



John Muir Project

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Hedgehogs

EXPLORE

One evening I noticed my two dogs sniffing around the garden following a scent, eventually they stopped at the edge of the patio in front of a hedge. They had discovered a baby hedgehog, a hoglet. It was the first time I had seen a hedgehog on my garden. I had no idea that they lived in the same space as I did!



I hadn't seen where it had come from and did not know where it was heading but it had curled up into a ball so to keep it safe I placed an up turned box over it as a makeshift shelter until it felt safe enough to uncurl and be on its way. I also placed a saucer of milk under the box.

DISCOVER

Hedgehogs are named due to where they find shelter and build nests in hedges and bushes and due to the snorting sounds they make, they are called hogs!

Hedgehogs are nocturnal animals, they sleep in the day and come out at night.

They can spend up to 18 hours a day sleeping!



Hedgehogs have spines which cover their back and sides. There are approximately between 5,000 and 7,000 spines on an adult hedgehog!

A hedgehog also has a small tail which can be difficult to see under his spines.

Hedgehogs curl into a ball when they are scared. The dogs sniffing him had sent him into self-protection mode where they curl into a ball to tuck their heads under themselves to keep their most vulnerable parts, their heads and their stomachs covered. While the spines on the outside of their bodies stick out as self-defence.

Hedgehogs will snack on berries and fruit although they mostly like to eat bugs and insects especially beetles, worms and caterpillars.

They are known to be a gardeners best friend as they eat slugs and other insects that may damage plants and flowers in gardens.

Although, whilst eating slugs they may come across slug pellets which gardeners use as a slug deterrent. These pellets are harmful to hedgehogs so should be avoided when possible.

Hedgehogs will hibernate throughout the winter from November and will not reappear until mid-March when food supply is more readily available to them.

Hedgehogs are lactose intolerant, so therefore cows Milk can make them ill and cause sickness and diarrhoea. The best thing for them to drink is water.

CONSERVE

Following the discovery of hedgehogs in my garden I decided that I would conserve my nocturnal visitors. The RSPB gives examples of how we can help hedgehogs to live in our gardens. Building homes for them now can keep the hedgehogs safe from predators and can be somewhere for them to hibernate between October and April.



I found an old plastic tub and a small piece of old guttering. I placed the tub upside down into a hedge within my garden.

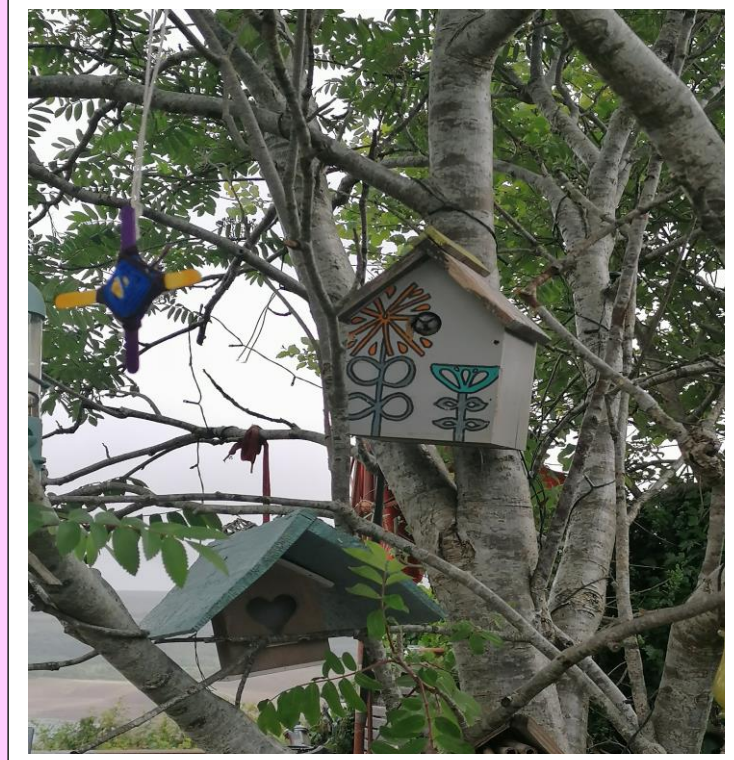
I cut a hole into the side of the tub to push the pipe into as a way of entry inside for the hedgehogs. I placed dry leaves and grass inside for warmth and covered the tub with branches and leaves for cover so that the tub will be camouflaged from predators to keep the tub a safe place for the hedgehogs to live.

