Lesson 9 Positive Pollen

Learning Outcome:

To investigate how static electricity helps pollen to move from flower to bee and bee to flower

Teacher information

When a bee moves its wings during flight, it builds up a positive charge - just like the static electricity your body builds up when you rub a balloon against your hair or run in nylon socks on the carpet.

The air around a flower is negatively charged.

When a bee lands on a flower, the positively charged pollen on the bee's body is attracted to the flower stigma, while the negatively charged pollen on the flower's stamens is attracted to the bee's body..

To simulate how this works run the experiment below.

You will need:

An empty plastic CD case

Paper dots from a hole punch - the pollen

Coloured paper flower

Balloon (or another way to make static electricity, e.g. A comb) - the bee

Student Activities

Put your paper flower in the base of your CD case.

Put the paper dots from the holepunch into the CD case on top of the flower. Close the case.

Now it is time to generate some static electricity to positively 'charge' your bee. Rub the balloon on your head (or comb your hair orrub your feet up and down on the carpet).

Move the balloon (the bee) over the CD case. Watch the paper (the pollen) move towards the positive charge.

Scientists say that bees can detect the charge in the air around the flower. Flowers that have already been pollinated and have had their nectar foraged have a stronger positive charge. That way bees know that that flower has less nectar and can choose another flower to forage from.

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