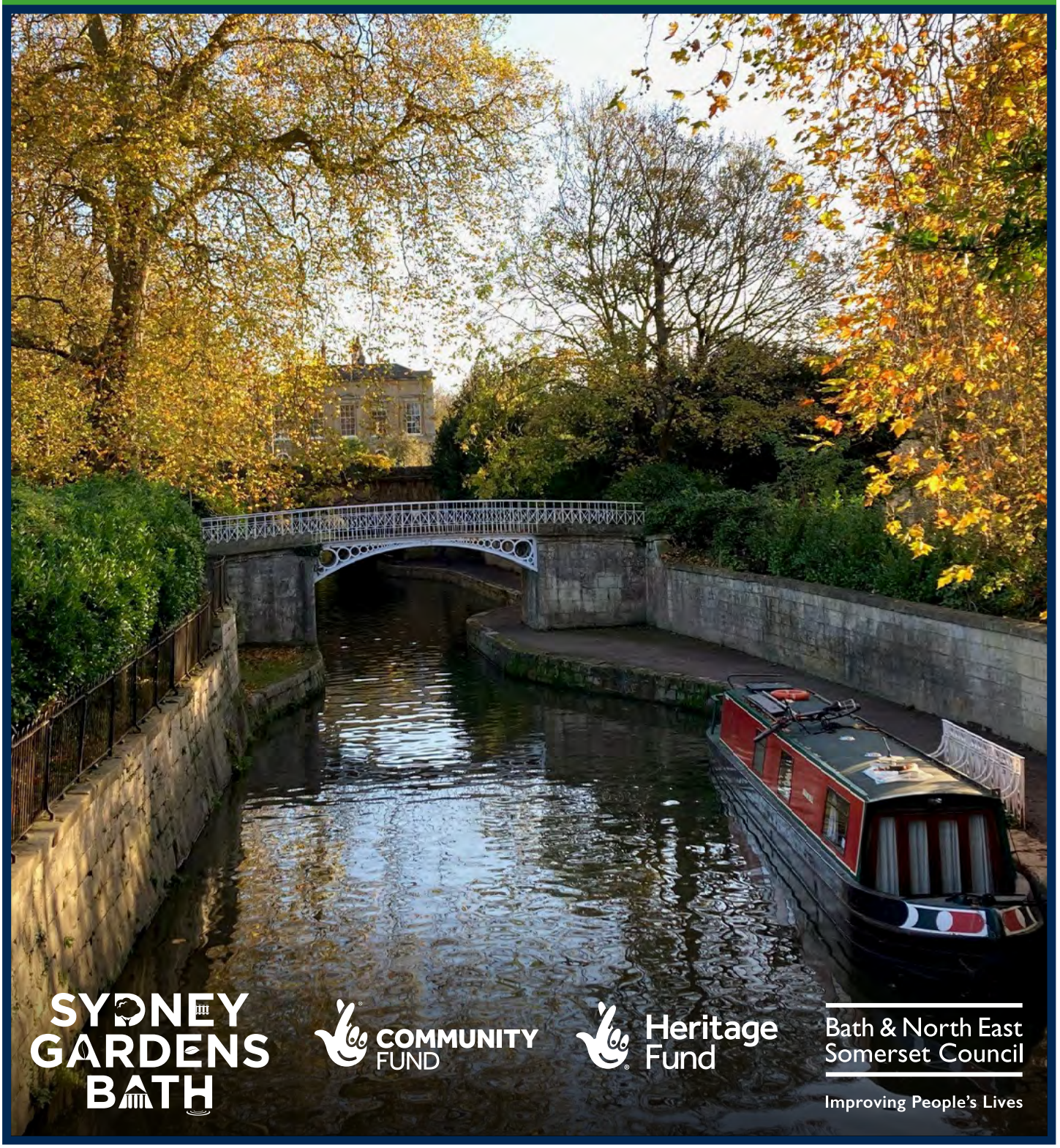
Teachers' Resource Pack for Sydney Gardens Bath Tree Trail



Teachers Resource Pack for Sydney Gardens Bath Tree Trail Designed for Key Stage 2

The Sydney Gardens' Tree Trail lends itself to many cross curricular activities. In this pack you will find 5 lesson plans corresponding to each tree on the trail. Designed to support your class's learning whilst bringing back a bit of Sydney Gardens extraordinary trees into the classroom!