We can also encourage hedgehogs by supplying them with food sources. Insects live in long grass and around flower beds by encouraging grassy areas in our gardens we can give the hedgehogs a food source as well as a natural cover from predators.

Insects also like to live in log piles and garden waste such as leaves and sticks, so leaving these in places around our gardens can also provide food and cover for hedgehogs.

Garden Birds

EXPLORE



I went for a walk around the garden early this morning, it was very quiet, and I could hear faint bird tweeps. I remembered an old bird house in one of the trees within my garden. I discovered there was a nest inside the bird house and the tweeps were coming from there!

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I could see some of the nest materials sticking out of the bottom of the Bird house. I always brush my dogs in the garden, and I could see dogs hair in the nest! There was also straw in there and leaves.



I also discovered other nests that were hidden throughout my garden. This proved to me that there were lots of birds making their home here. I could clearly see that the nests were made of different materials.

DISCOVER

I discovered that the birds that were living in my bird house were Great Tits. At first, I thought they were Blue tits. But on investigating, realised that although they are both similar there are some features that tell them apart.



Great tits are known to have yellow bodies with a black line down the middle of their chests. They also have black heads and white cheeks.



These pictures above are of the chicks on one of their early flights. The colour on their head is not as dark as their parents.

A female bird Great tit can lay anything between 5 and 11 eggs. The male is called a cock and helps to feed the chicks. The most dominant males will have a thicker black stripe down their center. There are around 2 million pairs of Great tits in Britain and there are 30 different species of Great tits!

CONSERVE



To ensure that the birds remain constant visitors to my garden I decided to pledge to keep a constant supply of food available for them. I made bird feeders out of willow and hung fat balls within them. I also filled bought bird feeders and filled them with nuts and seeds. I also plan to look into ways to provide other food sources and aim to recycle household objects into feeders in the future.

Bumble Bees

EXPLORE

After discovering sights and animals that were in my garden I decided to use another of my senses today and sit in the garden and use my ears to listen to the sounds to hear what noises were sharing my garden with me.

Within seconds of closing my eyes I could hear the birds tweeting and singing, Followed by a buzzing noise. I opened my eyes and flying around the honeysuckle bush by the side of me was a bumblebee!



I watched intently as the bee busily flew from flower to flower, hovering around, disappearing inside some of the petals to collect the pollen that was inside the flower. I quickly took some photos and was able to zoom into the picture to have a closer look at the little creature. [_](#)



I could not believe my eyes, when I zoomed in, I could see that the bee had little hairs all over its body and amazingly you could see the pollen stuck to the bees' body hair.

I had never seen a bee this closely before.

Technology had enabled me to see in detail, this amazing little creature at work.

