

Brent goes Wild



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Brent


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Brent Goes Wild is a partnership led by the **Young Brent Foundation** involving nine Brent based community organisations working with young people in the Borough.



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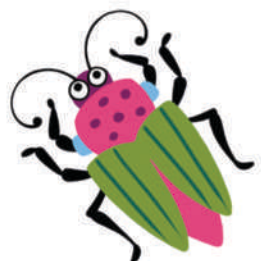
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THE PROJECT



BRENT GOES WILD is a 14-month partnership enabling children and young people aged 6-14, from backgrounds currently under-represented in science and natural heritage, to discover for themselves their innate capabilities for curiosity and experimentation.

The programme aims to **provide young people with the chance to explore aspects of STEM (Science, Technology, Engineering and Maths) in less formal settings** with the intent to ignite new interest and/or raise attainment in STEM subjects.



PURPOSE

The UK is experiencing a STEM skills gap and the evidence suggest that young people from disadvantaged backgrounds are less likely to engage in STEM subjects. This project aims to explore, challenge and demystify the ideas of STEM subjects and how it fits into our everyday life. Offering young people from disadvantaged backgrounds a greater opportunity to explore and discover STEM.

THE PROJECT SET THREE MAIN PRIORITIES:

- Increase health and wellbeing
- Provide participation and engagement activities
- Increase family awareness of STEM





HOW TO USE THE BOOKLET

The booklet is a tool to allow families, organisations and teachers to guide young people in learning about the environment and its connection with science.

The activities introduce concepts and stimulate explorations through learning-by-doing. They encourage participants to get to know the natural environment in their community, to find out the species that live around them, to establish a connection with the place they live in and to benefit from nature.

The activities are divided into 4 categories to make it easier to find them through this labelling:

EXPLORE

ART AND CREATIVITY

EXPERIMENTS

GARDENING AND POLLINATORS



All the activities have been implemented in Brent so you do not need to travel far to have a go at them.





KEEP SAFE

Exploring the natural world is a fantastic way to learn about nature, however it is important to take some precautions to ensure nobody gets hurt. Remind your group of the following guidelines:

PROTECT YOURSELF

Be careful when using sharp objects and electrical appliances. Children should be supervised at all times.

Don't look directly at the sun.

Don't taste things you find unless you are certain they are not poisonous.

Wear gardening or rubber gloves when handling soil.

Wash your hands after finishing an activity.

Always make sure you have the permission of parents before taking pictures of the children during the activity.

PROTECT THE NATURAL WORLD

Treat nature with respect.

Be careful with the animals you work with; wear protection if necessary.

Make sure they have appropriate food, water and air. When you're done, put them back where you found them.

Never pick protected species. Before collecting plants or picking flowers, get permission. Only take what you need and make sure you leave at least one third of anything you find in the wild. If possible it is best to not pick anything and to leave everything as you found it.








ACTIVITIES




ACTIVITY	TYPE	OBJECTIVE	PAGE
SILENCE CIRCLE		-To listen to sounds surrounding our environment. -To develop a sense of awareness of the world surrounding us.	13
MINI-BEAST HUNT		-To find mini-beasts in their natural habitats and identify them. -To learn about the characteristics of different mini-beasts and what is their function in nature.	15
MEET A TREE		-To connect with nature through your senses. -To explore the difference between different trees.	20
GUESS THE OBJECT		-To develop and explore different senses. -To increase connection with the natural environment.	22
4040 HOME		-To get to the <i>Guarded Home</i> base without getting caught by the seeker.	24
BARK RUBBING		-To note the difference between plants.	27
BUILDING A RECYCLING BIN		-To learn about recycling by building a recycling bin.	29

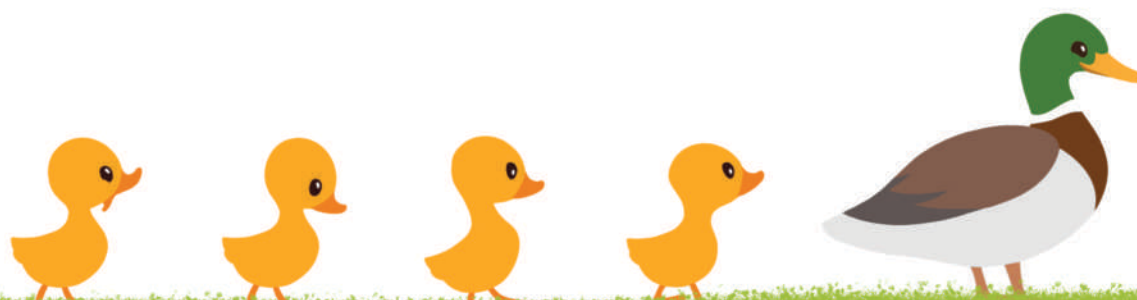


ACTIVITIES

ACTIVITY	TYPE	OBJECTIVE	PAGE
FLOWER PRESSING		<ul style="list-style-type: none"> -To explore the local areas, plants, habitat. -To collect petals to create prints on fabric. 	31
BIRD FEEDER		<ul style="list-style-type: none"> -To provide food and a shelter from bad weather for local birds. -To understand how urbanization is affecting wildlife. -To enhance children's creativity. -To encourage recycling in your community. 	33
DNA EXTRACTION		<ul style="list-style-type: none"> -To discover the connection between nature, food and science. -To extract DNA from fruits. -To observe the physical characteristics of DNA. 	36
POLLUTION CATCHER		<ul style="list-style-type: none"> -To catch visible pollution particles. -To learn what air pollution is, where it comes from and what can be done about it. -To understand the impact of air pollution to health and the environment. 	40
CARBON DIOXIDE EXPERIMENT		<ul style="list-style-type: none"> -To produce Carbon Dioxide (CO₂) through a chemical reaction. -To learn about Carbon Dioxide and how it is related to climate change. -To inflate a balloon without using your mouth. 	43

ACTIVITIES

ACTIVITY	TYPE	OBJECTIVE	PAGE
PLANT A TREE FROM A SEED		<ul style="list-style-type: none"> -To grow a tree from a seed from something you have eaten. -To plant it in the ground where it can grow and bear fruit. 	46
BERRY COLLECTION AND RECIPE HUNT		<ul style="list-style-type: none"> -To pick blackberries to eat. -To create a variety of recipes that you can share and discuss with each other. 	48
WILD FLOWER GARDEN		<ul style="list-style-type: none"> -To grow a wildflower garden for different pollinating insects. -To develop sensory skills. 	50





SILENCE CIRCLE

ORGANISATION: Clube dos Brasileirinhos

AGE RANGE: 5+

NO. OF PEOPLE: 20

SUGGESTED LOCATIONS: Outdoors, preferably woodland. Welsh Harp.



