

These sheets have been produced by the Bohemia Walled Garden Association from activities done at the garden at events to prompt learning about nature through hands on experiences. There were several Natural History events in 2016 that were funded as part of the Heritage Lottery Fund. The grant has also funded the sheets to enable others to download them to engage other children. Unless stated otherwise the sheets are for children of primary school age.



**WILD FLOWER IDENTIFICATION** 

· Art Activity · Templates



MOTH IDENTIFICATION · Art Activity ·Templates



WOODLAND ANIMAL STORY Badger Says No' to Rubbish in the Wood'

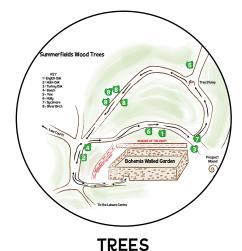


MAKE A GARDEN FOR BEES & BUTTERFLIES

· Art Activity · Templates



SOIL pH & WORMS · Make a wormery · Bug Hunt



· Tree Trail · Ouiz: Clues & Answers Measure Your Tree

Design by Super8Design.com, Kristina Alexander · Content by Mary Dawson and Daniela Othieno





### WILD FLOWER IDENTIFICATION

Identify 3 flowers by making a picture from cut out shapes (templates given)

- · Dandelion
- · Red Campion
- · Creeping Buttercup

Simple identification by shape of petals and



Next stage example To use book by Richard Fitter, Alister Fitter and Marjorie Blamey

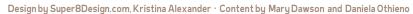
Reference list of wild flowers found in Summerfields Wood in May 2017

Red Campion Bilene dioica

Next stage example To use ID charts Field Studies Council **Guide to Woodland Plants** 

