

## Pan's Garden – Grades 2-3

### To Be Completed at School BEFORE Field Trip

Have students complete the [Pre-Survey](#). Scan and email completed student surveys to Susan Lerner at [slerner@palmbeachpreservation.org](mailto:slerner@palmbeachpreservation.org).

#### **ENGAGE (Pre-Visit - at school):**

Take the students outside. Tell them that they will be bees! Choose one “bee” to find a flower while the rest of the “bees” close their eyes and wait in their “hive”. Once the “bee” finds a flower, have them walk back to the “hive” and count the number of steps that they took to get back from the flower. Use the following to define the distance to the flower:

1-15 steps = short distance

16-30 steps = medium distance

31-45 steps = long distance

45+ steps = really long distance

Have the “bees” in the “hive” open their eyes. Have the “bee” that found the flower communicate with the other “bees” as to where the flower is by doing a waggle dance. Model the waggle dance once by following the directions on [Doin' the Waggle Dance](#) in any random direction. Have the “bee” that found the flower communicate to the other bees where the flower is by facing in the general direction of the flower and doing a certain number of waggle dances based on the distance to the flower as follows:

short distance = 1 dance

medium distance = 2 dances

long distance = 3 dances

really long distance = 4 dances

Make sure this information is shared with the “bees” in the hive and have them note the direction being faced and the number of dances performed. Based on that information, tell the “bees” in the “hive” to find the flower! After 2 minutes of searching, bring all of the “bees” back to the “hive”.

Ask the following questions but do not tell the students if they are right or wrong:

- Do you think this is how bees communicate with each other? (yes)
- Why do you think bees want to find flowers? (for food)
- What two senses do you think an actual bee relies on the most to find a flower? (sight and smell)

Note: If it is not possible to find flowers outside, you can use a colored ribbon or any other small object (e.g. pic of a flower) to represent the flower and have the “bee” hide it somewhere on the ground/floor.

Take note of prior knowledge and misconceptions.