MATERIALS:

Nothing!

OBJECTIVE:

- To listen to sounds surrounding our environment.
- To develop a sense of awareness of the world surrounding us.

INSTRUCTIONS:

Enjoy the opportunity on a day out to take a few minutes to connect to the environment. Very often we are eager to run to *do* things.

In this activity, we propose children take a few minutes to remain silent. When they experience silence, they become more aware of the sound of their surroundings:

- Explain to the group about the different sounds they might hear: the wind, the leaves, birds and squirrels moving up and down, other visitors strolling through the paths with or without dogs, cars, aeroplanes, and other vehicles in the distance.
- Ask the group to make a circle.



- Tell the group that silence will last a whole minute (or more, depending on the size and age of your group). During this minute we will try to capture as many different sounds as possible.
- Towards the end of the silent time ask the group to take note of their own breathing.
- When silence ends, tell your group that you are going to talk about the different sound each participant noticed. Once they start talking note how their voices are lower and calmer. Discuss and help children articulate their feelings about being outdoors.

TOP TIPS:

Contain any speaking during the silent time. There is no need to talk about the sounds you hear if they are all listening to it at the same time. Model how to be patient and enjoy the silence.



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MINI BEAST HUNT



ORGANISATION: Thames21

AGE RANGE: 4-14

NO. OF PEOPLE: As many as you wish.

SUGGESTED LOCATION:

Woodland Mini-beast Hunt - Anywhere with trees, dirt ground, fallen branches, sticks, leaves, or logs that have been on the soil for a long time. Your local park is ideal, there are usually trees and some have a woodland area but any garden will do fine.

Grassland Mini-beast Hunt - Wild long grass (not cut regularly or manicured), wild flower meadow, or anywhere with flowers. Again, your local park may have areas of wild flowers and grass or even your garden.

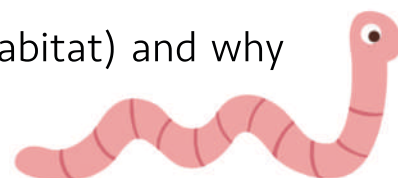
OBJECTIVE:

- To find mini-beasts in their natural habitats and identify them using a spotter sheet.
- To learn about the characteristics of different mini-beasts (how many legs, how they move, etc)
- To learn about where particular mini-beasts live (habitat) and why



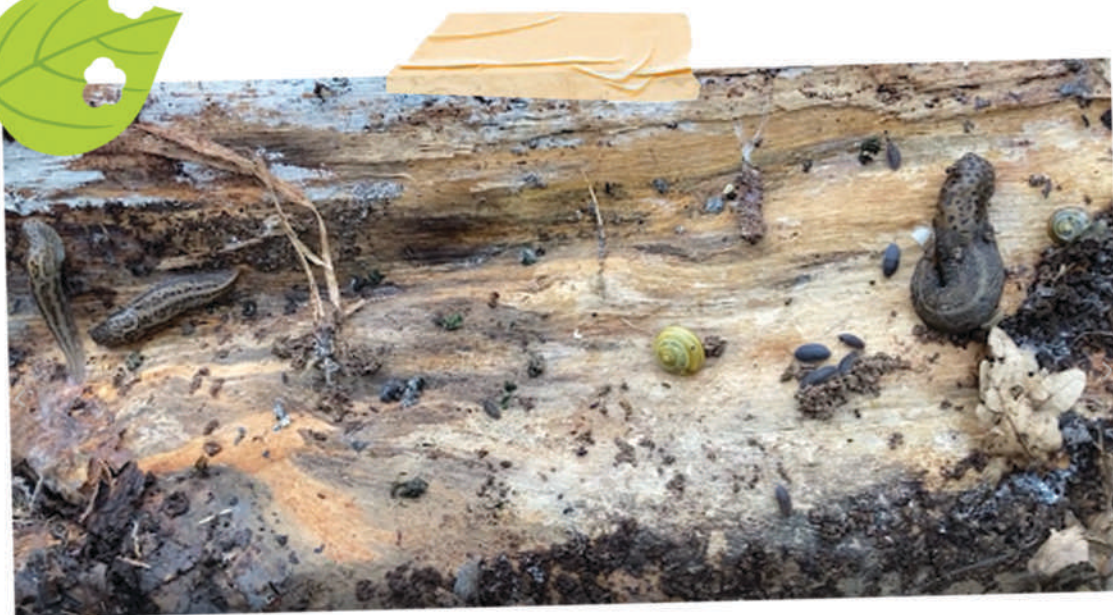
MATERIALS:

- Collecting pot with magnifier lid (or a clear cup)
- Spoon
- Mini-beast spotter sheet (see link)
- Sweep net
- White tray or white sheet





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they like to live there based on their characteristics.

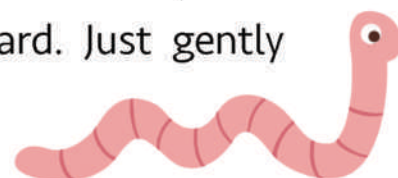
- To learn how to care about small creatures because they all have a purpose and function in nature.

INSTRUCTIONS:



Woodland mini-beast hunt

- The best place to start is under dead wood or at the base of a tree. If looking under a log, move aside or roll over avoiding your toes!
- Use your spoon to move aside dirt and leaves and look carefully to find mini-beasts. Move the dirt, stop and look, then move the dirt, stop and look. Repeat.
- When you find a mini-beast scoop it up carefully with your spoon and put it in your pot or cup. If it has fragile legs or is very small, you may want to use your paint brush. Fingers are best for worms as they have squishy bodies. Remember not to squeeze them hard. Just gently





enough to hold it in your fingers. If your mini-beast is on a log, tree or leaf, you can also hold your cup under. Then use your spoon or paint brush to sweep, or tap it gently into the cup.

- Use a magnifier to view mini-beasts closely and observe their characteristics.

Look closely at where you found your mini-beast and relate this to their characteristics.

