

HONEY: NATURAL, NUTRITIOUS AND DELICIOUS

Lesson developed by: Sue Worstall, Summit County Master Gardener Volunteer

ACTIVITY OVERVIEW:

A nature appreciation activity to use as a 1:1 cart activity or with small or large groups, which encourages participants to learn about honey. This lesson can be used in conjunction with those about pollinators and pollinator plants. The photos can be enlarged and copied, if wished.

THE STORY OF HONEY

The story of honey is older than history itself. An 8,000-year-old cave painting in Spain depicts honey harvesting, and we know it's been used for food, medicine and more by cultures all over the world since then.

Honey the natural product made from bees—one of our planet's most important animals. Honey bees visit millions of blossoms in their lifetimes, making pollination of plants possible and collecting nectar to bring back to the hive.

Lucky for us, bees make more honey than their colony needs, and beekeepers remove the excess and bottle it. Just like they've been doing since the beginning of time.

HONEY TRIVIA

1. How many flowers must honey bees tap to make one pound of honey?
Two million.
2. How far does a hive of bees fly to bring you one pound of honey?
Over 55,000 miles.
3. How much honey does the average worker honey bee make in her lifetime?
1/12 teaspoon.
4. How much honey would it take to fuel a bee's flight around the world?
About one ounce.
5. How many flowers does a honey bee visit during one collection trip?
50-100.
6. How do honey bees communicate with one another?
"Dancing." Honey bees do a dance which alerts other bees where nectar and pollen was located. The dance explains direction and distance. Bees also communicate with pheromones.



Source: National Honey Board- with permission

HOW HONEY IS MADE: Naturally by Nature

From Bee: Honey starts as flower nectar collected by bees, which gets broken down into simple sugars stored inside the honeycomb. The design of the honeycomb and constant fanning of the bees' wings causes evaporation, creating sweet liquid honey. Honey's color and flavor vary based on the nectar collected by the bees. For example, honey made from orange blossom nectar might be light in color, whereas honey from avocado or wildflowers might have a dark amber color.

To Hive: On average, a hive will produce about 65 pounds of surplus honey each year. Beekeepers harvest it by collecting the honeycomb frames and scraping off the wax cap that bees make to seal off honey in each cell. Once the caps are removed, the frames are placed in an extractor, a centrifuge that spins the frames, forcing honey out of the comb.

To Home: After the honey is extracted, it's strained to remove any remaining wax and other particles. After straining, it's time to bottle, label, and bring it to market. It doesn't matter if the container is glass or plastic, or if the honey is purchased at the grocery store or farmers' market. If the ingredient label says "pure honey," nothing was added from bee to hive to bottle.



THE OHIO STATE UNIVERSITY

COLLEGE OF FOOD, AGRICULTURAL,
AND ENVIRONMENTAL SCIENCES



Source: inaturalist-open-data.s3.amazonaws.com/photos/28051497

FORMS OF HONEY

Most of us know honey as a liquid in a bottle, but there are lots of other ways to enjoy this natural nectar. Comb, crystallized, liquid, whipped, and beyond—it just depends on what texture and usage we're looking for. Between the vast array of varieties and diversity of forms, there's a perfect kind of honey out there for every occasion.

HONEY BENEFITS

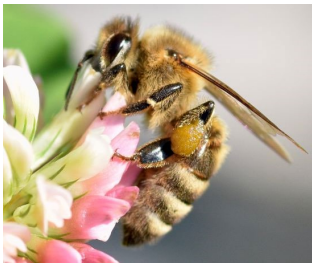
In addition to being an amazing natural sweetener, honey has additional benefits: it's a wholesome sore-throat soother, a natural energy booster, and more.

Nutrition: It's not just versatile, varied, and delicious.

Research Honey contains a wide array of vitamins, minerals, amino acids, and antioxidants.

Sweetener: While it's delicious in hot tea and drizzled on toast or a coffee cake, honey can add flavor to many dishes and beverages. Because honey is slightly sweeter than sugar, less can be used to achieve the same amount of sweetness in a dish.

Natural Energy: Honey is a natural source of carbohydrates, providing 17 grams per tablespoon, which makes it ideal for working muscles. Since carbohydrates are the primary fuel the body uses, athletes often use honey to help maintain muscle glycogen, which can give them needed boosts.



Source: Randy Katz, Summit County MGV

A few tasty and easy recipes follow, which could be shared with residents during this honey program:

LEMONADE HONEY PUNCH Makes 10 cups

For Ginger Honey Syrup:

1 cup honey

5 thin slices of ginger, peeled

1/2 cup water

For Lemonade:

1 cup freshly squeezed lemon juice

24 oz. apple juice

5 cups water

lemon slices, for serving

Directions:

Simmer the ginger honey syrup ingredients in a heavy saucepan for about 30 minutes, set aside to cool. Remove the ginger slices and discard.

In a large pitcher combine the lemon juice, apple juice and water. Stir in the cooled ginger honey syrup.

Fill each glass with ice and the lemonade, garnish with a lemon slice.

APPLE NACHOS WITH HONEY

Ingredients:

2 Granny Smith apples, or another variety

2 T. honey

3 T. peanut butter or almond butter

2 T. chocolate chips

1 T. unsweetened coconut, shredded (optional)

Directions:

Remove core from apples, slice and place on serving dish. Drizzle peanut butter and honey over apples. Sprinkle chocolate chips and coconut (optional) on top.

Serve to your favorite picky eater and watch them enjoy!

Recipes courtesy of Mitzi Dulan, RD, CSSD, made for the National Honey Board

Honey bee resources:

- honey.com National Honey Board: Activity sheets, recipes
- summitbeekeepers.com Professional organization
- u.osu.edu/beelab/ OSU, educational and outreach information
- <https://vimeo.com/487082422> Honeybee video with Summit MGV and Aviary Inspector Randy Katz
- There are also many YouTube videos about bees making honey

Contact Information:

If you have any questions about this activity, please email mgsummitcounty@gmail.com. We hope you benefitted from this activity. Please let us know if you utilized this with a quick email to the above address. Please send your name, facility name, number of participants involved in this activity, and your feedback for improvement so we can measure our impact and improve this product. Thank you!