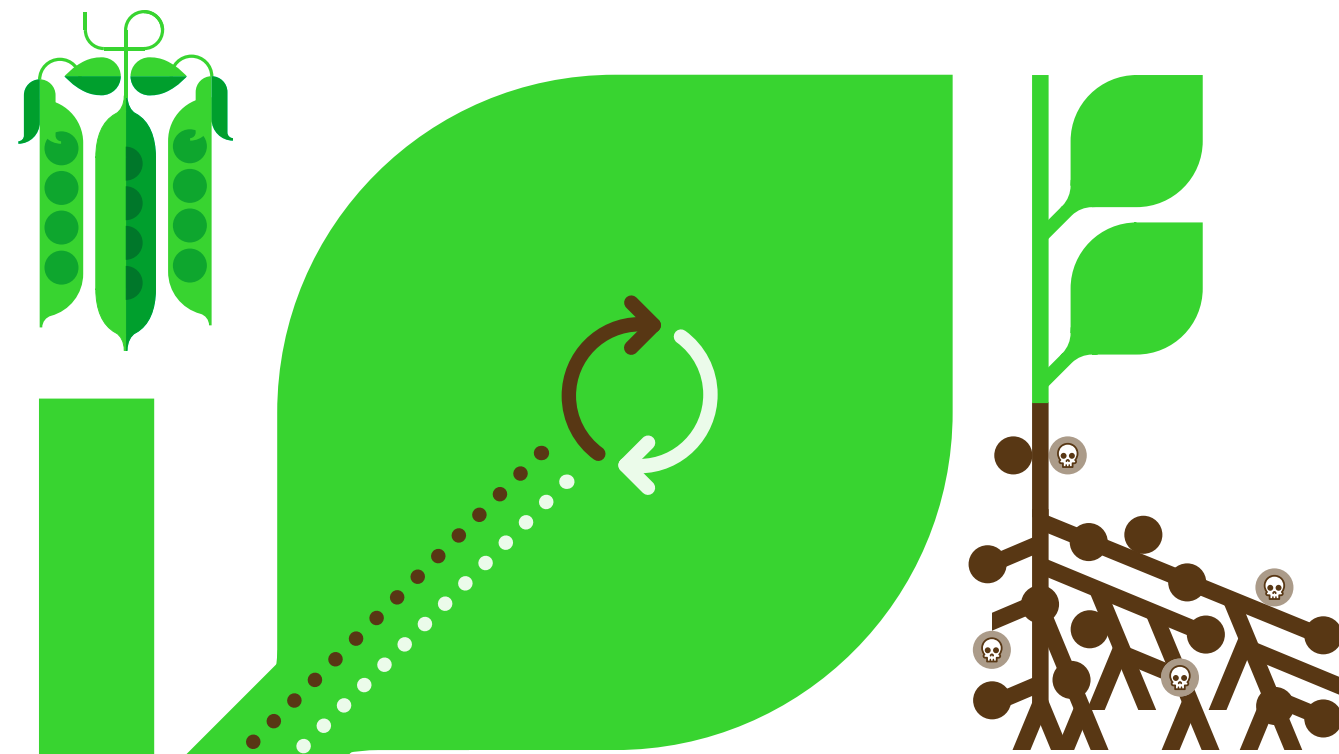


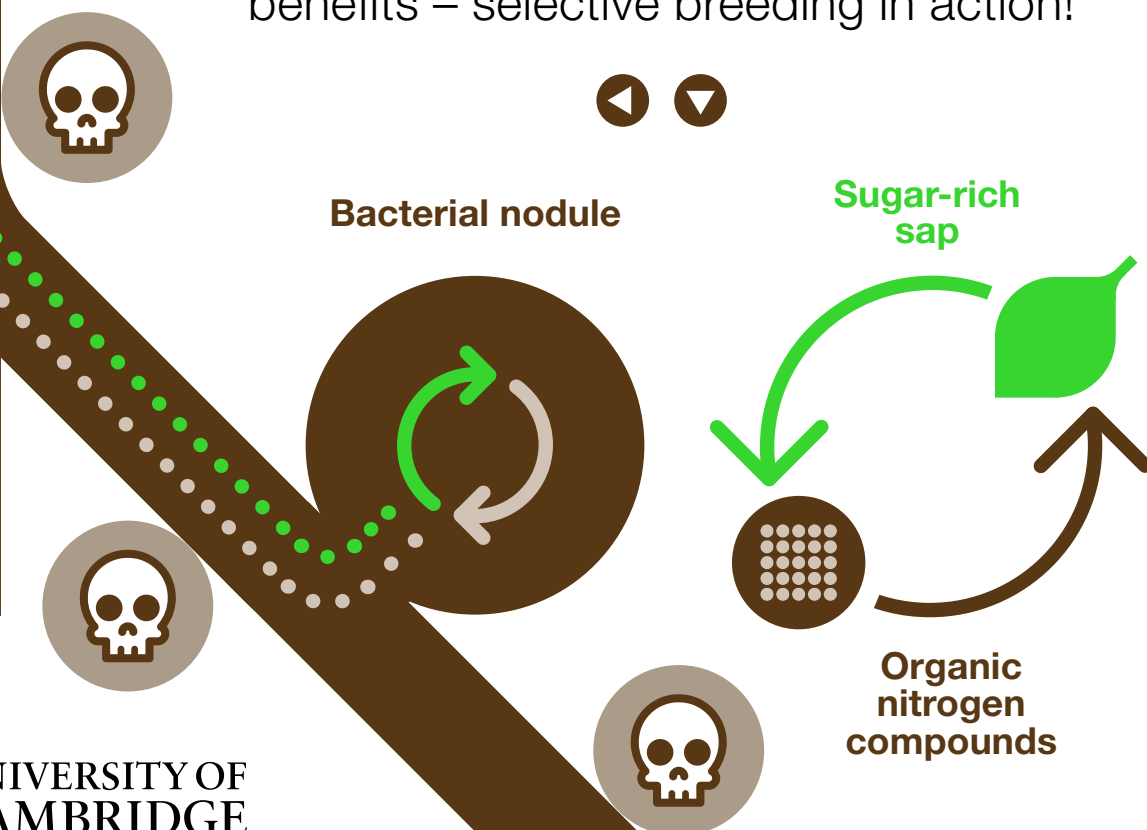
PlantPower Amazing plants

Plants interact with the world around them in remarkable ways, manipulating other organisms like insects and bacteria, and even cleaning up the environment.



Breeding bacteria

Legumes such as clover, peas and beans have nodules on their roots, full of bacteria producing the organic nitrogen compounds the plants need. In exchange they get nutrients from the plant. To select the best bacteria, colonies producing lots of nitrogen compounds are rewarded with extra sugar-rich sap. Less productive bacteria are starved and die off. The plant only shares its sugar with the bacteria providing the most benefits – selective breeding in action!