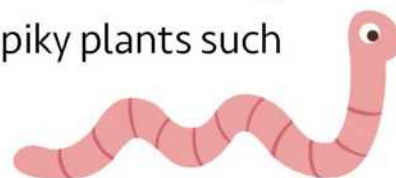
Grassland mini-beast hunt

Make your own sweep net! Here's some handy instructions:

How to make your own sweep net: lostladybug.org

Homemade sweep nets: kitchenpantryscientist.com

- Sweep your net through the long grass in a figure of 8. Go gently, remember these are tiny creatures you are trying to catch and bashing the grass or flowers is not necessary! Avoid areas with spiky plants such





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as brambles or thistles as these will get caught in your net. Close your net at the top with your hand and make your way to your tray or sheet. Empty it out into a white tray or white sheet to view and identify your creatures. Use your spoon or paint brush to put any into your cup for closer viewing.

- If you see an insect on the grass or on a flower, try putting your cup over the insect to catch it rather than using the net.

SAFETY

Look around to see if there are any brambles or stinging nettles in your search area and be aware of these as you go. Also be careful to avoid areas with broken glass, dog poo or lots of litter. Avoid catching insects that sting such as bees and wasps and only catch butterflies if you have a big butterfly net as their wings are easily damaged. Keep your hands away from your face and wash your hands after your bug collecting adventure!





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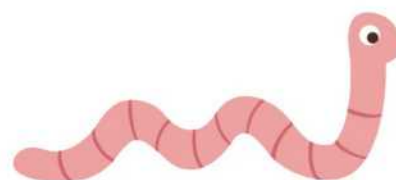
TOP TIPS:

- Dry and warm weather is best for finding grassland mini-beasts as they like these conditions.
- Wet weather is the best for finding woodland mini-beasts as they like the damp!
- Choose places which haven't been disturbed for a long time for the best mini-beast populations, especially in and under rotting wood.
- Go slowly and patiently, get close and look very carefully – many mini-beasts are well camouflaged and the closer you look, the more you see.



EXTRA INSTRUCTIONS AND RESOURCES:

woodlandtrust.org.uk



MEET A TREE

ORGANISATION: Natural History Museum

AGE RANGE: 5+

NO. OF PEOPLE: 2 or more

SUGGESTED LOCATIONS: Outdoors (gardens, parks, woodland)

OBJECTIVE:

- Using touch and your senses to connect with nature through getting to know trees.
- Explore the difference between different trees.

INSTRUCTIONS:

- Ask your group to get in pairs.
- Explain that they will be getting to know at least a tree very well today.
- In each pair one person needs to be blindfolded and the other spins them around with the blindfold on walking them slowly to a tree.
- The person blindfolded spends some time “getting to know” the tree they have been brought to.



MATERIALS:

A headscarf or something to use as a blindfold





- Once they have spent some time at the tree their partner walks them back to the original spaces and spins them round again.
- Ask the group to take their blindfold off and to go back to their tree.
- Acknowledge the achievements in the group and support those who can find their trees. Did they find the right tree?
- Switch places and start over again.

TOP TIPS:

- Be careful not to spin them really fast that they get dizzy!
- Use touch and also smell around the tree and say what you are feeling out loud- rough, smooth, branches - thin, fat etc.

THE MYSTERY OBJECT

ORGANISATION: Sport at the Heart

AGE RANGE: 8-10

NO. OF PEOPLE: Minimum 2

SUGGESTED LOCATIONS: Outdoors



MATERIALS:

- Blindfolds
(do not share
blindfolds)

OBJECTIVE:

In pairs, players take turns in bringing their partner something like a flower, stick, leaf, etc.

The player receiving the object has their eyes closed tries to guess what they are holding by using all their other senses.

INSTRUCTIONS:

- Start off by getting the participants into pairs (you can do that in a fun way by giving two people an animal exclusively and they must find each other by both acting out this animal).
- Once in pairs have them number themselves 1 and 2. 1 will go off first to find something to bring their partner (stress not to bring anything sharp or dangerous). Give a minute to find something and come back.
- 2 now have to touch, listen and smell (make joke and say 'Taste' then use this chance to stress DO NOT EAT ANYTHING their partners brings) then try and guess what it is.



- Then they swap over roles.
- You can add points or make it interesting by taking more senses away.

TOP TIPS:

- Feel the whole object.
- Find something with different textures.
- You can do that in a fun way by giving two people an animal exclusively and they must find each other by both acting out this animal.

4040 HOME

ORGANISATION: Sport at the Heart

AGE RANGE: 11-13

NO. OF PEOPLE: 4 minimum

SUGGESTED LOCATIONS: In a park with trees and shrubs to hide behind. But open space for home base. Roundwood Park is a good place to start.



MATERIALS:
None needed

OBJECTIVE:

To get to the *Guarded Home* base without getting caught by the seeker.

INSTRUCTIONS:

- Set the boundaries of where the field of play is and how far they can go.
- Choose a suitable home base, where the seeker will start and count to 40 while the others go off and hide.
- Explain that the seeker must guard the base but also wander from it trying to look for the other players.
- The players hiding must try and get to the base before the seeker gets there, then touch it and say "4040 home I'm free". Now that person must wait until the round is over.
- If the seeker sees someone the seeker must run and touch the home



base before the hiding player and say "4040 Home I see...(insert name or description of person)" now that person must wait until the round is over.

- If there is only one player hiding left they have the opportunity to free all players if they get to the home base first. To free all they must say "4040 home I free all". If all are free the seeker must stay the same person for next round. (You can also just add a forfeit – 20 Star jumps instead).
- If the last player doesn't free all then the player caught first by the seeker is the new seeker next round.



TOP TIPS:

Before starting the game ask participants to:

- Bring back something interesting they found while hiding (leaf, stick, etc..)
- Not stay too close to the tree and explore.
- To stay hidden for short amount of time, before attempting a home base run.
- Notice any bugs or insects while hiding.
- Explain the place where they were hiding what they saw, touched, smelt.

BARK RUBBING

ORGANISATION: Clube dos Brasileirinhos

AGE RANGE: 5+

NO. OF PEOPLE: 20

SUGGESTED LOCATIONS: Outdoors – Welsh Harp



MATERIALS:

- Paper
- Crayons

OBJECTIVE:

To note the difference between plants.



INSTRUCTIONS:

Tell your group to look around and see if they can spot different plants. Some children might not be able to spot differences right away. Explain trees have many different features, and you will explore their trunks. Make a print of the trees around and see if they are all the same or different. This will provide a unique bark print of the trees they investigate.

Demonstrate how to do the bark rubbing by holding the paper against the bark and rub the crayon on it until it creates a pattern.

TOP TIPS:

Use the crayons sideways to create a nice pattern.





This will provide a unique bark print of the trees for them to further investigate.

