



Traveling Bumble Bee Problem Activity



Ready to get started with this activity? To keep track of your progress, check off the instructions for each step below as they are completed. Make sure to check the box of the last step when you're done to receive congratulations for your completed activity!

Consider this: A female bees spends her early days looking for a place to nest. Once she finds a suitable location, she remains there her entire adult life while looking for flowers in the area that can provide her with nectar and pollen. This is called central-place foraging. In addition, she needs nesting material which could include leaves, mud, pebbles, or other building supplies.

And while you might think she makes a mental map of the area around her including where the resources are, a recent study suggests that they simply remember in which direction they need to fly to get to the next flower and how far away that flower is.

1. Find the Shortest Route

- See if you can come up with the shortest path that the bumble bee needs to take to go to each flower only once and return to the starting position.
- For instance, the path drawn in red is $45' + 50' + 40' + 30' + 15' + 30' = 210'$ total distance traveled. Can you beat that?