Contents

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This learning resource was created by artist educators Lucia Harley, Aimee Corbett and Charlotte Hosford, and Community Ranger Sue Palmer, as part of the Sydney Gardens Project, a National Lottery Heritage Fund and B&NES Council funded restoration project (2019 – 22).

The London Plane Tree – A habitat that creates a positive impact

Learning Objective: to recognise and explore positive human impacts on the environment.

Success Criteria:

- children will identify the needs of an organism to create a suitable habitat
- children will work together to create a habitat for their organism
- children will observe and record their findings over time to evaluate the impact they have created

Scientific Enquiry Skill: research and observation over time.

Vocabulary: food chain, habitat, organism, ecosystem, humidity and impact.

Resources: picture of London Plane tree at Sydney Gardens, internet/encyclopaedia access, small designated space in school grounds, paper, bug hotel resources **www.rspb.org.uk/get-involved/activities/nature-on-your-doorstep/garden-activities/build-a-bug-hotel/**and bug hotel diary.

Introduction: put a picture of the live and dead London Plane tree from Sydney Gardens on the board. Recap:

Why is this tree so often planted in cities?

Elicit or share: When it was live it would capture pollution through the fibres on its leaves and in its bark, filtering out the particles and dust that can be produced by traffic. The bark then peels off, discarding the pollution.

Why do they think Sydney Gardens has kept the dead tree, as well as the live one?

What might benefit from this tree?

Show children picture of a woodlouse, spider, bird and bigger carnivorous bird (heron). Elicit that this is a food chain. Even a dead tree can feed another animal. It can also create a habitat for a range of organisms creating an ecosystem.

Main Teaching: ***What is a habitat?***

Share clip from BBC bitesize **https://www.bbc.co.uk/bitesize/articles/ztv28hv** Elicit the different habitats for the different species. ***What impact can we humans have on these habitats?***

Like Sydney Gardens leaving the dead plane tree, we too can create habitats that give creatures an opportunity to thrive and support ecosystems.

Activity: make a bug hotel, that attracts different bugs and, if your school grounds have access, may attract a hedgehog too.

Split your class into groups. Each group will take responsibility for a different section of the hotel:

Group 1: habitats for woodlice

Group 2: habitats for bees

Group 3: habitats for toads

Group 4: habitats for beetles

Group 5: habitats for lacewings

Group 6: habitats for hedgehogs

Ask each group to research and note down what their organism needs, thinking about the: materials, size, season, light and levels of humidity. Children to report back their findings.

Extension: if there is a space nearby suitable for growing, children can also research food that each organism enjoys and plant up the area.

Explain to children you have found a designated area in the school grounds for this hotel and share the suggestions and prototype designed by the RSPB.

www.rspb.org.uk/get-involved/activities/nature-on-your-doorstep/garden-activities/build-a-bug-hotel/

Take children outside and ask them to select the resources for the hotel that you have preprepared or, if available, found in your school grounds and put the bug hotel together.

Plenary: tell children that they are going to observe and record their findings each week/month in a bug hotel diary to see if it is successful in creating a habitat and positive impact within their school grounds. Their recordings should include: dates, weather, season, observed activity, organisms.

