

Classroom Activity

10 Big Question: How can we feed the world sustainably?

Pollination and colour preferences of bees

Bees see very well in the UV, blue and yellow part of the spectrum. They cannot see red, it is like black to them (i.e. it has no colour). You can get an idea what a bee sees by taking a look at this article: www.dailymail.co.uk/sciencetech/article-473897/A-bees-eye-view-How-insects-flowers-differently-us.html

Most bee pollinated flowers are yellow or blue. White bee flowers generally reflect UV, which we cannot see. Many white flowers are moth pollinated and smell in the evening, such as frangipani. They do not reflect UV. Red flowers are mostly bird flowers.

You will need:

- White, blue and yellow plastic plates (red would also be nice if you can find it)
- Dishwashing detergent
- Forceps for handling your specimens
- Vials and labels
- A microscope

Place yellow and blue plastic plates containing water and a few drops of dishwashing detergent outside on a beautiful day. Place in full sun, but out of reach of other animals. In the evening, for each plate collect the insects you find into a separate vial. Make sure to label them with the correct plate colour. Look at the bees and flies you collected under a microscope.

Did one colour catch more bees than another colour? What about flies and wasps? The cotton flower changes colour from white to red after it is pollinated. Why do you think it would do that?