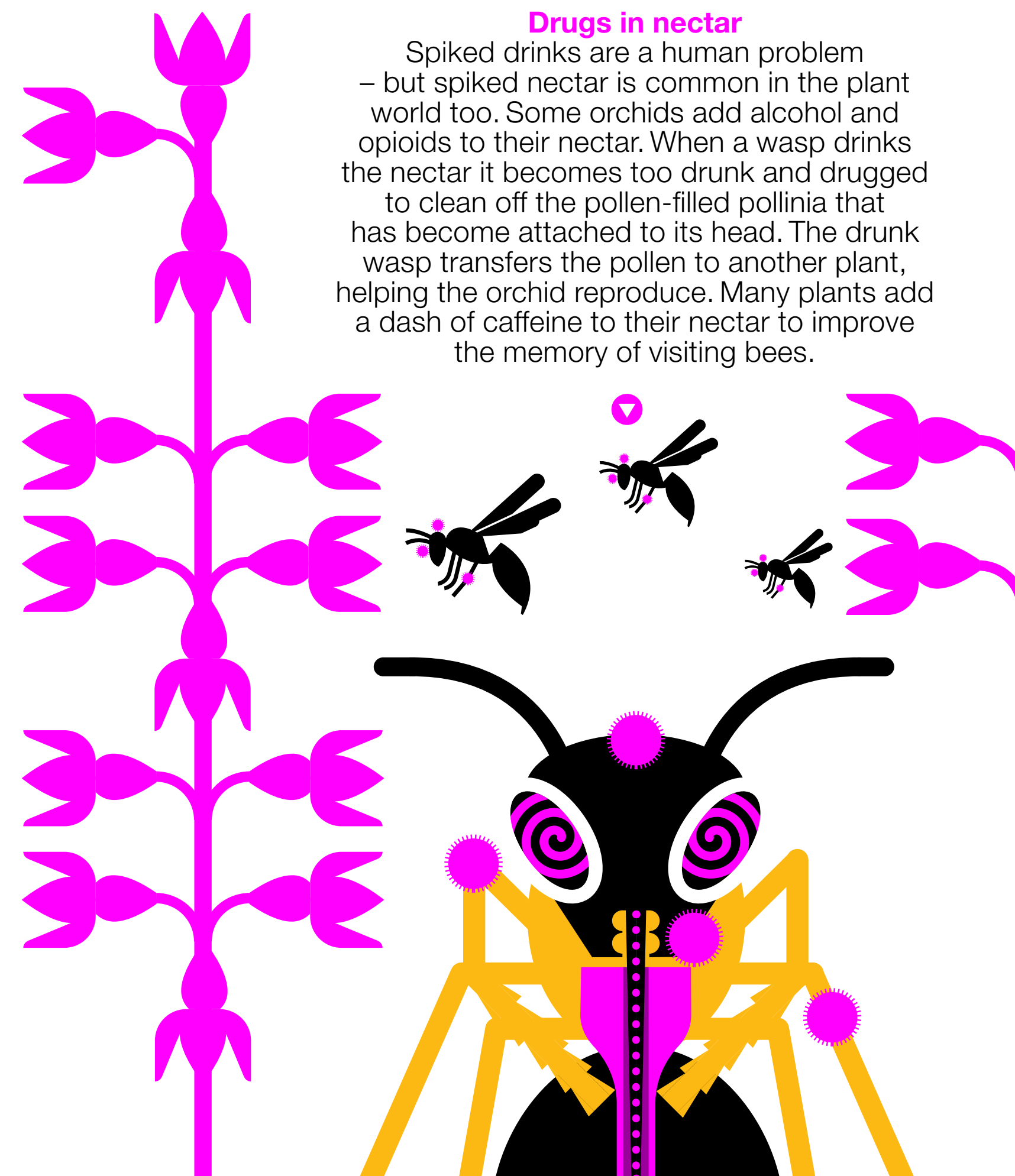
UNIVERSITY OF CAMBRIDGE



Cleaning up explosives

Huge areas of land around the world are contaminated by toxic explosives from military activities, mining and construction. This land can be too dangerous to even walk on. Scientists have produced gene edited plants that can remove the explosive residues, using them like a fertiliser for their growth!

