A Lesson Plan Grade 3-5

But Why is led by you, kids! Kids all over the world send us questions, and we find the answers. We've created these learning units to be used in a classroom setting or at home. Watch the video first and then use this guide to deepen your understanding of what you've learned. Find more episodes at butwhykids.org.

But Why: Adventures! Northeast Nature | JUNE: POLLINATORS

DRIVING QUESTION:

What is a pollinator and why are pollinators essential?

Objectives: Students will

- Identify different pollinators in their community.
- Understand the importance of pollinators in their community.
- Determine how they can optimize habitat to support pollinators.

Activities:

1. Come up with a plan to make your school or community more pollinator friendly. Are there places at school where you could plant pollinator-friendly flowers? Can you talk to the maintenance crew about mowing lawns less frequently or leaving some patches unmown so that flowers can grow? What other ideas can your class think of? Who do you need to talk to make your plan a reality?
2. Honey bees were featured in this episode, but what can you find out about other animal pollinators? Ask your school librarian for help finding out more about pollinating bats, moths, butterflies and birds. How are they the same as honey bees? How are they different?

VELS (K-3): SC 2:1, ED 4:1, M 4:1, SS 1:1 | Learning Targets Grade 3-5

NGSS

5-LS2-1

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BUT WHY

Watch & Connect

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WATCH & CONNECT:

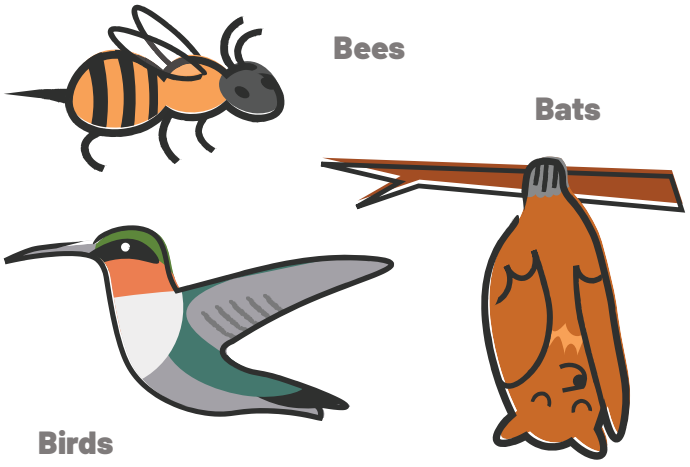
Draw or write in the boxes.

K (Know). What do you know about bees and other pollinators?

W (Want to know). What do you want to know about bees and other pollinators?

L (Learn). What did you learn about bees and other pollinators?

Different kinds of pollinators:



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Learning Targets: NGSS 5-LS2-1, VELS SC 2:1, ED 4:1, M 4:1 K-3

BUT WHY

Watch & Doodle

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But Why: Adventures! Northeast Nature | JUNE: POLLINATORS

WATCH & DOODLE:

In the video, look carefully at a flower. Where is the nectar stored? Where is the pollen? Now look at a bee or butterfly. What special attributes do bees and butterflies have that help them get nectar? How do they carry pollen? **Draw what you notice.**

Draw a honey bee:

First, draw three connected ovals for the body.

Then, add stripes, antenna, legs, eyes, wings and a little stinger!

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Learning Targets: NGSS 5-LS2-1, VELS SC 2:1, ED 4:1, M 4:1 K-3

Shapes!

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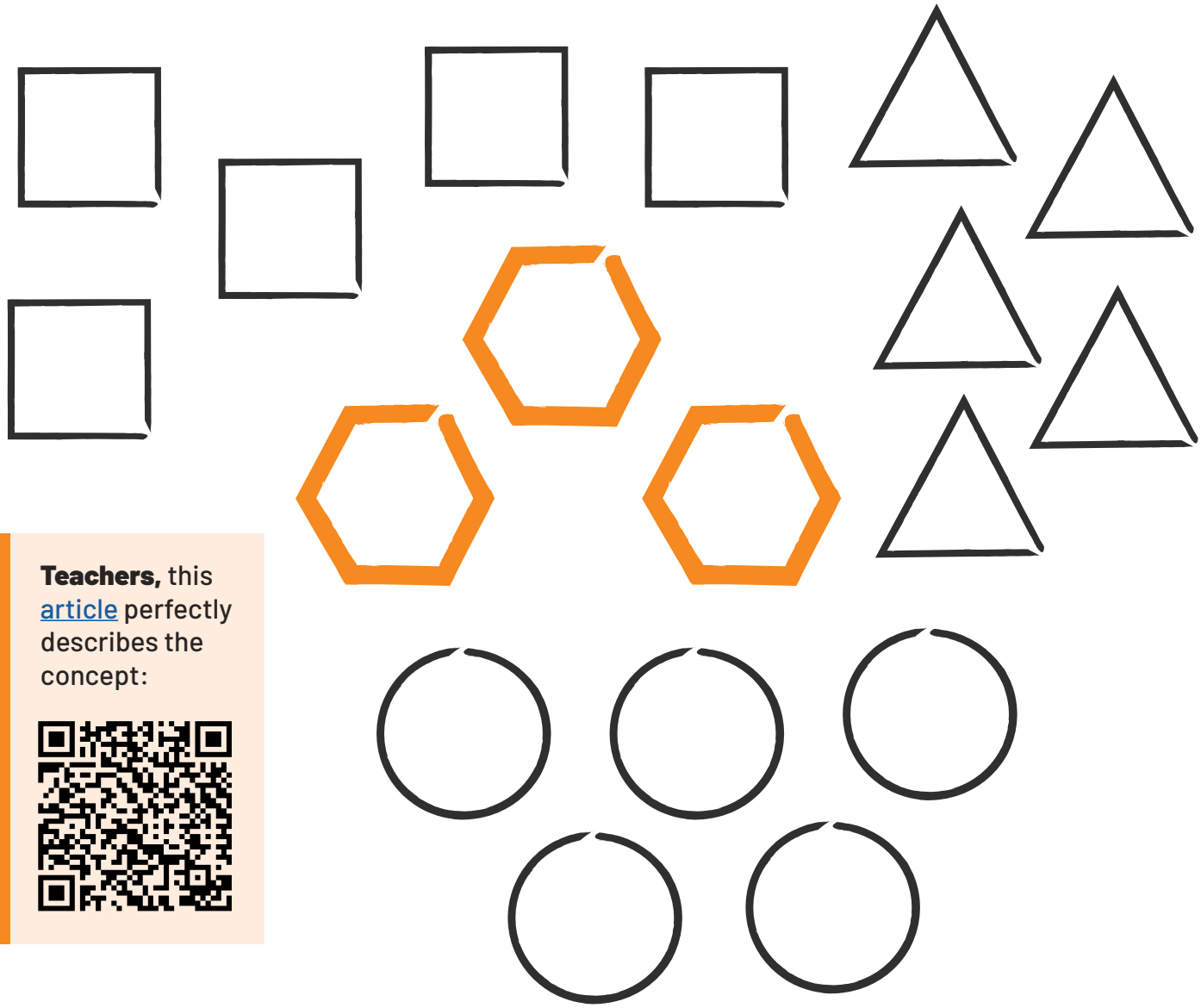
But Why: Adventures! Northeast Nature | JUNE: POLLINATORS

Explain why hexagons are the most efficient shape inside a honey bee colony. **Test and try:**



Teachers, this article perfectly describes the concept:

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Learning Targets: NGSS 5-LS2-1, VELS SC 2:1, ED 4:1, M 4:1 K-3

Traditions: Connections

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But Why: Adventures! Northeast Nature | JUNE: POLLINATORS

SOCIAL EMOTIONAL CONNECTIONS: We are all connected.

Flowers and bees are partners. The flowers make tasty nectar to attract pollinators and the bees move pollen from flower to flower as they go, which fertilizes the flowers. Honey bees and humans have a partnership, too. We help the honey bees thrive by protecting their hives (did you see the fence around the beekeeper's hive?) and they produce honey that we like to eat. Good beekeepers leave enough honey for their hives to survive the winter. Can you think of any other examples of partnerships like this in your community, where each partner gets what they need to thrive?

Reflect on community.

Share what you remember from the beekeeper's example:

Share an example from your own community:

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Learning Targets: NGSS 5-LS2-1, VELS SC 2:1, ED 4:1, M 4:1 K-3

BUT WHY

Traditions: Connections

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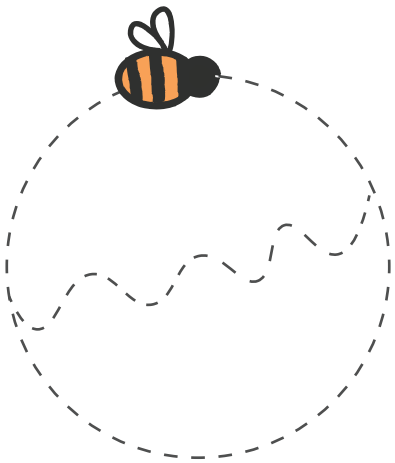
BIG IDEA: Honey bees use a special dancing language to communicate with other bees about where the best nectar is. Humans can use words to communicate, but what we do with our bodies when we talk can change our meaning: We can also communicate a lot without saying any words. Work with a partner to communicate something without saying any words. Was it hard or easy to get your partner to understand? Cultures across the world use signals, gestures and body language to communicate. Is there someone in your community who can share something about body language in a different culture?

Bee community:



Share an appropriate gesture:

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Learning Targets: NGSS 5-LS2-1, VELS SC 2:1, ED 4:1, M 4:1 K-3

BUT WHY

Did You Know?

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CHECK OUT THESE FUN FACTS:

Honey lasts forever! 3,000-year-old honey found when King Tut's tomb was unsealed in 1922 was still edible!

A pound of honey = **2 million flower visits**

There are three types of honey bees: one queen, male drones (whose only job is to fertilize the queen and who are kicked out of the hive before winter), and female workers. **The vast majority of a hive is made up of females.**

Honey prevents infections and can help protect minor burns or scrapes.

One honey bee only makes about **1/12 of a teaspoon of honey in her lifetime.**

Couch Family Foundation

Pollinator

[PAW-lin-ay-turr] • *noun*

An animal that transfers pollen from one plant to another, enabling plants to get fertilized.

Hive

[HIGHv] • *noun*

A colony of bees or the structure the bees live in.

Nectar

[NECK-ter] • *noun*

A sugary liquid plants make to attract pollinators.

Larva

[LAR-vuh] • *noun*

The immature form of an animal that has hatched from its egg but is not yet in its adult form. In insects, larvae (the plural of larva) are often wingless and wormlike. Some amphibians and other animals also have a larval stage. (Tadpoles, caterpillars and maggots are all larvae.)

What new words did you learn? Make your own vocabulary cards.