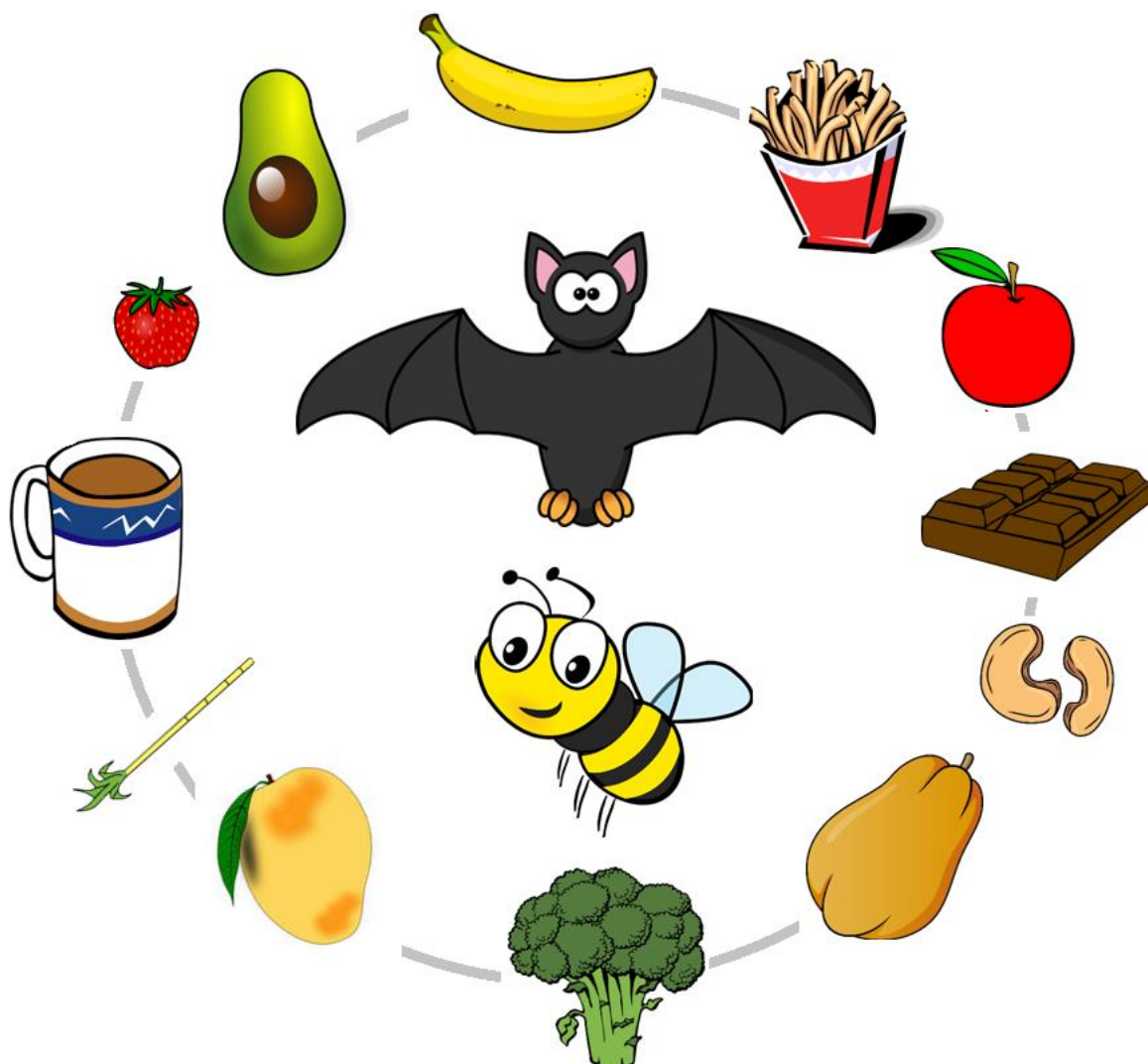


Pollination

The bats and the bees

Bats and bees are responsible for the pollination of most of our food. Can you match the pollinator to **all** the foods they pollinate? (hint: some may be pollinated by both bats and bees)



Key stages 3- 5

30 mins + presentations

Problem:

Neonicotinoids or "neonics" are pesticides sprayed on food crops to poison pests. However, they harm other, non-target species, including bees. Neonics are **sublethal**: they don't kill bees, but they make them forgetful. They can get lost and forget how to get home, forget to eat, or forget to look after their babies (larvae).

Without bees to pollinate some foods like chocolate, they could become "luxury items" and get very, very expensive. **Explain how this could create a sociological divide between groups of people.**

Organic farming (using no pesticides at all) requires more land for the same volume of produce. This can negatively impact bees too. **Suggest how.**

Easy: What The evidence that neonics increase the yields or cost effectiveness of food plants is limited. So why do you think farmers keep using them?

Hard: How can we motivate farmers to stop using neonics?



More reading:

<https://www.envchemgroup.com/neonicotinoids - updated.html>

Key stages 3- 5
30 mins + presentations

Challenge: Design a campaign to persuade farmers away from neonics.

Think about:

What scientific facts will you use?

What media will you use to communicate with farmers (e.g. face to face meetings, groups, individuals, written resources, online tools)?

What is your overall aim (e.g. to get rid of neonics, to replace them, or to reduce them)?

Key stages 3- 5

30 mins + presentations

How can you motivate them to make positive changes (e.g. new technology, grants, positive marketing...)?

How big will the impact be if the farmers take up your solution? How many farmers do you predict will take up your solution?

How long will your campaign take and how long before the environment sees the benefits (you may want to do some research)?

Prepare a "Dragon's Den" style oral pitch to convince a policy maker to choose your campaign. Present your pitch to your class or family, and listen to those of others. Hold a vote to see which solution is the most popular.

Key stages 3- 5

30 mins + presentations

Images:

<https://freesvg.org/chocolate-bar>

<https://freesvg.org/big-strawberry>

<https://freesvg.org/avocado>

<https://www.wannapik.com/vectors/7702>

<https://freesvg.org/red-apple-with-a-green-leaf>

<https://freesvg.org/1549573909>

<https://pixabay.com/vectors/cane-sugar-sugar-cane-plant-nature-42264/>

<https://publicdomainvectors.org/en/free-clipart/Mango/41838.html>

<https://publicdomainvectors.org/en/free-clipart/Tea-or-coffee-cup-vector/3537.html>

<https://www.maxpixel.net/Nuts-Cashew-Food-Nutrition-Healthy-Organic-Diet-5981774>

<https://freesvg.org/vector-image-of-broccoli>

<https://www.maxpixel.net/Ripe-Papaya-Fruit-Papaya-Healthy-Food-Eat-Fresh-5548155>

<https://publicdomainvectors.org/en/free-clipart/Cartoon-bat-with-scary-eyes-vector-illustration/15262.html>

<https://pixabay.com/vectors/honey-bee-flying-insect-honeybee-311047/>

Answers:

Bees pollinate:

chocolate

tea and coffee

broccoli

squash

potato

strawberry

sugarcane

apple

avocado

cashews

Bats pollinate:

mango

banana

avocado

cashews

Key stages 3- 5

30 mins + presentations