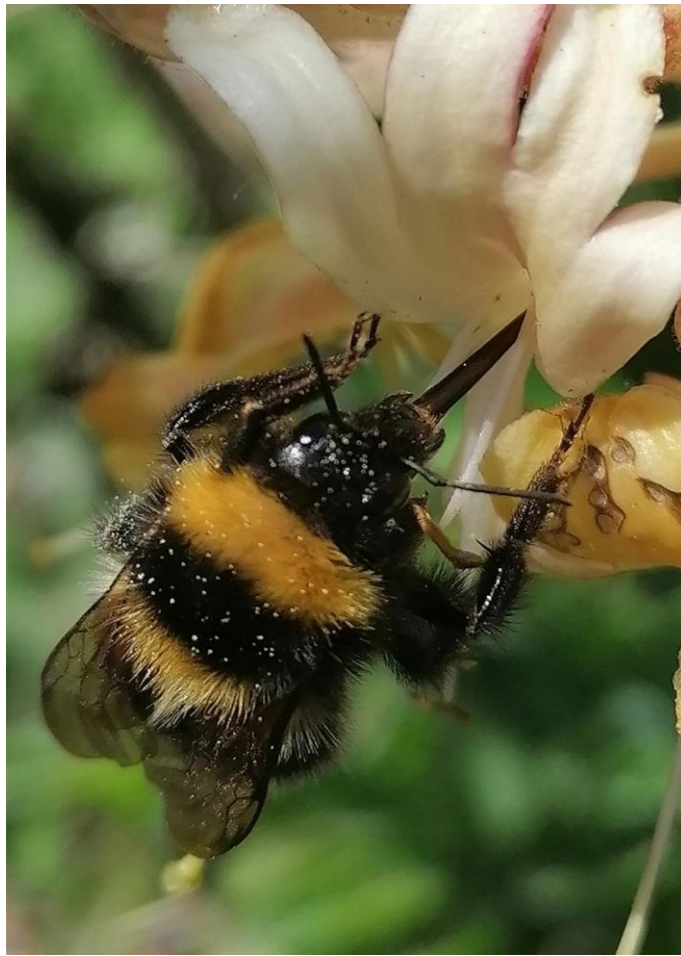
DISCOVER

There are 24 species of bumble bee in the United Kingdom.

The bumble bee that I discovered in my garden was a White-Tailed bumble bee. These bees are identified by their yellow and black striped body and their white tail.



Being able to zoom in on a picture helped me to be able to identify the white tail. These types of bees are the most common and can be found in most places feeding on pollen from flowers to brambles. They are also one of the first bees to come out of hibernation. They can be spotted as early as February.



The bumblebee that I saw in my garden was a female. It was a queen bee. Queen bees collect pollen on their body to take back to the hive.

A male white-tailed bumblebee has bright yellow hairs on its face.

In this picture, the bee is sticking her tongue into the honeysuckle to reach the nectar inside the flower. The sugary nectar provides carbohydrates for the bee and the pollen provides vitamins, minerals and fats which are essential for a bee's nutritional needs.

Bees fly from flower to flower collecting pollen and taking it to each flower they land on. This is called Pollination.

This process of Pollination is essential for the cycle of plants to reproduce. A plant that has been fertilized through pollination will produce seeds that will eventually become the future flowers for the future bees to continue the cycle of pollination!



I also discovered red-tailed bumble bees within my garden. This particular red-tailed bee is a female due to her black wings. Males have 2 yellow bands on its thorax and one on the abdomen. These bumble bees are common and can emerge in spring until autumn. Red-tailed bumble bees' nest in holes in the ground, under stones or in holes in walls. This species is very important in pollination.

CONSERVE

Unfortunately, over many years, numbers of bees are declining. The use of chemicals and destruction of green areas have contributed to the loss in numbers of bees. There are lots of things we can do to save bees from becoming extinct.

Within my garden, I decided I was going to try and take steps to help the bees to survive and thrive.

I bought seed packets of bee attracting flowers. I dug a border in a sunny area of my garden and sprinkled the flower seed all over the freshly dug ground.



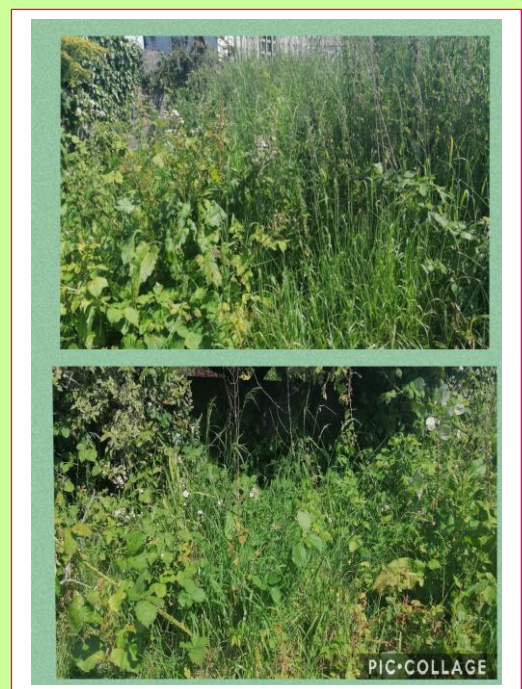
Hopefully, within a few months, this border will be full of flowers which will attract bees and provide a source of food and nectar for the insects in my garden.



