

BEES & HONEY

LEARNING OBJECTIVES

- Children will begin to understand how bees make honey.
- Children will begin to understand the practice of beekeeping.
- Children will observe beehive covers from Iran and understand the function and design purposes

SUMMARY

We often see bees during the warm spring and summer months, but what are they doing as they buzz about? Through movement, storytelling, and objects, children will learn about the life of bees and the process of beekeeping.

MUSEUM VISIT

Beehive Covers at the Sackler Gallery

ALTERNATIVES

Visit a garden and watch for bees going from flower to flower.

AGE 3-5 years

TOPICS OF EXPLORATION

Bees

Honey

Beehives/beekeeping

EARLY LEARNING STANDARDS

OBJECT

Honeycomb

BOOK

The Flight of the Honey Bee by Raymond Huber

PROJECT

Design a beehive cover

MATERIALS TO GATHER

- Ice cube trays
- Droppers
- Scarves
- Music player
- Pretend honey combs and tools
- Gloves and bee keeper hats
- Yellow and black art materials
- Glue, scissors
- Books
- Plastic flowers
- Pom poms
- Beehive
- Pencils
- Spoons
- Honey
- Strips of poster board paper for antenna headbands
- Pipe cleaners
- Tape/staplers

ITEMS TO PREPARE:

- Signs
- Extensions
- Flowers with colored water
- Images of bees
- Paper plates with small oval hole cut near one edge
- Pretend beehive with velcro bees
- Beekeeper hats
- Images of bees' honey recipe
- Images of beekeeper's role

INTRODUCTORY ACTIVITIES

- Bee Dance— Provide wings and/or scarves and encourage children to fly and do a “bee dance” to the music of “Flight of the Bumblebee” by Nikolai Rimsky-Korsakov.
- Make antennas— Provide pipe cleaners and images of bee antennas and encourage children to make their own pair.
- Bee Art—Provide a variety of yellow and black materials, and images of bees. Encourage children to use whatever materials they want to create an artistic representation of a bee.
- Dramatic Play—Dress like a bee keeper and scrape honey comb. Provide bee puppets.
- Nectar to Honey—Provide ice cube trays as the hive, and laminated flowers with the middle being a cup that contains colored water. Encourage children to transfer the “nectar” to the “comb” with droppers.
- Literacy—The Honeybee and the Robber by Eric Carle, Hornets' Nest by Kate Scarborough, How do Bees Make Honey? By Anna Claybourne, Bees by Gallimard Jeunesse, Life of the Honeybee by Andreas Fischer-Nagel, Bees, Wasps, and Ants by George S. Fichter

WARM UP

- Hello song & introductions.
- Today we are going to be talking about bees, specifically honey bees! What do you know about bees? Honey bees are really interesting and hardworking creatures! Let’s read a book to find out more—Read Flight of the Honey Bee by Raymond Huber
- How exactly does a bee make honey? I’ve got a honey bees’ recipe to make honey! Discuss what a recipe is. Share the bees’ recipe for honey and act it out as you go (dance). Share honeycomb where appropriate.
- Are you ready to pretend to be bees and make some honey? Give caregivers each a flower and a bag of pom poms as nectar, and ask them to find a spot in the room to stand. Have children get in their bee posture—wings ready, antennae out, etc., and have them fly to the flowers, drink the nectar/get a pom pom and come back to drop it in the hive (in the circle area). Once all the nectar has been brought to the hive cool it down by flapping wings, and pretend to seal off the hive.
- That was hard work, huh! But wait, now we know how bees make honey, but how do people get honey? How does it get from the beehive to the store? There are people called beekeepers, who set up beehives and gather the extra honey from the hives so people can eat it. Look at objects (smoker, clothing, scraper) and discuss their purpose.
- Today we are going to go to the Sackler Gallery to see an object that was used in beekeeping a long time ago in Iran (show map). Today, beekeeping and honey are still important in Iran. Let’s watch a video to see what beekeeping looks like today in Iran.
- Taste honey and share what we like to eat it in or with.

