

Sustainability in the Early Years

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The Fendrod Lake



Discover and Explore

The Fendrod is an area that I have visited for many years with my young nieces and also for jogging. In all that time I never stopped to take a look around at the abundance of wildlife and insects that live there. The Fendrod Lake is a well-known landmark situated in the centre of Swansea enterprise park popular with fishermen, families, joggers, and dog walkers. The site covers over 13 acre of land, the lake itself is home to many species of fish including Carp, Perch, Tench, Roach, Rudd, Bream and Koi. The landmark was originally designed as part of the flood defence scheme, but has since become a recreational area, this is largely due to Swansea Council and Natural Resources Wales for providing help to develop the area that the site looks the way it does now.

The lake is also home to a variety of bird life including Canadian Geese and as the name suggests these birds are not native to the United Kingdom. Canadian Geese were introduced to the United Kingdom from North America in the 17th century and are now well established in the wild with an estimated population of over 190,000. Canadian Geese partner and mate for life, they often nest close to a water source this enables them to dive for food and elude predators. Canadian Geese produce up to six eggs in a single brood between march and June. During the spring and summer months Canadian Geese feed on grass and sedges and seeds and berries during the colder months all of which need water to grow and flourish. Canadian Geese also contribute to the ecosystem, the seeds from the plants they eat are deposited in the soil when they defecate which in turn contributes to soil fertility by adding nutrients.



Whilst exploring the area I noticed the different species of insects that call the Fendrod home. Woodlice are crustaceans, they live in colonies and set up home in dark damp places, particularly where there are decaying plant life, in dry soils woodlice dry out quickly and die. The majority of

water however, but have gills like fish through these gills water to function. recyclers as well as vegetation woodlice leaves and decaying beneficial in compost improvers. Essentially collectors to the soil growth would be have limited access to



crustaceans live in woodlice live on land that they breathe need a thin layer of Woodlice are natures feeding on decaying feed on mould growth, wood, they are heaps and as soil woodlice act as waste without woodlice plants reduced as they would nutrients in the spring.

I also noticed a variety of spider life in and around the area. These are a few that you can spot at the Fendrod. Spiders eat up to four times per day and like to set up home near water sources because it attracts their prey. Although Spiders get most of their water intake from their prey, they do also drink water accumulated within their web and the vegetation from the morning and evening dew and from puddles of water formed on the ground. Spiders are an essential part for the ecosystem as they control numbers of other insects that can destroy plants in the wild and regulate the crops for human consumption. Spiders are a key element in the food chain acting as predator keeping reducing insect population which helps control the spread of disease. They also serve as prey for birds and other small animals.



Orb Weaver Spider



Golden Orb Weaver



Zebra Spider



Orb Weaver Spider



Daddy Long Legs

There were also a number of Bees in and around the Fendrod that I saw flying from plant to plant. Bees are pollinators which means they help plants to grow, breed and produce food by transferring pollen between flowering plants fertilising them. Bees have an important role as the plants we need for food rely on pollination, particularly by bees.



Due to this pollination we can enjoy foods from apples and pears to coffee and vanilla. Bees gather pollen to feed to their young, the tiny branch like hairs on their legs and bodies collect the pollen as they fly from plant to plant. The scabious bee is the United Kingdom's largest mining bee. A preferred habitat for the scabious bee is open grassland as they rely on the pollen of small scabious that grow there to feed its young. Aside from honeybees there are approximately 24 species of bumblebees and 240 species of solitary bees within the United Kingdom.

Over the 13 acres of beautiful landscape that the Trees not only provide habitats for nestling for us to breath, contribute to the prevention rainwater entering watercourses and store in the prevention of climate breakdown. remove harmful co2 by trapping the harmful converting it into breathable oxygen, this



fendrod spans I discovered an array of trees. birds and mammals they also provide clean air of flooding by reducing the amount of harmful carbon which is extremely important Trees are essential for the ecosystem, they fumes in their bark and branches and process is called photosynthesis. There are



over 20 species of trees and shrubs in the United Kingdom that are known to have medical properties such as oil from the bark of a birch tree contains antiseptic. It is thought that trees can cool the air by up to 7 degrees within cities, as trees lose moisture, they channel heat upwards from their leaves. Lichens are organisms that are formed by the interaction between a fungus species and predominantly an alga. Lichens play an important role in the ecology of woodlands as they provide microhabitats and food for small invertebrates and house parasitic fungi. Like trees Lichens also recycle carbon and retain water.