History behind the Peace Oak

At the end of the First World War there was a national celebration and Bath held one in Sydney Gardens; there were tea parties, music and dancing. 7000 children processed through the town to Sydney Gardens. The 'Peace Oak' was planted on this day in front of 5,000 servicemen and their partners who were then entertained to tea. It rained all day but the people of Bath continued the revelry. Throughout the day it is said that two tons of cake, 50,000 buns, and a large quantity of biscuits were provided, while 100 gallons of milk was used for tea.

To get the children thinking about the celebrations you may want to show some videos, have your own tea party, think of times in school when celebrations have happened, summer fairs etc.

To find the booklet that was produced specially by Bathnes Parks Service and the Sydney Gardens Project on the 100th Anniversary of the Peace Oak go to our Learning Resources: **www.bathnes.gov.uk/sydneygardenslearning**

Or visit: **www.bathscape.co.uk/wp-content/uploads/2020/10/Peace-Oak.pdf**

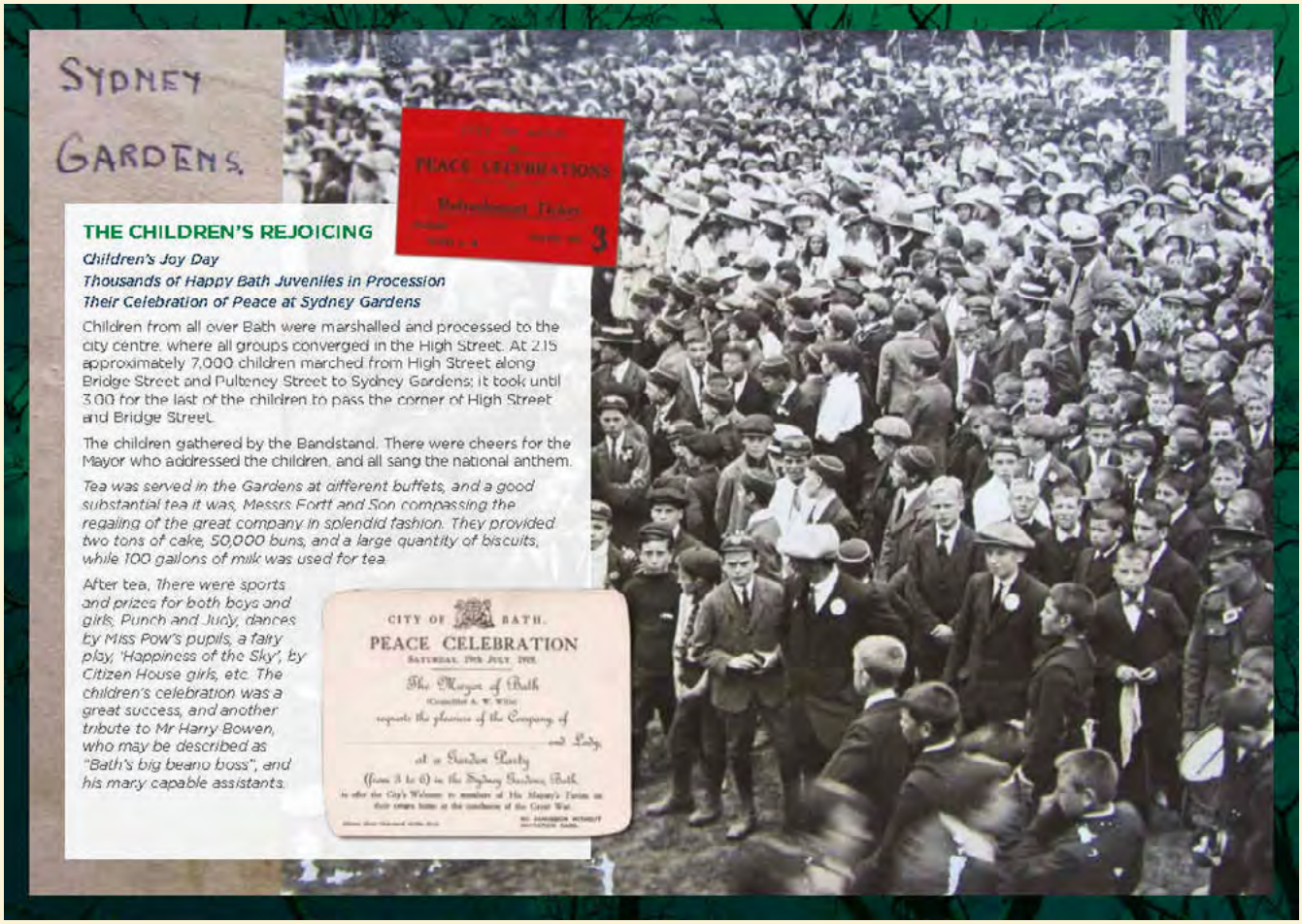
Flanders Fields by John McCrae

In Flanders Fields, the poppies grow
Between the crosses, row on row,
That mark our place; and in the sky
The larks still bravely singing, fly
Unheard, amid the guns below.

We are the dead. Short days ago
We lived, felt dawns, saw sunsets glow;
Loved and were loved – but now we lie
In Flanders Field.

Take up our quarrel with the foe!
To you from falling hands we throw
The torch, Be yours to bear it high!
If ye break faith with us who die
We shall not sleep tho' poppies blow
In Flanders Field.

en.wikipedia.org/wiki/In_Flanders_Fields



Peace Oak, Golden Oak 'Concordia'

Learning Objective: to explore and creatively respond to WW1 poem Flanders Fields by John McCrae.

Success Criteria:

- children will identify the audience and purpose of the poem
- children will use their senses to imagine the planting of the Peace Oak
- children will be able to use the poem as a model to write their own response from the perspective of a post war person in history

Vocabulary: loss, sacrifice, foe, lark, quarrel, amid and "the torch".

Resources: Flanders Fields poem by John McCrae and booklet (link below) about Peace Oak planting and celebration. **https://beta.bathnes.gov.uk/sites/default/files/peace_oak_16pp_a5_booklet_online_1.pdf**