CO₂

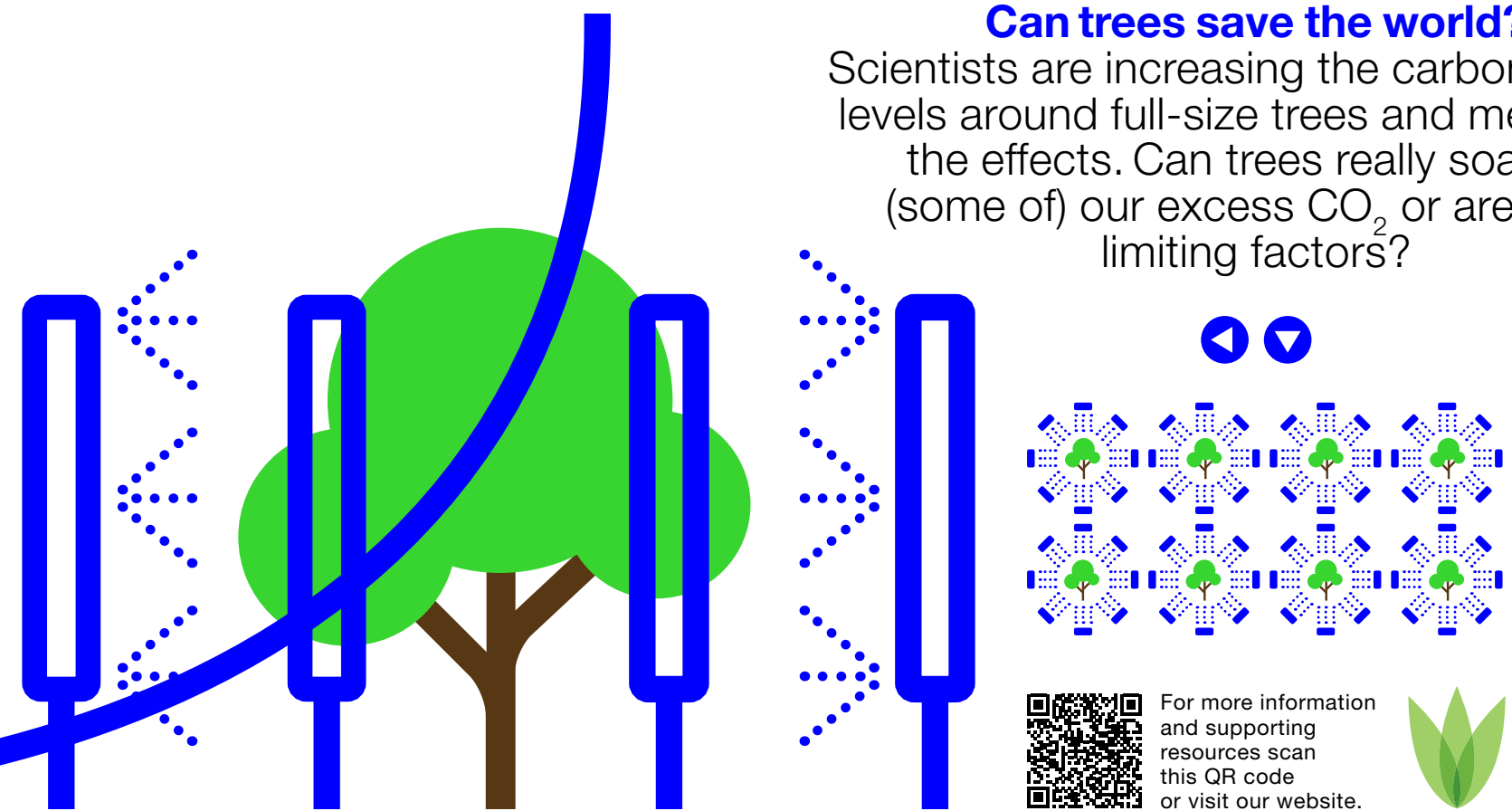


Drugs in nectar

Spiked drinks are a human problem – but spiked nectar is common in the plant world too. Some orchids add alcohol and opioids to their nectar. When a wasp drinks the nectar it becomes too drunk and drugged to clean off the pollen-filled pollinia that has become attached to its head. The drunk wasp transfers the pollen to another plant, helping the orchid reproduce. Many plants add a dash of caffeine to their nectar to improve the memory of visiting bees.

Can trees save the world?

Scientists are increasing the carbon dioxide levels around full-size trees and measuring the effects. Can trees really soak up (some of) our excess CO₂, or are there limiting factors?



For more information and supporting resources scan this QR code or visit our website.

Science & Plants for Schools

saps.org.uk/amazing