- Gather your group in a circle and start having a conversation about the activity.

Questions to explore:

Did you enjoy doing the activity?

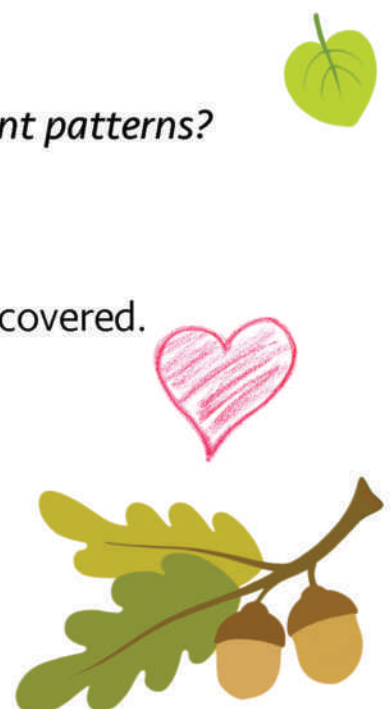
What are the differences that you can spot among different patterns?

Do you know any of the trees in this space?

- Give your group some fun facts about the trees they discovered.

TOP TIPS:

Use the crayons sideways to create a nice pattern.



BUILDING A RECYCLING BIN

ORGANISATION: AlexZ Educational

AGE RANGE: 5 - 12 years old

NO. OF PEOPLE: 15

SUGGESTED LOCATIONS: Anywhere comfortable for your group.

OBJECTIVE:

To learn about recycling by building a recycling bin.

INSTRUCTIONS:

- Divide Participants into groups of 4/5.
- Give each group the materials and ask them to build a recycling bin. Tell them to think out of the box and create a practical and fancy one.
- At the end of the activity, tell the group to sort out the leftover materials they didn't use. Explain that the material (glue, bigger pieces of paper etc) can be used for other activities, taken home or kept for other purposes.
- Then, ask the group to tidy up and to sort the waste using the bins they just made – they can put in the bins any leftover materials, such as



MATERIALS:
Cardboard,
Paper,
Scissors,
Glue,
Tape,
Pens,
Markers





small pieces of paper.

- After that, the group can find a recycling bin in the park, to empty the small cardboard bin.

TOP TIPS:

- Split the children into groups in such a way that each group has both younger and older children – the older ones will help the younger ones.
- You can use all sorts of boxes for this activity (shoe boxes, delivery boxes etc). Just make sure you cut them in such a way that the children won't be able to reconstruct the initial boxes. The purpose of the activity is to be creative and build an entire new object!

FLOWER PRESSING

ORGANISATION: Active Sporting Communities

AGE RANGE: 10-15 years

NO. OF PEOPLE: As many as you wish

SUGGESTED LOCATIONS: Capital City Academy – Roundwood Park



OBJECTIVE:

- To explore the local areas, plants, habitat.
- To collect petals to create fabric prints.

MATERIALS:

Fabric bags,
Flower petals,
Paints,
Wooden rollers or
hammers,
Crayons,
Art materials



INSTRUCTIONS:

This activity can be delivered at home, individually or with a group and you might need to complete it in 2 different sessions.

Make sure you explain all the steps before the group start practicing:

- Cut a piece of fabric out and practice.
- Arrange your flowers and leaves on the fabric.

- Flip them over (on the right side) and tape them down with masking tape.
- Turn the fabric over and place it on a hard surface. Start hammering.
- Flip the fabric over again and gently remove the tape.
- Let it dry for 30 min.
- Gently scrape away any leftover plant material.

TOP TIPS:

Involve your group/family at every stage. Make sure the areas you are going to collect the petals have a range of colours/flowers to keep everyone engaged.



BIRD FEEDER

ORGANISATION: Start Easy

AGE RANGE: 5+

NO. OF PEOPLE: 20

SUGGESTED LOCATIONS:

Anywhere comfortable for your group.

OBJECTIVE:

- To provide a source of food and a shelter from bad weather for local birds.
- To understand how urbanization is affecting wildlife.
- To enhance children's creativity.
- To encourage recycling in your community.



MATERIALS:

- 1 milk or juice carton
- Birdseed
- Acrylic paint
- Paint brushes
- 1 stick
- 1 string
- Scissors



INSTRUCTIONS:

Wildlife worldwide is facing a housing crisis. When land is cleared for agriculture and urbanisation, habitats and natural refuges go with it, such as tree hollows, rock piles and large logs.

Artificial refuges provide wildlife places to shelter, breed, hibernate, or nest, helping them survive in disturbed environments like urban and agricultural areas.



You can build a bird feeder out of recycled materials, like a juice carton:

- With the help of an adult, cut a large hole in the center of one side of the carton.
- Using a sharp object, punch a small hole about an inch below the hole you cut out. Insert a 7" long twig into the small hole you punch. This will provide a perch for birds.
- Cut a hole on the top of the carton and insert a string through for hanging.
- Paint your feeder anyway you wish with acrylic paint (washable paint won't hold up outside). Then let it dry for one or two hours.
- Fill the carton with birdseed.
- Hang your feeder outside in a spot about five feet from the ground.



TOP TIPS:

- An adult will need to help with cutting.
- Try to decorate your bird feeder with natural materials. For example you can glue twigs on top of the carton to create a roof.
- If possible, install your bird feeder on a tree, avoiding open and noisy areas. Hang it at eye level or a little above, not too low where birds are within a cat's reach.



DNA EXTRACTION



ORGANISATION: Start Easy

AGE RANGE: 6+

NO. OF PEOPLE: 20

SUGGESTED LOCATIONS: Indoor

OBJECTIVE:

- To discover the connection between nature, food and science.
- To extract DNA from fruits.
- To observe the physical characteristics of DNA.



MATERIALS:

- 2 strawberries or a banana
- 2 g salt
- 100 ml water
- 100 ml ice cold rubbing alcohol
- 1 teaspoon of washing up liquid
- 1 zip lock bag
- 2 glasses
- 1 spoon
- 1 beaker
- 1 black card
- 1 skewer or wood stick

INSTRUCTIONS:

DNA is the material that contains all the information about how a living creature looks and functions. For example, DNA determines the colour of one's eyes, or the shape of the leaves on a tree.

DNA is found in the cells of all plants and animals.