MUSEUM GATHERING

- Head to the bottom floor of the Sackler Gallery where the fountain is located. On the way down tell the children to keep their spy eyes open for something circular. Point out the beehive covers and allow children a turn in groups to get close to the case and carefully observe the covers.
- Make a sitting circle and ask the children: What did you notice about these objects? What do you think they have to do with bees?
- Explain that these objects are beehive covers from Iran (show on map). Explain that beekeeping was widely practiced in the Islamic world. Bees are mentioned in Islam’s holy text, the Qur’an.
- These beehive covers went on beehives made from reeds, and coated in mud (show objects or images). The beehive covers went on either end so that the bees were protected, but could still go in and out of the beehive. Why would they need to leave the beehive? Point out the small oval hole on the covers.
- To learn about why these beehive covers look the way they do we’re going to play a game. Give each child a blank paper plate with a small hole in near the bottom. Now you each have your own beehive cover, and we’re going to put them all together so that our bees know where to go. Allow children to go up 2 by 2 to place their beehives in a communal area. Then ask a child to try and find theirs. Talk about if it is easy or difficult and why. It was hard to find your beehive if all the beehive covers look exactly the same! That’s why the beehive covers have unique designs so that each beekeeper could easily identify their beehive.
- What do you notice on the designs of the beehives? Some have words, and some have images. Point out the mosque on the turquoise cover. Explain that a mosque is a special place where some people go to practice their religion, like a church or synagogue. Ask the children what are some special places they have in their lives, whether it be a place of worship, their home or a family member’s home, etc. Provide the children with pencils, and a paper beehive cover. Encourage them to draw or write something that is important to them.
- Play the beehive cover game again, where each child places their cover in a group again, and see if it is easier or harder to find their beehive. Talk about why.
- Sing goodbye song and hand out extensions.

INFORMATION FOR EDUCATORS

Honey Bees

<http://animals.nationalgeographic.com/animals/bugs/honeybee/>

Waggle dance:

The honey bee dance is a way for bees to communicate with one another. A honey bee that discovers a new food source will tell other honey bees about its location through the honey bee dance. When a worker bee returns from an abundant food source, she will dance inside their nest in a circle.

There are two main types of honey bee dances: round dance and waggle dance. Round dance, as the name indicates, is a movement in a circle. This is used to indicate the food source is less than 50 meters from the nest. Waggle dance is a figure eight pattern while the bee waggles its abdomen and is used for food located at a distance of more than 150 meters. Exact distance can be communicated by duration of the dance. A longer dance indicates a great distance

<http://www.orkin.com/stinging-pests/bees/honey-bees/>

Beekeeping

Beekeeping is the maintenance of [honey bee](#) colonies, commonly in man-made [hives](#), by humans. A [beekeeper](#) (or apiarist) keeps bees in order to collect their [honey](#) and other products that the hive produces (including [beeswax](#), [propolis](#), [pollen](#), and [royal jelly](#)), to [pollinate](#) crops, or to produce bees for sale to other beekeepers. A location where bees are kept is called an [apiary](#) or "bee yard".

<https://en.wikipedia.org/wiki/Beekeeping>

<https://www.beethinking.com/pages/beekeeping-for-beginners>

Beekeeping in Iran

<https://www.youtube.com/watch?v=5DsOAGtO6Ss>

<https://www.youtube.com/watch?v=gx6UK0C-FUM>

Object Information



Among some of the more unusual ceramic objects from Islamic Iran are beehive covers, some of which date back to at least the seventeenth century. Beekeeping was widely practiced throughout the Islamic world and because bees are singled out in the Qur'an, Islam's holy text, they enjoy particular status among other animals and insects. The designs on the two covers on view are intended as protective and auspicious symbols and are characteristic of the more vernacular ceramic tradition that has existed in the Islamic Near East for centuries.

INFORMATION FOR CAREGIVERS

Resources

- **Why Young Kids Learn Through Movement** by Lara N. Dotson-Renta
<https://www.theatlantic.com/education/archive/2016/05/why-young-kids-learn-through-movement/483408/>
- **Why Kids Need to Move, Touch and Experience to Learn** by Katrina Schwartz
<https://ww2.kqed.org/mindshift/2015/03/26/why-kids-need-to-move-touch-and-experience-to-learn/>

Rationale

- Memory and movement are connected, thus the body is a tool for learning. When children are using their body to explore new concepts, they are experimenting with new knowledge and making it more concrete. Also, neuroscience shows the necessity of movement breaks for children, and that their focus will last much longer if they have ample movement throughout their day. Incorporating movement into a child's day helps them make abstract concepts more concrete, remember more, increase attention, as well as incorporate fun!
- Young children have a limited scope of experience due to their relatively short time in the world. Expanding young children's scope of the world through books, objects, conversations, and visits help open them up to the world beyond their immediate surroundings, and foster respect and interest in other cultures.

Tips

- Build movement into your daily routine—it's good for physical and mental health, but it's also fun! When you ask a question, ask your child to answer you through movement. When you're at the grocery store and your child is getting antsy, ask them to move through the aisles like the floor was covered in their favorite fruit, or sticky honey, etc., or ask them to make their bodies into the shapes that they see.
- When exploring a new topic with your child, do some research together and see how things are done in different parts of the world. For example, how is honey used in food in other locations in the world?