Introduction: remind children of the Peace Oak. ***Why was it planted? Why is it important to remember those who fought in WW1?***

Tell the children that many people wrote diaries, letters and poems of the time they spent in the war. Why do they think people did this? These are primary sources that we can use to gain a real understanding of what WW1 was like.

Main Teaching: read the poem together clarifying the meaning of the lines.

Whose perspective is the poem from?
What is your impression of Flanders Fields?
What did they do when they were living?
Who is the foe? Why will they not sleep?
What are your favourite lines, why?
What do you notice about the rhyming pattern?

Look at documents for the celebration in Sydney Gardens. ***Why do you think it was important to have a celebration at the end of the war?***

Group Activity: imagine you are there enjoying the celebration and watching as the Peace Oak is planted.

Either as a class or in pairs divide a large piece of paper in half. Put the headings 'Celebration' and 'Peace Oak' at the top of each section. Ask the children to mind map what they might have seen, heard, felt for each heading e.g., smiles, laughter, joy, rustling leaves, crumbling dirt, heavy heart.

Extension: encourage children to pick a few of their words and note down any rhyming words next to them.

Independent activity: write a response to the men in Flanders Fields from the perspective of someone at the planting of the Peace Oak. Using the structure of Flanders Fields and a mind map model writing the start to your poem, remind children they are writing in present and future tense.

In Sydney Gardens the Oak tree will grow
Though its progress may be slow
We will not forget those in Flanders Fields
When we dance and laugh and celebrate peace…
Because of you we all know
We live, feel dawns, see sunsets glow.

Plenary: children share the favourite line of their poem so far.

History behind the Giant Sequoia's name

The Giant Sequoia growing in Sydney Gardens may have been part of the first batch of saplings brought back from the USA in the Georgian period. Colonised lands were searched to feed an insatiable desire to collect botanical specimens for their beauty or economic potential. Timber was extremely lucrative in the mid-19th Century.

