

# Guide to the Digital Bee Hive for Educators



Did you know that honey bees dance? Do you know why bees build honeycombs in the shape of a hexagon? Do you know how many eyes honey bees have? Bees live a secret life inside of their hives... but NOW we can see what goes on in a live hive. The Bee Cause and its partners are on a mission to inspire children to learn about and protect these precious pollinators. That's why we've created a **Digital Bee Hive Experience** - to educate our community of learners about this vital ecosystem.

This Digital Bee Hive is an innovative and unique way for students to connect with the honey bee. The only tools a teacher will need is internet access and a viewing device with QuickTime. The following Extension Suggestions are designed to springboard the 30-minute Digital Bee Hive Experience into a purposeful adventure for students. The experience includes opportunities for students to search and find in the live bee recording as well as multiple mini-lessons along the way.

Please go to our [Bee Cause Blog](#) for the [Live Hive Link](#)

## Extension Suggestions

**KWL Chart** - A Know, Wonder, Learn chart can be used to introduce and wrap-up the Digital Hive Experience. This graphic organizer guides learners to access their previous knowledge, find a purpose for the learning and summarize their growth of knowledge. KWL is a great way for teachers to monitor learning.

### Pre and Post Assessment Questions

**A Look Inside the Hive: Discussion for the search and find segments in the live bee recording**

- Can you find the queen bee? How do you know it is her?
- Do you see the hexagon cells? Do all of the cells look exactly alike?

- Why do you think the bees build their hive using a hexagonal shape? (Hint: Do you see any open space between the cells?)
- Can you find a cell in the hive containing honey? Hint: it will appear dense and will be capped)
- Do you see any of the bees dancing? Can you do a Jive from the Hive?

### Do You Know the Different Types of Honey Bees?

- What are the three types of bees? Can you describe how they are different? How are they alike?
- What kinds of jobs do the 3 types of bees have?
- Who is the largest bee in the hive? Who is the smallest?



### Do You Know the Life Stages of a Honey Bee?

- How many eggs can a queen bee lay per day?
- How many days does it take for her eggs to hatch?
- What are the life stages of a honey bee?



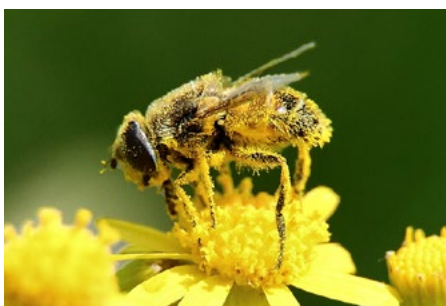
## Do You Know the Anatomy of the Bee?

- Can you name all eight parts of the worker bee?
- Which body parts do you have in common with a bee?



## Can You Find Examples of Nectar, Honey, and Pollen in the Hive?

- What do the bees use the nectar to make?
- Why do the bees flap their wings inside the hive?



## Why is the Hexagon Shape Used to Make Honeycomb

- Where does the beeswax come from?
- What supplies do the bees store in their combs?



## Do you Know How Honey Bees Communicate?

- What are the bees trying to communicate when they do the Waggle Dance?
- Can you name another way that bees communicate within the hive?



## Journal and drawing opportunities

- What job would you want to have in the hive? Give reasons you would want that job. What are your qualifications for the job? Why would you be good at that particular job? Draw yourself as a bee doing the job that you want.
- Write a thank you letter to a bee for something you are grateful for that bees provide the world. It could be honey, pollination, the way they work, or how they move in and out of the hive.
- Make your own bee comic strip! Think about how bees communicate with each other and include a new bee dance in your strip. “Bee” sure to tell what your bee is trying to communicate with her dance.

**Want more of our Digital Bee Hive?** The Bee Cause Project has created a Digital Hive, bespoke with a cabinet frame modeled to replicate the design of the Observation Bee Hive, a model installed in schools across the country. Complete with a high-resolution screen and custom footage from a live bee hive, this digital tool can take you inside a bee hive 24/7 without live bees on the grounds.

We want to send out a sweet thank you to our partners at Savannah Bee Company for providing the inspiration for this project and to the Ohana East Family Foundation for funding its research and design.

For more information about this or other Bee Cause initiatives, please visit [www.thebeecause.org](http://www.thebeecause.org) or send us a message at [info@thebeecause.org](mailto:info@thebeecause.org).

## POLLINATION LESSON STANDARDS

### NEXT GENERATION SCIENCE

3-LS1-1; 3-LS3-1; 3-LS4-2;

4-LS1-1; 4-LS1-2; 4-PS3-2; 4-PS4-3;

5-PS3-1; 5-LS2-1

### ELA COMMON CORE

W.3.2, W.3.3;

W.4.2; W.4.3;

W.5.2; W.5.3;

Name \_\_\_\_\_

Date \_\_\_\_\_



## DIGITAL BEE HIVE PRE/POST ASSESSMENT

1. How many kinds of bees live in the hive? \_\_\_\_\_

2. Why do bees fan their wings in the hive? \_\_\_\_\_

\_\_\_\_\_

3. How much honey do you think a bee makes in her lifetime? \_\_\_\_\_

\_\_\_\_\_

4. Why do bees make honey? \_\_\_\_\_

\_\_\_\_\_

5. How do you think beeswax gets made? \_\_\_\_\_

\_\_\_\_\_

6. Who from the hive can sting? Males or Females

7. Which body parts of a bee can you name? \_\_\_\_\_

\_\_\_\_\_

8. Name the lifecycle stages of the bee. \_\_\_\_\_

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9. Do you know the ways that bees communicate in the hive? \_\_\_\_\_

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10. What further research would you be interested in doing about bees? \_\_\_\_\_

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