
From Molecules to Organisms: Structures and Processes
K-LS1-1. Use observations to describe patterns of what plants and animals (including humans) need to survive.
Earth's Systems
K-ESS2-2. Construct an argument supported by evidence for how plants and animals (including humans) can change the environment to meet their needs.
1st Grade
From Molecules to Organisms: Structures and Processes
1-LS1-2. Read texts and use media to determine patterns in behavior of parents and offspring that help offspring survive.
2nd Grade
Ecosystems: Interactions, Energy, and Dynamics

2-LS2-2. Develop a simple model that mimics the function of an animal in dispersing seeds or pollinating plants.

History, Government, and Social Studies
Standard 1: Choices have consequences.
1.1 The student will recognize and evaluate significant choices and consequences that have impacted our lives and futures.
1.3 The student will investigate and connect examples of choices and consequences with contemporary issues.
1.4 The student will use their understanding of choices and consequences to make a claim or advance a thesis using evidence and argument.

National Agricultural Literacy Standards:
Agriculture and the Environment
- Describe how farmers/ranchers use land to grow crops and support livestock (T1.K-2 a.)

Plants and Animals for Food, Fiber, and Energy
- Identify examples of feed/food products eaten by animals and people (T2.K-2 c.)

Food, Health, and Lifestyle
- Recognize that agriculture provides our most basic necessities: food, fiber (fabric or clothing), energy, and shelter (T3.K-2 b.)

Culture, Society, Economy, and Geography
- Identify the people and careers involved from production to consumption of agricultural products (T5.K-2 e.)
- Trace the sources of agricultural products (plant or animal) used daily (T5.K-2 f.)

Supporting Resources:

"A Bee's Life" book by Dona Herweck Rice https://books.google.com/books/about/A_Bee_s_Life.html?id=AQrhBAAAQBAJ "Achoo, Why Pollen Counts" book by Shennen Bersani https://www.agclassroom.org/matrix/resource/336/ "Amazing Bees: Buzzing with Bee Facts" book by Sue Unstead https://books.google.com/books/about/Amazing_Bees.html?id=64tRDAAAQBAJ "Bea's Bees" book by Katherine Pryor https://www.agclassroom.org/matrix/resource/1051/ Beekeeping with Maddie Youtube Series by Maddie Moate https://www.youtube.com/playlist?list=PLmTANLv-GyXXqmwkIkdXcNYoY6Sy1t0Pg DK Books: Why do we need bees? https://www.youtube.com/watch?v=r7EpQnzbwA8 "Flight of the Honey Bee" book by Raymond Huber https://books.google.com/books/about/Flight_of_the_Honey_Bee.html?id=heuOEAAAQBAJ "From Flower to Honey" book by Robin Nelson https://books.google.com/books/about/From_Flower_to_Honey.html?id=Xnt3i7_I8_AC Honeybee: Kansas State Insect: https://statesymbolsusa.org/symbol-official-item/kansas/state-insect/honeybee Kansas Honeybee Producers Association: http://www.kansashoneyproducers.org/ Kids Connection Magazine: A Pollinator Party https://www.ksagclassroom.org/resource/connection/ National Geographic: Kids Learn Why Bees Are Awesome | National Geographic https://www.youtube.com/watch?v=z9zZ48jJZyk&t=21s National Geographic Readers:

Bees” book by Laura Mash https://books.google.com/books/about/Bees.html?id=Aw3aCwAAQBAJ Northeastern Kansas Beekeepers Association: http://www.nekba.org/ South Florida PBS: Beekeeper | Virtual Field Trip | KidVision Pre-K https://www.youtube.com/watch?v=zl-YujjzyGA “The Amazing Honeybee” lesson plan by Michele Melius https://www.agclassroom.org/matrix/lesson/686/ “The Honey Makers” book by Gail Gibbons https://books.google.com/books/about/The_Honey_Makers.html?id=l3VaAAAAYAAJ

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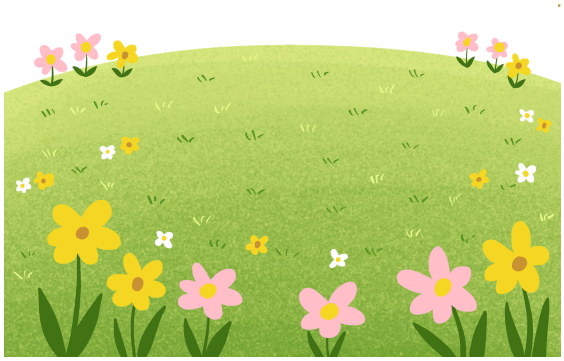
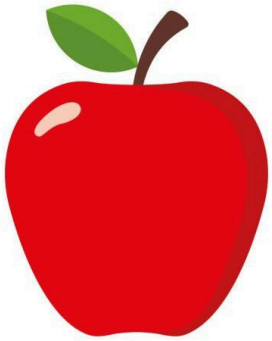
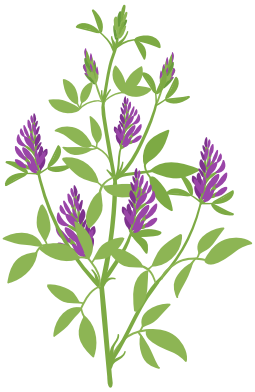
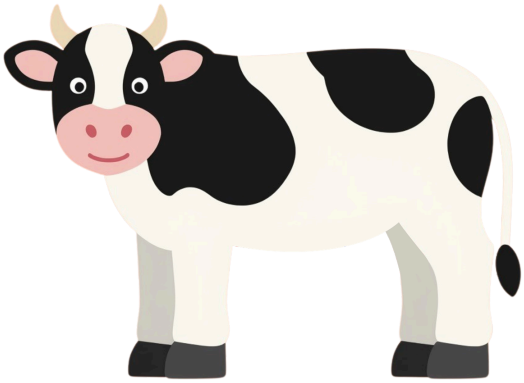
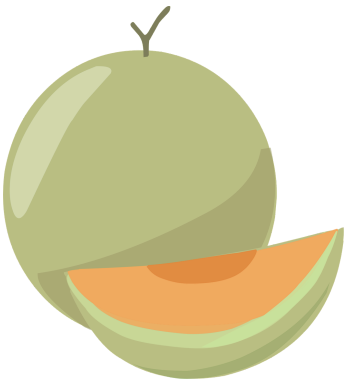
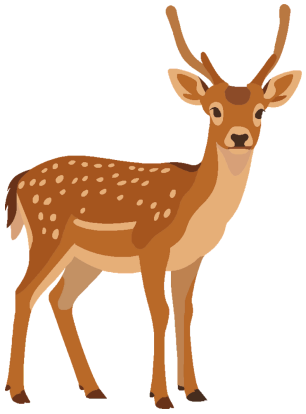
Bee Lab. (n.d.). Bee pollination. University of Minnesota Bee Lab. Retrieved June 1, 2026, from https://beelab.umn.edu/pollination

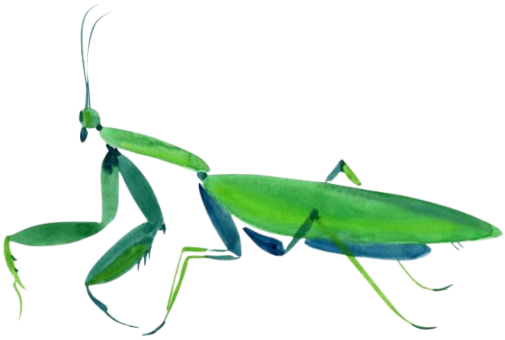
The Nature Conservancy. (2021, March 25). Pollinators in Kansas. https://www.nature.org/en-us/about-us/where-we-work/united-states/kansas/stories-in-kansas/protecting-local-pollinators/

U.S. Department of Agriculture. (n.d.). Honey bees. Retrieved June 1, 2026, from https://www.usda.gov/about-usda/general-information/initiatives-and-highlighted-programs/peoples-garden/importance-pollinators/hon

Flowers 	Honey 
Apples 	Broccoli 
Strawberries 	Cucumber 

Cotton 	Alfalfa 
Cows 	Almonds 
Plants 	Melons 

Cranberries 	Chocolate 
Trees 	Deer 
Bee Venom 	Royal Jelly 

Wild Animals 	Squirrels 
Raccoons 	Dragonflies 
Praying Mantis 	Blackbird/Starling