Pollinators and Flowering Plants

Bee-come a pollinator

Age: 7–14
Topic: PE and Biology
Time: 30–45 minutes

What should learners already know?

- One way in which pollen can be transferred from plant to plant is via insect pollination.
- Certain types of insects perform this role, and they are called pollinators.

What equipment will I need?

- Biodegradable coffee cups
- Cardboard tokens
- Optional: timer

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Did you know:

There are six groups of pollinator; bees, wasps, butterflies, moths, flies, and beetles.

How can we show the learning?

- Explain to children that pollinators drink nectar for energy and eat pollen as a protein source. Pollen is especially important for feeding pollinators' young, which are called larvae. Pollination occurs when pollen is transferred from one flower to another. This is a vital process for humans, but it is important to view it from the pollinator's point of view, as we did today!
- Why did the honeybees collect less pollen than the bumblebees? Because bumblebees are hairy, so lots of pollen sticks to their hair when they visit flowers. Honeybees are less hairy, so can carry less pollen.
- Challenge children to think of reasons why bees need to return to the nest so often. This is because they need to feed young and can only carry a certain amount of pollen on their bodies.

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Did you know:

1 out of every 3 bites of food we eat depends on pollinators.

How will learners explore this?

1. Declare one area of the playground to be a 'flower' and place a pile of tokens ('pollen') here.
2. Split the class into groups of 3–4 children, and assign each group a 'nest'. If space allows, each 'nest' should be roughly 15 meters from the 'flower'. Ask children to line up at their nest. Each child is a 'bumblebee'.
3. First run a 'fair game'. Each group is given one biodegradable coffee cup. When you say 'GO!', the first 'bumblebee' will run out from each nest, collect as many tokens as possible in the cup, and deposit them back in the nest. They then must pass the cup to the next 'bumblebee' in their nest.
4. Children must repeat the task with each 'bumblebee' until 3–4 minutes is up, at which point any tokens not at the nest are lost. Count up the tokens at each 'nest'. The one with the most 'pollen' wins!
5. Now run an 'unfair' game. Put all of the tokens back in the nest pile.
6. Half of the groups are assigned to be 'honeybees'. This means that their cup is taken away, and they must collect tokens from the 'flower' just using their hands. This is to reflect the fact that honeybees are less hairy than bumblebees, so can carry less pollen.
7. Repeat the game as above. This time, when 'honeybees' return to their nest, they must deposit their tokens then tag the next 'honeybee' in their nest to allow them to go.
8. Once the 3–4 minutes are up, count the number of tokens at each nest once more. Compare the amount of tokens at the 'bumblebee' nests to the 'honeybee' nests. Are they different?

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