

# POLLEN GATHERING RELAY RACE



Object of the game: To act out the scenario of a foraging bee finding a source of pollen and then coming back to the hive and telling the other bees where to look. The players will simulate “pollen baskets” by sticking colored stickers to their legs. (Why not simulate nectar gathering? They store nectar in their stomachs and then get their stomach pumped by another bee when they return. Let’s stick to pollen.)

SUGGESTION: Before doing this activity, read a book or watch some videos about bees communicating in the hive. (YouTube has many good videos on this topic.) Learn what the waggle dance is and how it works. Also, you might want to discuss the difference between pollen and nectar and the reason each is gathered.

Target age group: 4 to 10

Materials needed:

- 1) colored stickers (about 4 different colors, and enough that each player will get one of each color)
- 2) a copy of the following pattern page of two bees (printed onto card stock or laminated is best but plain paper will work, too)
- 3) several dozen objects such as paper or books under which the stickers can be hidden
- 4) a large area to play in

NOTE: If you can purchase stickers that look like colored dots, that’s great. In my case, I had to use a set of rectangular stickers in neon colors. I just cut the stickers in half to make 3 cm squares. So I ended up with a pile of square stickers in neon green, yellow, orange and pink. But they worked just fine. You will need a sticker of each color for each player.

How to set up:

This will depend on your space. In my case, I had an auditorium that was set up for church meetings, so there were chairs with books under the seats. I simply placed a book on each seat and hid the stickers under a few of them. If you have a large open room, you could lay pieces of paper in rows on the floor. You’ll have to adapt the idea to your space.

Sort the stickers so you have stacks of a single color. Divide the stacks in half so that you have a set for each team. (For example, you will have two stacks of pink, two stacks of green, two stacks of orange.) Hide each stack under one of the books/papers. In my case, I found it helpful to divide the room in half and assign one half to each team. So I hid one set of stacks on one side of the room, and the other half on the other side. That cut down on search time for the “bees.”

### How to play:

1) Divide the players up into two teams (competing hives). (It will not really matter if the numbers are exactly even.) Have the teams sit down, close to each other, like bees in a hive.

2) Give a paper bee to each team.

3) Choose one player from each team to be the first foraging bee.

4) The other bees, who will not be foraging, must remain in a huddle and keep their eyes closed. It's dark in the hive and the bees can't see out. The bees must not look at where their foraging bee is going. They will have to find the nectar source on their own.

5) The foraging bees from each team go out into the room and begin looking for those stickers. They turn over the book/papers to see if there are any stickers underneath. They must put the book/paper right back in place. No reckless actions or tossing things aside! When they find a pile of stickers, they take one sticker, then put the book/paper back on top. This is important. They must cover the pile again. Then they take the backing off the sticker and put the sticker onto their lower legs, imagining it to be a pollen basket. They then return to their hive.

NOTE: Each team's bee can find a different color. They don't need to find the same pile or the same color. The game will work if each team is on a different color for each round. That's fine.

6) Now the foraging bee will have to communicate **WITHOUT WORDS** where to look for the particular color of pollen that was brought back. The other bees must look at the colored sticker on the forager's leg, and find that color. In order to let the other bees know where to look, the returned bee takes the picture of the bee and uses it to show a waggle dance. The direction of the waggle will show what direction to go. In reality, the bees are using the direction of the waggle to indicate an angle from the sun, but that is not feasible in this situation. Making the paper bee go in a line towards the pollen source will be good enough.

NOTE: Some of my students needed a lot of reminding about using the waggle clues. They'd be off in a totally wrong direction, forgetting they'd ever had a clue given to them. Since the entire point of the game is learning about bee communication, I would remind them to think about the waggle clues that had been given.

The length of the waggle will show how far to go: near, medium or far. (You might want to establish a unit of measure, such as the hand length, and have them use one length for close, two for medium and three for far.)

7) If the bees are tempted to talk and give verbal clues, you can discourage this by giving them a piece of masking tape (blue painter's tape works well) to put over their mouths. My students thought this was a lot of fun, actually!

8) The other bees go out and turn over the book/papers one by one. They are not allowed to signal to anyone else if they find it! Bees do not communicate outside the hive, oddly enough. Each bee is on its own. (Obviously, the players may well see what is going on, and you can't prevent that.) It is very important they put back the book/paper after they take a sticker.

9) All bees return to the hive once they have that color stuck to their leg. The first hive to have all their bees come back wins that round.

10) Choose new foraging bees to start the next round.

11) The game is over when all of the colors have been found.

(And everyone wins because they all had a lot of fun and learned about bees!)