With this experiment, you'll be able to extract and observe the DNA of

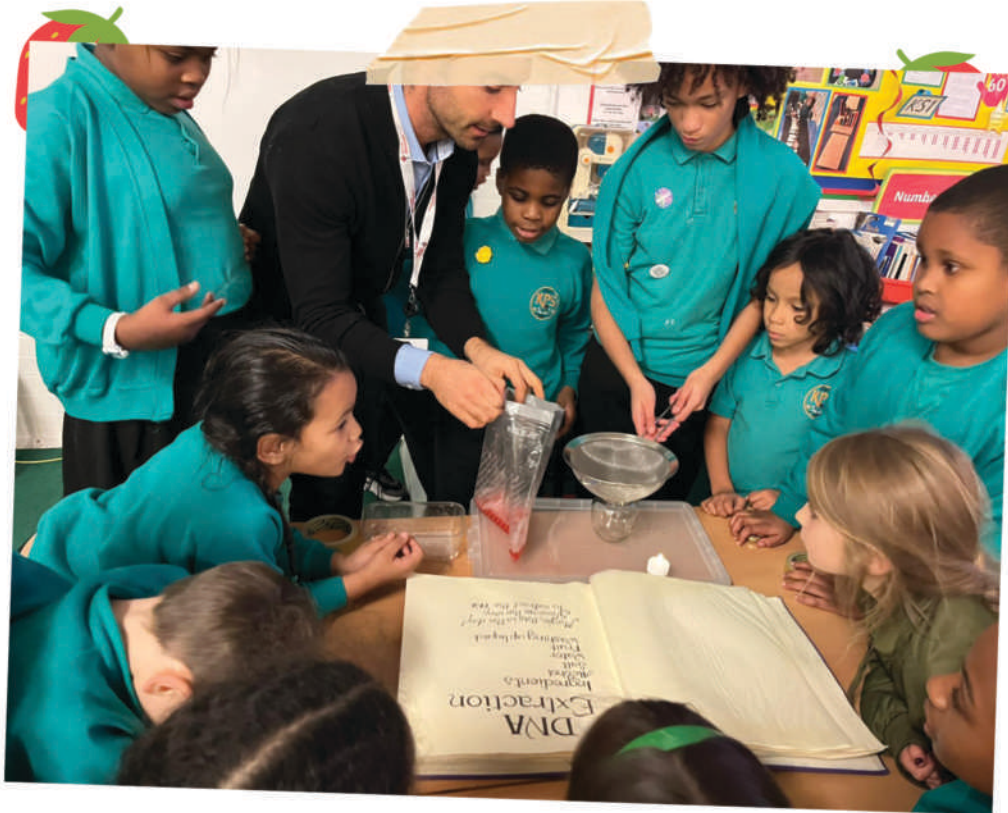


a fruit using simple, household ingredients.

This activity is a great way to talk about how DNA works, its functions and its importance in the makeup of every living organism.

What to do:

- One hour before you start the experiment, put a bottle of rubbing alcohol in the freezer. You'll need it later.
- To make the extraction mixture, add 1 teaspoon of salt and 2 teaspoons of washing up liquid to 100 ml water. The washing up liquid helps to break the fruit cells. This promotes the release of the cells contents, including the DNA. The salt makes the DNA molecules stick together.
Gently stir the mixture until the salt dissolves.
- Wash the strawberries and remove the leaves. This experiment is also



also valid for other types of fruit such as bananas or kiwis, but strawberries are special because they have more DNA than any other fruit. This means it's easier to extract a large amount of DNA that is visible to the naked eye.

Place the strawberries in a zip lock plastic bag.

4. Pour the extraction mixture into the bag. Press the air out and seal the bag. Gently mash the bagged strawberries with your fingers for about 2 minutes.

5. Pour the resulting strawberry pulp through a strainer and into a glass or similar container. This will remove all the solid material.

6. Carefully, pour ice-cold rubbing alcohol into the container with the fruit mixture. The alcohol forms a layer, floating on top of the mixture.



- After few minutes a fluffy white substance will appear at the top of the mixture. That's the DNA of the strawberries!
The DNA, in the presence of salt, is not soluble in alcohol. The rest of the mixture gradually dissolves in the alcohol, but the DNA separates out.

- Scoop out the DNA with a stick and spread it on a black card.
Leave it to dry.

Once the DNA dries, you should be able to see its stringy, spider-web structure.

TOP TIPS:

Since the activity requires the use of rubbing alcohol, the children must be under adult supervision.

Make sure you wash your hands after the lab.

POLLUTION CATCHER

ORGANISATION: Start Easy

AGE RANGE: 3+

NO. OF PEOPLE: 20

SUGGESTED LOCATIONS: Indoor or in a park with tables.



OBJECTIVE:

- To catch visible pollution particles.
- To learn what air pollution is, where it comes from and what can be done about it.
- To understand the impact of air pollution to health and the environment.

MATERIALS:

- Paper plates
- Strings
- Pencils, crayons
- Petroleum jelly (vaseline)
- Scissors



INSTRUCTIONS:

- Take a paper plate and, using a pencil, make two small holes in the rim. Make the holes about 7 cm apart.
- Thread a string through the two holes so that the loose ends are at the back of the plate. Cut the string to around 40 cm.



- Draw a nice and colourful picture on the back of the plate.
- Turn your paper plate back face up and smear a thin layer of petroleum jelly on the surface of the plate. The petroleum jelly is sticky and will catch the particles in the air.
- Find a good place outside to hang your plate. Choose somewhere that offers shelter from the rain, like a porch or under a tree.
- Wait 2 weeks to collect your plate and examine your results. you should find some particles stuck on the plate. They come from dust, soot, cars, factories and other sources.
- If you are doing this experiment with more than one child, ask each of them to make their own pollution catcher and then hang the plates in different places. For example, one near a busy road, and one at the



rear of their house. After 2 weeks take the plates down and compare what they have found. What location has the cleanest air?

- You can use this experiment to engage children in a discussion on air pollution.

What do you think are the effects from breathing in highly polluted air? Is there something we can do to help clean the air? Could we use the car less and walk or cycle more?

TOP TIPS

If you have a magnifying glass, take a closer look at the particles stuck on the plate.

CARBON DIOXIDE EXPERIMENT

ORGANISATION: Start Easy

AGE RANGE: 6+

NO. OF PEOPLE: 20

SUGGESTED LOCATIONS: Indoor



MATERIALS:

- 1 biodegradable balloon
- 1 small bottle
- 1 funnel
- 2 tablespoon of baking soda
- 1 cup of vinegar

OBJECTIVE:

- To produce Carbon Dioxide (CO₂) through a chemical reaction.
- To learn about Carbon Dioxide and how it is related to climate change.
- To inflate a balloon without using your mouth.