The Sequoia was a prized trophy and named after Sequoyah, an important and extremely influential educator of the Cherokee Nation. The Native American Cherokee Nation did not have a written language and relied on word of mouth and oral traditions to share stories and news. Sequoyah believed in the power of the written word to share information quickly and widely. He set about creating an alphabet based on the syllables used in the Cherokee language called a syllabary. The syllabary was a great success as people found it easy to learn and use and the Cherokee people set up the first Native American newspaper in the United States.

The Cherokee Nation suffered terrible losses at the hands of Europeans and American Settlers who forced the Cherokee people off their ancestral lands. Sequoyah tried to reunite his people. But sadly, he died in 1843.

The name Sequoyah lives on through this tree and is an important reminder of Sequoyah's work and the mistreatment of the Cherokee Nation.

www.nationalgeographic.org/article/sequoyah-and-creation-cherokee-syllabary/

www.britannica.com/event/Trail-of-Tears

Sequoyah with the syllabary.

Art by the Native American Cherokee Nation

Learning Objective: to learn about and create artwork using natural materials inspired by the Cherokee Nation.

Success Criteria:

- can identify features of Cherokee Nation artwork
- can explain the importance of symbols
- can use natural materials to create my own symbol

Vocabulary: Giant Sequoia, Sequoyah, Native American, Cherokee Nation alphabet, syllabary, symbol, symbolise, represent and natural materials.

Resources: large paper, pencil and natural materials.

Introduction: on the board write up ᏏᏉᏯ Elicit ideas from the children about what they are going to learn about today.
Then write ᏏᏉᏯ = Si quo ya.

Remind children of the Giant Sequoia they recently measured at Sydney Gardens. Jog their memories on the look and feel of the tree. Why was the bark special, how did it disperse seeds etc.

Then explain that the Giant Sequoia is named after Sequoyah, a Native American from the Cherokee Nation. Sequoyah created an alphabet based on syllables for his people, so they could learn to read and write. These symbols are from his syllabary and represent his name. ***Why might he have thought it was important for his people to read and write?***

Main Teaching: explain that the syllabary was very effective at helping the Cherokee people to read and write quickly. Symbols and symbolism is also very important in Cherokee artwork. ***Art is also a powerful means of communication – how, why?***

In Cherokee art, bears are particularly important. The bear symbol represents strength, family and courage. The Cherokee people would see bears living in the forest and saw that they were powerful and agile.

A water spider represents tenacity and bravery as there is an ancient Cherokee myth that this spider kept the animals warm by carrying burning coal in a sack that she spun!

There are also different tribes within the Cherokee people including, the wolf clan, the bird clan and the deer clan. ***What might these animals represent?***

Ask children to mind map animals that are important to them and to explain why.

Share with children examples of Cherokee gourd art **www.karenberrycherokee.com/gourd-carving.html**

What do they notice about the use of symbol, colour and material?

Activity: ask children to think of an animal they like and what it represents to them. Tell children that today they are going to create a picture of their chosen animal using natural materials. Ask children to draw an outline of their chosen animal onto a big piece of paper (preferably A2).

Then depending on season and availability you could invite children to:

A: collect natural materials as a class prior to the art lesson suggesting; feathers, shells, leaves, sticks, seeds etc

B: search school grounds for materials such as leaves, stones, twigs, flowers, seeds etc

C: you have pre collected and prepared resources

Take photos to record children's work.

Plenary: ask children to evaluate their work using two points: **WWW** (What went well) and **EBI** (Even Better If).

The Yellow Bean Tree, Catalpa ovata – Seed dispersal

Learning Objective: to identify different methods of seed dispersal.

Success Criteria:

- can explain the term seed dispersal
- can explain different methods of dispersal
- can identify features of seeds for each dispersal category

Scientific Enquiry Skill: identifying, classifying and grouping.