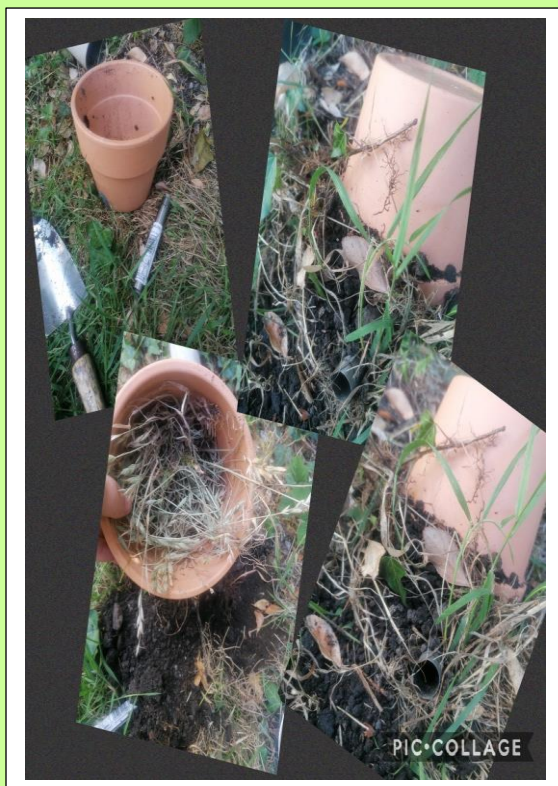
I also chose to let the wildflowers grow around my garden, there are lots of fox gloves which the bees frequently buzz around and fly into.

One corner of my garden I decided not to mow and leave it to grow long and wild. In addition to helping the hedgehogs it would also provide cover and a source of food and pollen for the bees.

These areas are called 'pollinator lawns.' Usually left to grow wild with the opportunity for all plants to grow within them. Bulbs and herbs can be planted within the area to provide a further food source for the insects that live within it.



Bees also need somewhere to nest and hibernate, so I bought an insect house. Houses need to be in a sheltered space in the garden I also chose to create my own bug den out of an old terracotta pot filled with dry grass and with a small pipe for the bees to enter safely. I then dug this into the ground as



White-tailed bumble bees like to make their nests underground or in holes or little burrows often left behind by mice in the ground.

They can hibernate in these nests for up to 6 months. When they awake in spring they will need to feed, so placing a nest near flowers can provide pollen and nectar for the bees.



With the aim of become more sustainable, myself and my family decided to grow some vegetables. I attained a water butt to recycle rainwater to water the plants. I also recycled parts of trees trunks to use as borders for the plants and to make vegetable beds. I was gifted wooden beds which will also be used for vegetable beds.

SHARE

These experiences that have been undertaken in the John Muir award can be shared to encourage an interest in nature, the world around us and sustainability.

We can share these ideas with our family, friends and in our school settings.

Children can be encouraged to participate in the tasks and involve parents by setting home tasks involving recycling, identifying plants and animals, sustainability and nature.

Parents can be encouraged to upload ideas and pictures of the completed tasks onto the school's social media pages and bring in work to show friends and teachers.

This can then be expanded throughout the setting for a whole school approach to share the John Muir experiences even further. Older children can get involved and can undertake the award themselves and again, share their experiences to spread their newfound love of nature and the world around them.

I have shared my experiences through social media and have shared my pictures with friends and family. I also aim to share my scrapbook with children within my class and also plan to show my experiences with the schools eco warriors and encourage them to undertake the John Muir award.

Bumble Bee action song

(Tune: I'm a little teapot)



I'm a busy bumble bee

Buzzing around

Bbzzzz bbzzzz, can you hear my sound?

My busy, busy wings and my stripy back

You'll know who I am because I'm yellow and black!

I'm a busy bumble bee,

Buzzing around.

Bbzzzz bbzzzz can you hear my sound?

Flying through the flowers,

Happy as can be, collecting yummy nectar to make
honey!