Bumble the Bee was a very happy Bee.

He loved being outside playing with his friends.

One day Bumble decided to go for a walk in the park.



Along the way Bumble saw Sid the worm

“Hello Sid, would you like to come for a walk with me?”

“Oh, hello Bumble, thank you but I’m afraid I can’t. Its so hot today that the soil has all dried out”

“I don’t understand,” said Bumble

“Well, you see worms need moisture in our bodies and in the soil to survive and move easily, but the sun has dried it all up. I shall have to go home” said Sid sadly as he turned and left.

“Goodbye Bumble,” said Sid

“Goodbye Sid” said Bumble and he continued on with his journey.



Just then Bumble heard a rustling in the flowers ahead, it was Wallace the woodlouse.

“Hello Wallace, how are you? Would you like to come for a walk with me?”

“Hello bumble, I’m afraid I can’t, you see the sun has dried up the log I live in,” said Wallace.

“I don’t understand,” said Bumble

“Well, you see woodlice need moisture to survive. We live in damp environment; without water I get poorly and dehydrate. So, I’m off to find a new home, goodbye Bumble,” Wallace said as he turned and left.

Bumble continued on with his journey, feeling very sad that his friends did not want to play with him.

Just then Bumble heard a voice.....



"Hello bumble, what's wrong? Why do you look so sad?"

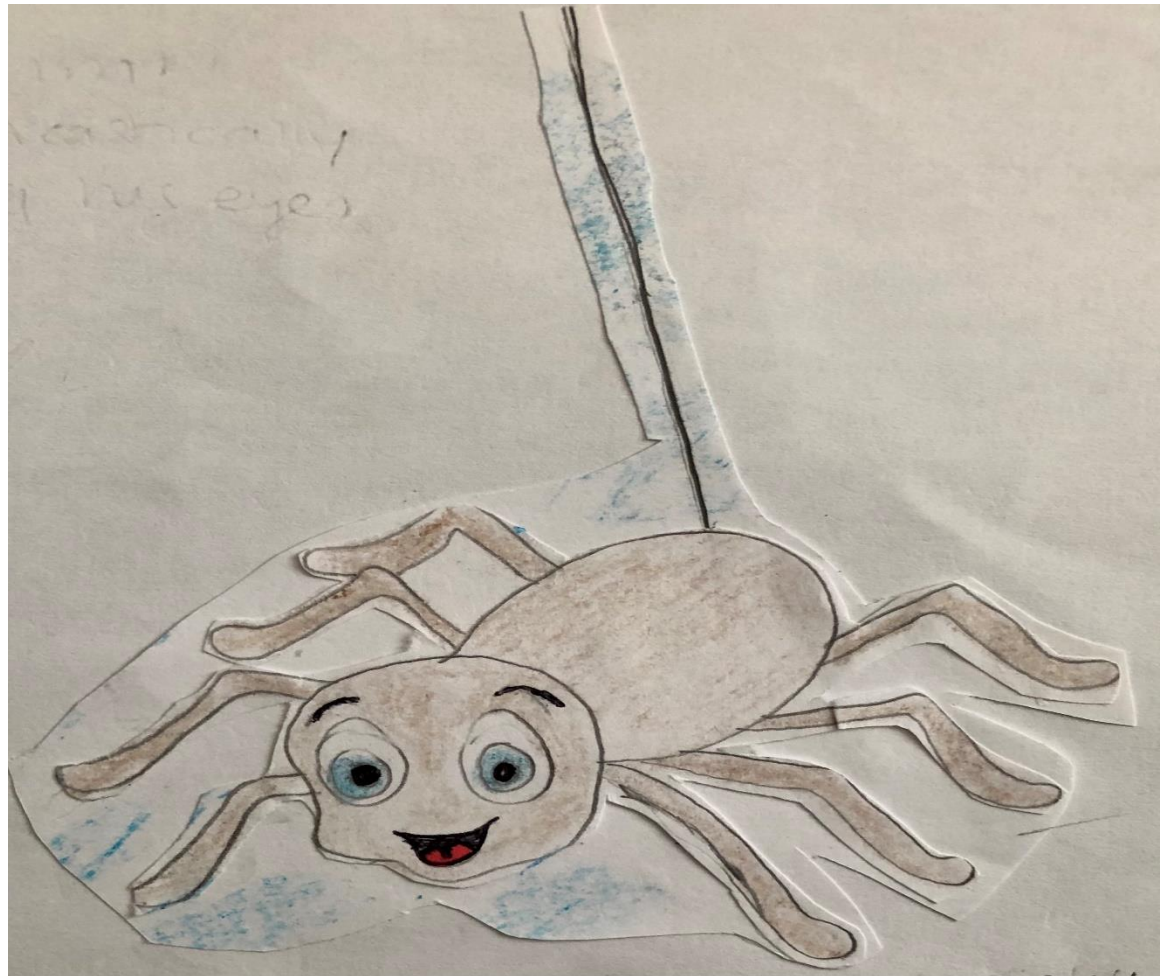
It was Sally the spider.