Vocabulary: dispersal, scattered, overcrowding, carried, feathery and consumed.

Resources: images of seeds from trail, collected seeds/pictures of different seeds and video below: **www.bbc.co.uk/bitesize/topics/zxfrwmn/articles/z28dpbk**

Introduction: introduce the children to the idea of seed dispersal using their recent trip to Sydney Gardens and knowledge gained of types of seeds at the gardens. Explain that Sydney Gardens is managed by a team of gardeners and volunteers, which means the gardeners decide where they want specific, bushes, flowers or trees to be planted. This doesn't stop the trees from producing seeds with the hope they will travel and grow!

What seeds did we look at, at Sydney Gardens? Acorn, Sequoia Cone with seeds etc.

Can you think of any other examples of seeds produced by trees: apple seeds, conkers etc.

Share images of different seeds.

All these seeds are designed to move away from the trees they grew from, why do you think this is?

If not elicited introduce the problem of 'overcrowding'. And the term 'seed dispersal'.

How do you think the seeds disperse? Elicit ideas.

Main Teaching: share the image of the seeds from Sydney Gardens and share the concepts of dispersal by wind, animal and explosion **www.bbc.co.uk/bitesize/topics/zxfrwmn/articles/z28dpbk** Ask children to talk in small groups to decide which category each seed should go in and why. Remind children of fun fact re Sequoia: The Sequoia is unusual and doesn't fit into these categories because their cones spread their seeds after being heated by wildfires.

Activity: on each table provide a giant piece of paper with the three categories: Wind, Animal, Explosion.

Depending on season and weather you could invite children to classify a selection of seeds that:

A: children have found in playground or on a local walk

B: you have pre-collected

C: you have printed images of

Invite children to classify the selection of seeds, thinking about why they belong in each category and share their findings.

Next challenge children to identify features of seeds suited to each type of dispersal.

Questions to support their categorisation: ***Can it be easily blown? Is it light to travel on the wind?***

Is it tasty for animals? Could it get stuck to an animal's fur? Does it come in a pod that could pop open? (Note the Catalpa bean pods are an exception, they disperse by wind, the pod splits open creating 'wings' to assist it to fly!).

Extension: children could research other types of dispersal such as water or fire.

Plenary: which seed in your opinion is the most successful at dispersing, why?

The Maidenhair Fern, Ginkgo Biloba – Pollination and fertilisation

The Ginkgo is famed as being a 'living fossil' meaning that the organism has changed very little over millions of years. There are specimens of Ginkgo in the rock record from over 270 million years ago, in the Permian Period.

Learning Objective: to explore the life cycle of flowering plant.

Success Criteria:

- label the parts of the flower used for reproduction
- create a comic strip that portrays pollination by insect or wind

Scientific Enquiry Skill: identify and classify.

Vocabulary: pollination, fertilisation, stamen, carpel, stigma, ovary, eggs, pollen, sexual and asexual reproduction.

Resources: flowers such as tulips, daffodils or lilies, labels with the lesson vocabulary on. **www.bbc.co.uk/bitesize/topics/zxfrwmn/articles/zfn6t39**

www.bbc.co.uk/bitesize/guides/zykp34j/revision/1

Introduction: tell the children that they are going to explore the life cycle of flowering plants and identify the different parts of the flowers and their uses. Ask the children what they know about the flowers in front of them, do they know the names of the flowers or their different parts? Demonstrate to the children the way to dissect a flower, lay it out and identify the parts they know.

Activity: in pairs children take a flower and dissect it, laying out the different parts. Give the children labels for the parts of the plant and ask them to put them next to the corresponding parts. If they don't know some of them ask them to keep them to one side.

Main Teaching: all these parts of a flower come together to help the flowers to reproduce. How do you think a tulip/lily/daffodil reproduces? Watch the video, ask the children to add the remaining labels for the flower as they come up on the screen.

