

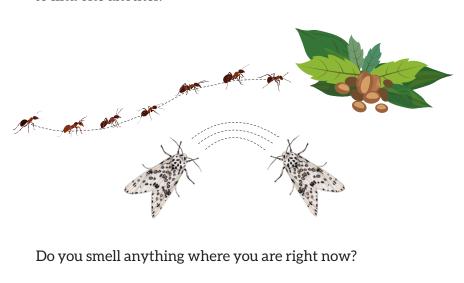
WHY USE MAPS?

Maps help us understand how places are related to one another. A map can show something small, like the path an ant travels, or something very big—like the entire earth! Maps help us see the world in a new way. In this journal, you will create a map of the world around you. You can do this in your backyard, in a park, or in a public garden.

Before you create your own maps, here are some things that most maps have:



Another way animals can communicate where something is located is through smell. Many animals, including insects, produce scents called "pheromones." These pheromones can help insects communicate with one another. For example, ants use pheromones to create trails to guide other ants in the nest to food. Other insects, like moths, use pheromones to find one another.



If you follow the smell, what might it lead you to?

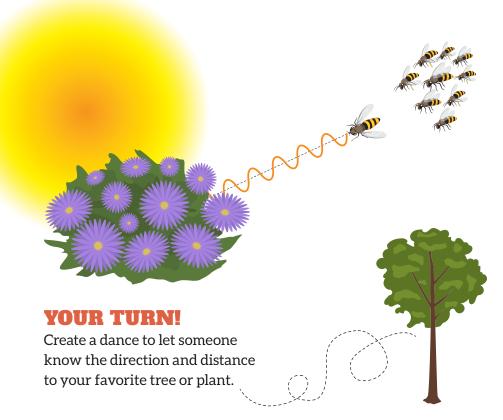
Can you think of other ways animals or humans can share where something is located?

2 PLANT HEROES MAPPING 7

My map: by: Legend:

FINDING GOLDEN TREASURE!

Maps can help us get from one place to another or share the location of something good—like treasure! However, there are other ways besides a map to communicate the location of something. For example, honeybees use a dance to communicate where the best flowers are located to gather nectar and pollen. Bees waggle back and forth in a straight line to tell the other bees how far the hive is from the flowers. The direction in which the bee does this waggle dance tells other bees what direction from the hive and sun the flower patch is. With both the distance and direction, the other bees can find the treasure of the flower patch!



STEP-BY-STEP INSTRUCTIONS

- Go outside or think about a place outside you know really well. It can be your yard, a park, or a public garden.
- **2** Using pages 4 and 5 of your journal, draw a map of the area.
- **3** Create a legend and label places on your map.
- Find your favorite spot on the map you drew.
 Label this spot as "My Favorite Spot."
- Give your map a title.
- Bonus! Think about the area shown on your map. Have you seen any animals or people walking around this area recently?? Consider drawing a line to show how the insect, bird, or person moved on your map.
- Share your map with others. Does the map make sense to them? Can they use it to find your favorite spot?

6 PLANT HEROES MAPPING 3