INSTRUCTIONS:

Carbon Dioxide (CO₂) is one of the most important elements on Earth. When animals breathe out, they release Carbon Dioxide into the air. Plants use this Carbon Dioxide to make their own food and then release oxygen into the air for animals to breathe in.

Carbon Dioxide is also a greenhouse gas and this means that it can trap



heat from the sunlight, keeping the Earth warm.

But human activities like driving cars, electricity, and cutting down forests are releasing large amount of Carbon Dioxide into the atmosphere, causing too much warming on Earth. This change can have a big impact on plants and animals health.

Children can learn about Carbon Dioxide in this experiment:

- Pour the vinegar into the bottle.
- Add the baking soda to the balloon, using the funnel.
- Carefully stretch the opening of the balloon over the bottle opening. Make sure the balloon is dropping down on the side to keep the baking soda from falling in.
- Lift the baloon upright, allowing the baking soda to fall into the



vinegar, starting a chemical reaction.

Encourage children to ask questions and make predictions:

What do you think will happen when baking soda and vinegar come in contact?

What do you think will happen to the balloon attached?

- The chemical reaction creates carbon dioxide gas that bubbles up from the mixture. The gas expands up and out of the bottle and inflates the balloon.
- Carbon dioxide is heavier than air, so if you drop the balloon, you'll notice that it falls to the ground faster than a regular balloon filled with air.

TOP TIPS:

Use a sharpie to draw a face or a fun picture on your balloons before filling it with baking soda.

PLANT A TREE FROM A SEED

ORGANISATION: Phoenix Rising

AGE RANGE: 8 - 18

NO. OF PEOPLE: 1

SUGGESTED LOCATIONS: Warm section of the home with plenty of natural light (eg. window sill).

OBJECTIVE:

- To grow a tree from a seed from something you have eaten.
- To plant it in the ground where it can grow and bear fruit in 5-7 years (depending on what fruit the seed is).

INSTRUCTIONS:

- Fill the pots with compost 90% full.
- Add water to the compost so it is moist throughout.
- Using the pencil make a hole 2 cm deep in the centre of the pot and put a seed in.
- Leave on your window sill watering sparingly twice a week and simply wait.
- Continue doing the same for the next 12 months. Then change to larger



MATERIALS:

3 flower pots,
1 Pencil,
Compost,
Seeds from fruit
consumed or
used for cooking
(eg. lemon seeds)





pots.

- The plant can stay indoors for the next 18 months as it will grow according to the size of pot and the environment it is growing in.
- Take monthly photos and notes of the plant's progress.

TOP TIPS:

Let the plants take their time and grow, leave it alone to simply grow.

As long as it has lots of light it will be happy. If three months pass and nothing, repeat the process as seeds grow at different rates and sometimes not at all.



BERRY COLLECTION & RECIPE HUNT



ORGANISATION: Phoenix Rising

AGE RANGE: 8-25

NO. OF PEOPLE: up to six

SUGGESTED LOCATIONS:

A- Welsh Harp, Brent River

Park (by NCR entrance to St Raphael's Estate).

However, there are many locations in Brent where you can find wild blackberry bushes.

B- Any comfortable meeting spot where you have access to good Wi-Fi.

MATERIALS:

A small bucket for each person to collect the berries

OBJECTIVE:

- To pick blackberries to eat.
- To create a variety of recipes that you can share and discuss with each other.

INSTRUCTIONS:

- Simply pick ripe juicy berries that are ripe and ready to eat.
- Gather where you can do some research together or on your own and find an interesting recipe using berries that you are happy to try and also share the recipe with the group.





TOP TIPS:

This activity actually starts in the spring when you first identify berry bushes on your walks to school or around the local area and observe their growth to ripeness and time to pick

Note! If the berries are in a public place others will be looking to do the same as you, so be ready to pick when the berries are ripe.

There are many different recipes as berries can be found worldwide find something interesting not only to try but also share.





WILDFLOWER GARDEN



ORGANISATION: OK CLUB (Oxford Kilburn Youth Trust)

AGE RANGE: Families

NO. OF PEOPLE: Dependant on your space/ size of garden/ balcony

SUGGESTED LOCATIONS: Front/back garden, or a balcony/outside window ledge in some plant containers.

OBJECTIVE:

- To grow a wildflower garden for different pollinating insects.
- To develop sensory skills.



MATERIALS:

Wild flower seeds mix,
Compost,
Soil containers,
Sunflower seeds (not the ones you can eat -they won't grow sadly!),
Lavender plants



INSTRUCTIONS:

- Buy some bee and pollinator insect-friendly wildflowers and sunflower seeds at any local food store.
- Encourage the group to look at the space you are going to use. Ask





them to imagine they are a little flying bug. (You can introduce different types of bees and ask the group about the number of bee's species they will see flying into their '*Flower restaurant*').

- Pollinating insects need easy access to wonderful flowers. Ask the group if the space they have is outdoor or indoor.
- Ask the group to read the seed packet instructions together and to follow them.
- Tell them that seeds are easy to grow, they don't need tools.
- Ask them to use their hands to put the compost into the container- feel the soil.



- Ask the group: *What does it feel like? Smell like?* (Don't taste it though- not very nice- trust me!)
- Now tell the group to spread the seeds according to instructions and water them if necessary.
- Remind the group to wash their hands with soap and water afterwards (seeds that are for planting in gardens can be poisonous- so be careful if you have younger children).
- Make sure the group make a label so they can tell what they have planted (use the seed packets as labels by placing them with a pin or sticky tape on twigs or bamboo sticks, even old wooden chopsticks!) Once finished, tell the group that the garden needs care and maintenance once a week.




TOP TIPS:


- Instead of traditional plant pots you can use wooden fruit box lined with plastic bags, or a large yoghurt pot with small holes in the bottom for the water to drain. Recycling is so much better and more fun! (Use a pair of old shoes if you want to! Look online for alternative plant pots and see what people have done!)
- Pollinating insects, like bees, must have a water source. As the weather warms and they start looking for flowers, honey bees will start looking for water as well as pollen and nectar. Make a little tray of shallow water that they can safely drink from (see picture).
- Bees will really like your plants, so don't be afraid if they fly close to you- they won't hurt you. But, if you find them a bit scary, be "bee safe" and stand away from the flowers.



