

## **Be the Bee Game Instructions - K-2**

**Grade level:** K-2

**Subject Areas:** Environmental Education, Science

**Duration:** two 20-minute sessions

**Group Size:** any

**Settings:** space to run (indoor/outdoor)

**Conceptual Framework Topic Reference:**

**Key Terms:** pollination, food, environment, bees

**Objectives:** Students will (1) be able to recognize what pollination is and (2) know how pollination is accomplished.

**Method:** Students pollinate the flowers in various assemblages (clusters or spread) and understand “natural barriers” that can affect their success (predators, pesticides)

### **Materials:**

- Paper plates: between 10-20 plates (you can decorate as necessary- tissue paper, markers, paint, etc.)
- Students: 7-30

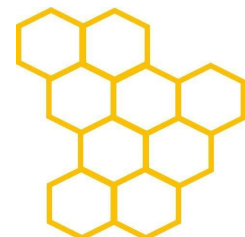
### **Background:(how does it work/specialization; what does it do; barriers)**

Prepare cards that have foods pollinated by bees (blueberry, raspberry, strawberry, chocolate) and foods not pollinated by bees, but by other forms like wind, water, other animals (oats, corn, etc.) Talk about how pollination is necessary for many of the foods we enjoy, and without bees we would be stuck only eating the wind pollinated foods.

### **Procedure:**

#### *Before the Activity*

- Teach how pollination works and the effects: Pollination is the transfer of pollen to a stigma, ovule, flower, or plant to allow fertilization. Talk about how pollination works. Show the image of a pollen grain and how it creates a fruit but must first be brought to the flower.
- Talk about why bees pollinate: they use the pollen for food for their babies (larvae) and some of it falls off onto flowers and fertilizes it.



### Game Specifics:

- There are two groups of players; “bees” and “predators”.
- The point of the game is for the predators to get as many bees as possible.
- The bees have to pollinate every flower (center of the plate) with their foam balls (pollen) and return to the hive (safe zone) without being tagged by a predator.
- When a “bee” is on a flower, it is safe from predators as long as it is touching the plate.
- When a bee is tagged they are now done with the round and must sit out.
- The bees and predators must be clearly marked, as well as the hive and any pesticide zones.

**Notes:** You can change up the placement of flowers to show how hard it is for bees when habitat is spread out. Close groups of flowers are easier to pollinate.

### Evaluation:

1. Have students explain how pollination works: correctly showing that pollen has to go from one flower to a separate flower using a vector (bee, bat, beetle, butterfly, wind) in order to produce fruit.
2. Have students talk about how easy it was to pollinate groups of flowers versus individual lone flowers on the landscape, and how that would be for a tiny bee. Explain the larger implications of habitat health (if the flowers were miles away and not connected with any corridors).
3. Explain how the pesticides would affect a bee/other organisms, their health and mission to find food.

