'Buzzing Lifelines': The Vital Role of Bees in Sustaining our World

Aim:

To investigate bees in a bee hive, observe how they work together and the vital role they play in sustaining our world. This will be done by taking photographs of bees in a productive, working bee hive.

Method:

An iPhone 15 Pro Max was used to capture these photographs. Photographs were taken at Haileybury College in Berwick. These photographs were edited using the website, Befunky.com in which tools such as cropping, highlighting and altering exposure were used.

Scientific Content:

Bees are found all over the world. There are lots of different species and they are essential for our existence, sustaining farming and biodiversity worldwide. Due to colony collapse disorder and human activities, such as habitat loss, pesticides and climate change, bees are slowly disappearing.

In a hive, there are many jobs and members are divided into three types. Worker bees can be males or females and they search for food, build, and protect the hive, clean, and circulate air by beating their wings. The queen's job is simple – she lays the eggs that will spawn the hive's next generation of bees. Drones are only male bees that have only one job, which is to mate with the queen. They don't work, don't make honey and can't sting. Most drones won't even get the chance to fulfil their role, so the drones will get kicked out of a hive during winter because all they do is eat the food supply. All members must work well together to ensure they have a productive hive because a third of the worlds food production depends on bees.

Bees are a key part of the global food system and pollinate 75% of our food crops. Air pollution can mask scent molecules from plants, which mean bees need to forage longer and become less effective pollinators. Worker bees usually only live for 10 days and keep searching until they die. They can travel up to 800km until wings give out. It is clear that bees play an important role sustaining our world and we don't want them to disappear.

References/Acknowledgements:

135 Amazing Bee Facts: History, Anatomy, Legends, And More

https://bestbees.com/2023/02/08/135-bee-facts/

Date Accessed March 2024

The Honey Bee *Apis mellifera*: An Insect at the Interface between Human and Ecosystem Health

https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8869587/#:~:text=Apis%20mellifera%20Linnaeus%20(1758)%2C,of%20vegetables%20and%20fruit%20products.

Date Accessed July 2024

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Original Photographs taken with an iPhone 15 Pro Max: