



# Honey Bees and the Waggle Dance



January 18, 2018

Waggle Dance  
Activity

Have you ever taken the time to consider the work of **honey bees**? Honey bees may not seem important but when we take a closer look at all these busy friends do, it is clear that they play an important role in our lives. If you've ever eaten an apple, strawberry, or even broccoli, you can thank a bee for their hard work. Over 80% of flowering crops are **pollinated** by honey bees. So let's get to know these brilliant creatures!

### Children's Adventure Garden Winter Reading Suggestions

The Honeybee Man  
by Lela Nargi & Krystan Booker

Winnie-the-Pooh  
by A.A. Milne

You Wouldn't Want to Live  
Without Bees  
by Alex Woolf

Honey bees live and work together in a **hive**. The **queen bee** is the boss of the operation. She is responsible for laying eggs and keeping the colony in order. All other bees are born as either workers or drones. **Drones** are bees that have no stinger and no way to collect pollen. Their sole purpose is to help the queen bee lay her eggs. **Worker** bees do all the rest! Workers keep the hive clean, feed the growing bee larva, and look for sources of nectar to eat. Workers are the bees we see out and about, visiting flowers to gather nectar.

While the worker bees are busy searching for food, they do another important task—pollinating flowers! As worker bees move from flower to flower, they carry a small amount of pollen with them on their fuzzy bodies and in their **pollen baskets**. Many flowers are specially adapted to draw the attention of bees. Bright colors, fragrances, and abundant nectar are just a few of the many mechanisms meant to attract pollinators. When a bee stops at one flower and moves to the next, the second flower is pollinated allowing seeds to form. In the case of our food crops, pollination is what allows fruits and vegetables to grow!

When bees find a good source of food they inform their fellow worker bees where to look for it. A worker bee will go back to the hive to give directions to the rest of the bees. How do you think a bee gives directions? They can't speak and they can't draw a map. Instead, these amazing creatures explain through dance—the **waggle dance**! The waggle dance tells other bees what direction to fly in relation to the sun and how far to go to find a food source. If a food source is in the direction of the sun, the direction-giver waggles straight toward the sun. If the food source is far they will also waggle for a longer amount of time. So the key to decoding direction from bees is the **direction** and **duration** of the waggle dance.



We are just beginning to understand the complex nature of bee communities. The potential information conveyed through the waggle dance and the "language of dance" is seemingly limitless. Additional bee dances, such as the "round" dance and the "tremble" dance, have already been determined to convey information beyond directions to nectar. As you try our activity today, consider what other information you could explain through your movements in addition to distance and direction. Next time you see a honey bee, give a little waggle to say "hello"!

\*Follow this link to see the waggle dance in action:

<https://youtu.be/2S-ozxplrdI>





# The Waggle Dance

Learn to Communicate like a Honey Bee!

Today you are a honey bee, specifically a scouting worker bee! You've just found a source of food and want to tell your fellow workers were to find it. Let's learn to waggle dance to tell them how to get there.



## What to Do

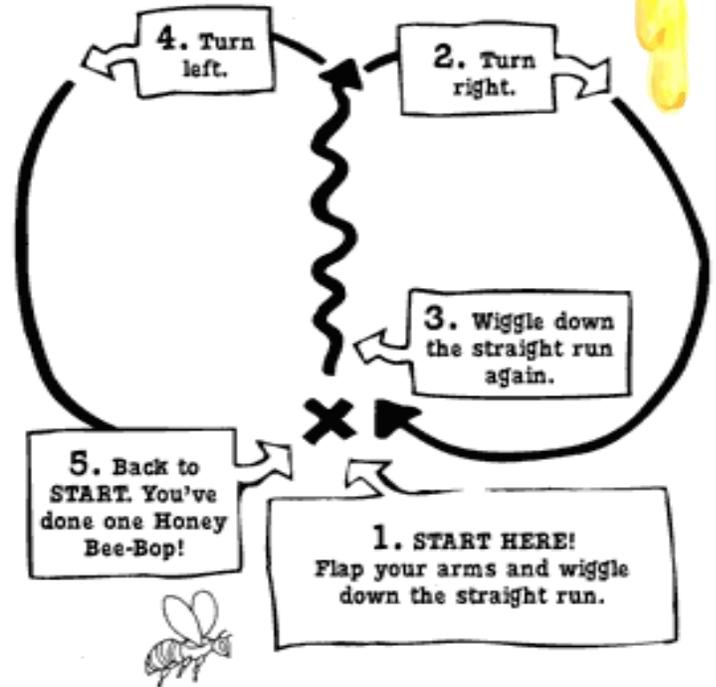
Take turns playing the **scouting bee**.

If you are the **scouting bee**, choose an object to represent a flower and hide it somewhere in an open area (either a large room or yard).

Next, the **scouting bee** will perform a dance to tell where the flower is at.

What's a waggle you ask? Well, you just wiggle side to side as you move forward! The curvy line represents the time to waggle.

The **watching bee** will pay close attention to the dance and try to find the flower based on the **scouting bee** directions. If there is more than one watching bee, you can work together to decide where the flower might be!



How to Waggle	
Flowers are <b>VERY CLOSE</b> --less than 10 feet	Waggle <b>VERY SLOWLY</b> (3 to 4 waggles)
Flowers are <b>CLOSE</b> --10-15 feet	Waggle <b>SLOWLY</b> (5 to 6 waggles)
Flowers are <b>FAR AWAY</b> --15-25 feet	Waggle <b>FAST</b> (7 to 10 waggles)
Flowers are <b>VERY FAR</b> --25 feet or more	Waggle <b>VERY FAST</b> (As many waggles as you can!)



DALLAS ARBORETUM

## Rory Meyers Children's Adventure Garden