FUN FACTS




SUNFLOWERS - **Annual sunflowers** bloom during summer and into autumn. **Perennial sunflowers** bloom for a period of 8-12 weeks with some beginning as early as July and others finishing as late as October. Use a calendar to estimate how long it will take for your sunflowers to bloom, by looking at the growing time on the back of your seed packet.



Sunflowers can grow very tall! - remember that! Have some string and **bamboo canes** to keep them standing and safe.

POLLINATORS - Many wildflowers produce nectar, a sugary liquid that many insects eat. When an insect lands on a flower to feed (like a bumblebee) pollen grains stick to its body. As the insect moves to another flower of the same species, these yellow (sometimes orange) pollen grains are transferred to other flowers and pollination occurs. This is very important as it helps grow food like fruits and vegetables.





BRENT'S BEE CORRIDOR

Bees and other pollinating insects are declining in abundance all over the world, largely due to increased level of urbanisation, use of pesticides and climate change.

In an attempt to fight this decline Brent Council has created a 7 mile long corridor of wildflower meadows across 24 green spaces.

Wildflower seeds were carefully selected to be compatible with the London soil. Over the summer months the grasses and flowers grow long, attracting butterflies, dragonflies, bees and other pollinators.

This initiative shows how spaces within urban areas can be used to support wildlife conservation.

BRENT'S **BEE** CORRIDOR





BRENT PARKS



Spend 15 mins in one of these fantastic Brent green locations and identify what you see all around you, flowers, plants, insects, birds and animals. If you could note your findings, take pictures and feedback to us at info@youngbrentfoundation.org.uk then we can start to get a really good understanding of biodiversity in the borough.



www.brent.gov.uk/services-for-residents/culture-leisure-and-parks



WHAT CAN YOU FIND ON YOUR WELSH HARP RESERVOIR WALK?

Look for these during your walk:



SQUIRREL



SQUIRREL DREY



MAGPIE



ROBIN

Location 1: Stop where you can see a good view of Wembley Stadium.



VETCH - this plant can be grown to put nutrients in the soil before planting vegetables.



STINGING NETTLE - its leaves can be used to make teas and soups. The hairs on the leaves can sting!

Location 2: Stop at the edge of the woodland.



LICHEN AND MOSS - moss is a simple plant, and lichen is a fungi-algae mix!



BRAMBLE - this is a blackberry plant with sharp thorns on the stem. Blackberries grow in summer.



Location 3: Stop where you can see many ant nests in the grass.



OAK TREES - look for this lobed leaf - green in summer and brown in autumn. Look on the tree and on the ground. Some leaves still hang onto the tree all winter!



ANT NESTS - worker ants dig tunnels underground and pile the soil outside the entrance, creating these mounds or "nests".

Location 4 and 5: Can you spot these birds?



summer

BLACK-HEADED GULL



winter



COOT



MUTE SWAN



MOORHEN



CANADA GOOSE



Male

MALLARD



Female

WELSH HARP RESERVOIR WALK

Short walk 25 mins (return)

From the car park follow the black line (—) to Point 2, then return along the red line (—).




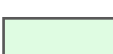

Medium walk 50 mins (return)

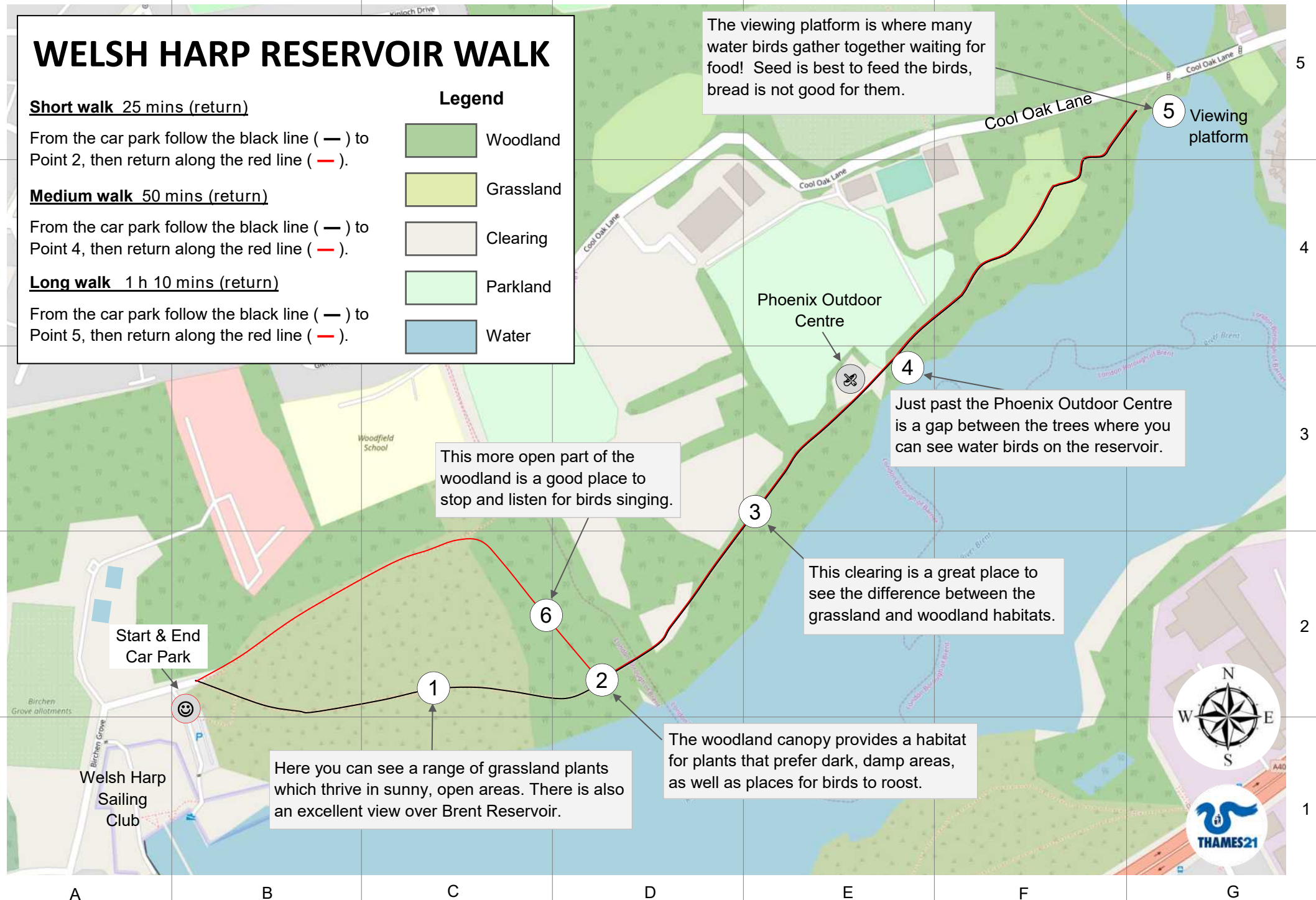
From the car park follow the black line (—) to Point 4, then return along the red line (—).