Watch for a second time pausing for key questions.

What does the bee do?

What attracts the bee to the flower?

Where does the pollen need to go?

How are the seeds made?

What is this process called? Pollination.

What else helps to transport pollen?

Main Activity: children to create a short comic strip showing the pollination of a plant via bee or wind. Children to use 3 to 4 drawings and a description.

Extension: Plants can reproduce in one other way which does not involve pollen. This is known as asexual reproduction and requires only one parent to create an exact copy of the adult plant. Watch this video to find out more **www.bbc.co.uk/bitesize/guides/zykp34j/revision/1** Ask children to draw a diagram for a plant that uses asexual reproduction and make a comparison between both types of reproduction.

Plenary: the Ginkgo trees that we saw at Sydney Gardens are a little more unusual. Unlike the flowers we have looked at that have both male and female parts in them, the Ginkgo tree is either male or female.

How do you think it produces seeds?
The pollen from the male flowers has to be transported by wind or insect to fertilise the female tree which then produces seeds shaped like almonds.

What problems might this cause?
If there isn't a tree of the opposite sex in the area, the tree cannot reproduce.

In the UK often only the male tree is bought and planted in gardens why? Because the fruits that the female tree produce smell like vomit or poo! Some scientists think that this was to attract dinosaurs to eat them, so the seeds could be dispersed far and wide.

Visiting Sydney Gardens

Getting to the park

Walking: You can walk from the City Centre in 10 – 15 minutes along Great Pulteney Street.

Cycling: About 5 minutes from the Centre along Great Pulteney Street. There are 3 cycle lock up points in the park: by loos, Bathwick entrance and in the play area.

Bus: Routes: 11, 94, D1. The 734 also runs near the park.
Stops: Holburne Museum, Forester Road, Darlington Road.

Parking: Free parking is available around the edge of the park on Sydney Road (some bays are restricted to 2 hours, some are 4 hours between 8am to 6pm). They are often full, so leave plenty of time. There is also some free parking up the Warminster Road. The Holburne has a small car park beside it mainly for Museum visitors, and you need cash for the machine.

Minibus drop off: There is a pull in at the Holburne Museum gate at the very bottom of Sydney Road. Try calling the Holburne for further information about dropping off groups by minibus/coach on 01225 388569 or email **enquiries@holburne.org**

Toilets: There is a public loo in the park (20p card payment access). There are also public toilets in the Holburne. There is a Changing Places facility in Sydney Gardens.

Refreshments: There are occasional food/drink carts in the park, and a café in the Holburne

The play area: Panna football court, basketball hoop, table tennis, climbing, swings, slides, a natural play area and a ‘sham castle’.

Extra reading and resources for Sydney Gardens' tree trail

Heritage and history trails for adults and kids:
www.bathnes.gov.uk/sydneygardenstrails
www.bathnes.gov.uk/sydneygardenslearning

General information about Sydney Gardens
www.bathnes.gov.uk/sydneygardens

Articles about the trees in Sydney Gardens
https://medium.com/sydney-gardens-bath/trees/home

Richard S White's articles on Botany Empire Deep Time
https://medium.com/sydney-gardens-bath/trees/home

History booklet about the 'Peace Oak' at Sydney Gardens and the 100th anniversary https://beta.bathnes.gov.uk/sites/default/files/peace_oak_16pp_a5_booklet_online_1.pdf

Information about conscientious objectors in WW1
www.iwm.org.uk/history/voices-of-the-first-world-war-conscientious-objection

This Tree Dreams (Poem for Sydney Gardens.), by James Randall
https://medium.com/sydney-gardens-bath/this-tree-dreams-for-sydney-g-by-james-randall-87990e9c5afe

Further Information on Cherokee Nation
www.nationalgeographic.org/article/sequoyah-and-creation-cherokee-syllabary/

www.britannica.com/event/Trail-of-Tears