"Oh, hello Sally, I'm just sad because Sid the worm and Wallace the woodlouse made excuses, so they didn't have to play with me today, they said they needed to look for water," Bumble said rolling his eyes.



“Well, you know all living things need water to survive. Although I get most of the water I need from my prey I also need water to live. My particular favorite is the morning dew that I drink from my web, Mmm DELICIOUS!” Water is in short supply and is reduced every year, so it is important not to waste it. Did you know that 4.5 gallons of water is wasted every time we wash our hands and leave the tap running?”

“Hmm I hadn’t realised how important water is, thank you Sally” said Bumble as he continued on his journey



“What a wise spider, I’ve learnt so much today on how important water is for survival. We must all do our best to save water and reduce waste, by turning off the tap while brushing my teeth and washing my hands I can save water for the planet.



The End.

Conserve

Whilst exploring the Fendrod lake I realised the important role water has for all living things and the wildlife and insects that rely on the Fendrod lake for their survival. Humans, insects, wildlife, crops, and vegetation all need water to survive. Due to climate change the lakes are drying up it is importance to conserve water. Although, 97% of the world is made up of water of that 97% only 3% is fresh water and less than 2% is suitable for human consumption. This is reduced every year due to consumption and contamination. This triggered my enthusiasm for conserving and reusing water. I investigated possible ways for this by researching online and found an inexpensive water recycling unit that I can construct and place in my garden to recycle rainwater. This will enable me to water my plants, wash my vegetables and wash my car using recycled rainwater. Water recycling barrels enable over 100 gallons of water to be collected throughout the rainy seasons. I aim to construct this within the coming weeks.

Step 1: What is needed

1 large plastic refuse bin (The larger the better)

A tube of watertight sealant for plumbing

2 rubber washers, 2 metal washers

1 hose clamp

1 spigot



A drill and Landscaping fabric

Step 2: Start by using your drill to create a hole near the bottom of your barrel. This is where you insert your spigot. Use a drill bit that is a little smaller than or the same size as the spigot.



Step 3: Inserting the Spigot, place a metal washer onto the threaded end of spigot, then put a snugly fitting rubber washer over the threads to help hold the washer in place and prevent leakage.



Step 4: Next, apply a bead of waterproof sealant over your rubber washer and insert the spigot into the hole. Wait for the sealant to dry, then run a rubber washer, followed by a metal washer onto the threads of the spigot inside the barrel. Secure the spigot in place inside your barrel with the hose clamp. This is important because it will keep your spigot from coming loose from your barrel.



Step 5: Make entry and exit holes, by carefully cutting a hole in the lid of your rain barrel. This hole should sit under your home's

downspout, so the water runs right into the barrel. Cut the hole so it is large enough to accommodate the water flow from the downspout. Then drill a hole or two near the very top of your rain barrel. This hole will allow water to overflow.



Step 6: Seal the Top by Cutting a piece of landscaping fabric to sit over the top, then put the lid over the top of it to secure it. This will create a barrier that prevents mosquitoes and other pests from getting in your rain barrel water.



Step 7: Place Your Rain Barrel on a platform to help give more pressure when connected to a hose. Position the barrel directly underneath your downspout in a spot that is most convenient for you to use it. Then just wait for it to rain so you can enjoy the water and money savings.