Long walk 1 h 10 mins (return)

From the car park follow the black line (—) to Point 5, then return along the red line (—).

Legend

	Woodland
	Grassland
	Clearing
	Parkland
	Water





RESOURCES

NATIONAL GEOGRAPHIC
www.nationalgeographic.co.uk

NASA KIDS CLUB
<http://www.nasa.gov/kidsclub>

WWF
www.wwf.org.uk

BIODIVERSITY INTERNATIONAL
www.biodiversityinternational.org

THE ENCYCLOPEDIA OF LIFE
<https://eol.org>

THE CONVENTION ON BIOLOGICAL DIVERSITY
www.cbd.int



GLOSSARY



ATMOSPHERE is the layer of gas (mostly nitrogen and oxygen) surrounding the Earth.

BIODIVERSITY is the biological variety and variability of life (animals, plants, even microorganisms like bacteria) on Earth.

CARBON DIOXIDE (CO₂) is a colourless, odourless gas present in the atmosphere. It is formed during respiration of living organisms and produced through combustion of fossil fuels. Carbon dioxide is one of the main greenhouse gases that contributes to global warming.

CLIMATE CHANGE refers to the shifts in temperatures and weather patterns in a region over a long period of time. Throughout Earth's history, climate has continually changed, but since the 1800s, the cause of current climate change is largely human activity, primarily due to the burning of fossil fuels (like coal, oil and gas) which releases what are called greenhouse gases into Earth's atmosphere.

DNA, short for *deoxyribonucleic acid*, is the molecule that contains all the information about how a living thing will look and function.

ECOSYSTEM is a biological community of interacting organisms and their environment. Living things interact with each other and also with non-living things like soil, water and air.





GREENHOUSE EFFECT is a process that occurs when gases in the atmosphere trap the sun's heat, keeping the Earth warm.

GREENHOUSE GASES are gases in the atmosphere that trap the sun's heat. The main greenhouse gases are Water Vapor and Carbon Dioxide.

HABITAT is the place where an organism lives.

ORGANISM is any living thing such as a plant, an animal or a germ.

POLLINATION: The transfer of pollen from the male part of a flower to the female part, which enables the plant to reproduce. Most often this process is caused by an animal or by wind.

POLLINATOR is an animal that moves pollen from the male anther of a flower to the female stigma of a flower. This helps to bring about fertilization of the ovules in the flower by the male gametes from the pollen grains.

RECYCLING is the process of converting waste materials into new reusable objects.

SPECIES is a group of living organisms whose members have the same characteristics and can reproduce with one another.





ACKNOWLEDGEMENTS

A big thank you goes to everyone involved in this programme inspiring children and young people to enjoy the environment around them. Using it as a living lab, for fun and experimentation in their everyday lives.



NATURAL HISTORY MUSEUM

We would like to thank the Natural History Museum for their input into Brent Goes Wild and delivering their brilliant Urban Nature training sessions to the 9 YBF member organisations. The training was full of practical activities and ways to encourage young people to connect with nature. For further information please go to:

www.nhm.ac.uk





UN YOUTH ALLIANCE



We would like to thank UN YOUNGA for providing amazing resources and recognition for children and young people involved in the project. Formed in 2009, the **YOUTH AND UNITED NATIONS GLOBAL ALLIANCE** (YUNGA) is a partnership between United Nations agencies, civil society organisations and other entities that work with children and young people.

YUNGA acts as a gateway for children and youth from around the world to participate in the activities and initiatives of the United Nations. YUNGA seeks to empower children and young people to have a greater role in society, raise awareness and become active agents of change. YUNGA aims to engage young people in activities of key environmental and social concern at both national and international levels.

Developed in collaboration with United Nations agencies, civil society and other organizations, **YUNGA CHALLENGE BADGES** aim to raise your awareness, educate and motivate you to change your behaviour and become an active agent of change in your local community. The series can be used by teachers in school classes as well as by youth leaders, especially Guide or Scout groups. Challenge Badge activities are both educational and fun! We want you to enjoy learning about how to make our world a more sustainable, fairer place! Find out more:

www.fao.org/yunga





JOHN MUIR AWARD

wild places:
**DISCOVER
EXPLORE
CONSERVE
SHARE**

Thanks for giving more than 100 families the opportunity to receive the Family discover Award.

The John Muir Award encourages people of all backgrounds to connect with, enjoy and care for wild places.

The Trust's John Muir Award is an environmental award scheme focused on wild places. The Trust describes wild places as those which comprise natural elements (such as animals, plants, landforms and weather); they believe that wild places can be found almost anywhere, from the heart of our cities to our most remote mountain-tops.

The Award scheme is inclusive, accessible and non-competitive and encourages awareness and responsibility for the natural environment through a structured yet adaptable scheme, in a spirit of fun, adventure and exploration.

It's open to all who can understand and meet the Award Criteria. It is ideally suited for those participants working at the later stage of primary education and beyond. Adults are welcome to get involved too – on their own, in groups, or alongside younger participants.

There is a Family Award that welcomes involvement as a family unit and can include all ages and abilities.

www.johnmuirtrust.org





EUROPEAN METAL RECYCLING

We would like to thank EMR for supporting recycling activities delivered during the Brent Goes Wild.

Did you know that European Metal Recycling has a base in Brent? They were keen to let families in Brent know about the work they do so here is a message from EMR:

At EMR we are passionate about tackling climate change and protecting the world's natural resources for generations to come. As a global leader in sustainable materials EMR recycles, re-uses and recovers over 10 million tonnes of materials which may have otherwise gone to landfill. When you look at the four main product types that EMR works with (steel, copper, aluminium and lead), the carbon emissions are between 74% and 89% less when compared to extracting and processing virgin materials for the same application. This is a massive saving which has pivotal implications for the move towards a net-zero world.

EMR accepts metals from aluminium cans and copper piping to bicycles. You can find out what it accepts and how to create an account here:

<https://uk.emrlocal.com/yards/emr-neasden-scrap-metal>





YOUR NOTES



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