5 Petals

Dandelion (Taraxacum





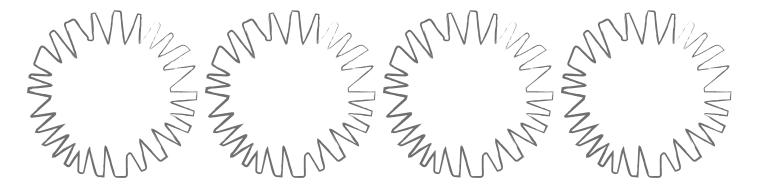




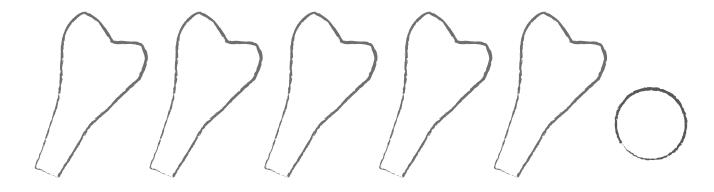


### WILD FLOWER TEMPLATES

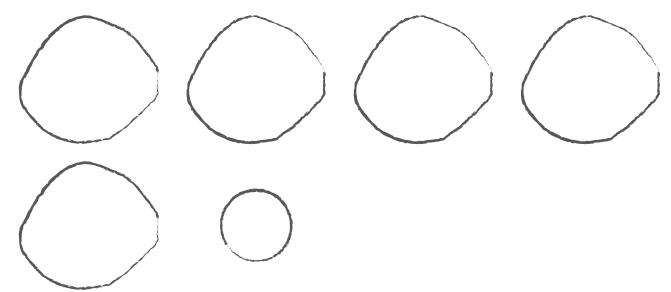
**Dandelion** 



### **Red Campion**



### **Creeping Buttercup**

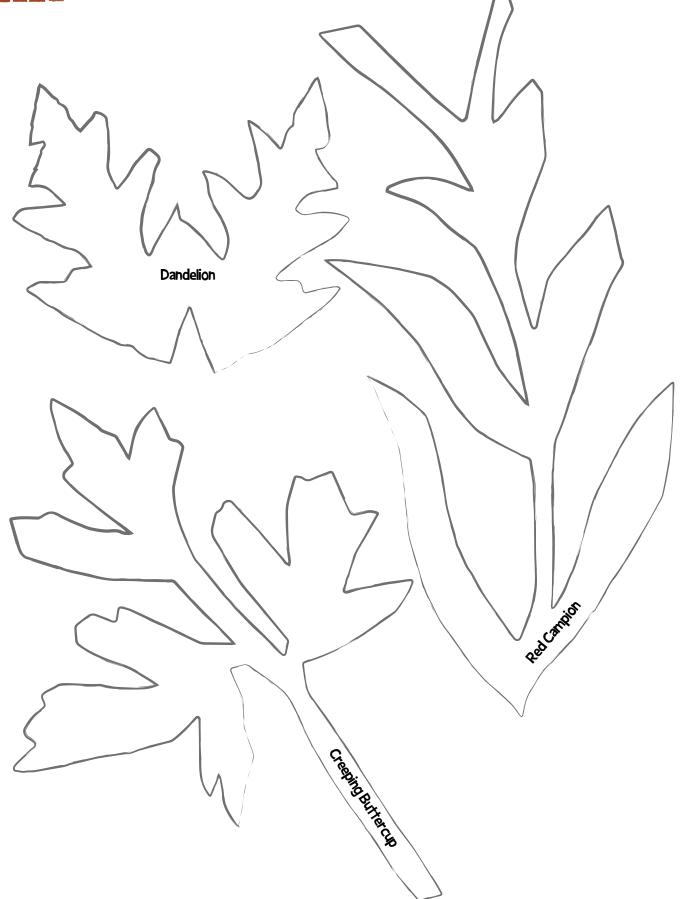








### WILD FLOWER LEAF TEMPLATES



 ${\bf Design\,by\,Super\,8Design.com}, Kristina\,Alexander\cdot Content\,by\,\,Mary\,Dawson\,\,and\,\,Daniela\,Othieno$ 







### **WILD FLOWER WALK: 7 MAY 2017**

This was the abundance of plants that visitors discovered in Summerfields Wood during a Wildflower Walk organised by the Bohemia Walled Garden Association on 7th May 2017.

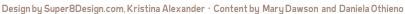


The short route started from the entrance of Bohemia Walled Garden, turning left on the footpath and up to Prospect Mound. It then followed the footpath down to the wet area (taking in the mock Roman Bath), then up the footpath to higher ground and returning to the Walled Garden.



Twenty-five people attended, of whom twenty were new visitors to the garden. The walk was led by two members of the local botany group.













### WILD FLOWER WALK: 7 MAY 2017



### **COMMON NAME**

### LATIN NAME







Opposite-Leaved Golden Saxifrage (IF) ..... Chrysosplenium oppositifolium

Cleavers (Sticky Willie) (NIF) ......Galium aparine

Herb Robert (IF) ------Geranium robertianum Rosebay Willowherb (NIF) .....Chamerion angustifolium

Violet (IF, F) -----Viola sp

Hart's Tongue Fern (NIF) -----Phyllitis scolopendrium Bracken (NIF)------Pteridium aquilinum Field Maple (IF) ------Acer campestre Rowan (IF)-----Sorbus aucuparia

Sucamore (NIF) Acer psedoplatanus Hornbeam (IF, F) ......Carpinus betulus

Wavy Bitter Cress (IF, F) .....Cardamine flexuosa

Enchanter's Nightshade (NIF).....Circaea lutetiana

Bramble (NIF) Rubus fruticosus agg

Ivu (NIF)-----Hedera helix

Wood Anemone (NIF, F)------Anemone nemorosa

Daisu (IF)-----Bellis perennis

Holly (NIF)-----llex aquifolium

Great Horsetail (?) -----Equisetum telmateia Bluebell (IF) ------Hyacinthoides non-scripta

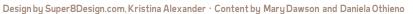
Hybrid Bluebell (IF) ------Hyacinthoides x massartiana

"Spanish" Bluebell (IF)------tiana

Germander Speedwell (IF) ......Veronica chamaedrys Wood Speedwell (IF, F).....Veronica montana

\*Keys: IF (in flower), NIF (not in flower), F (in fruit)









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Four simple moth shapes to cut out & colour (templates included)

- · Elephant Hawk Moth
- · Emperor Moth
- · Black Arches
- ·Burnet 6 spot







#### SOME MOTH MYTHS

· Moths only fly at night. Untrue: The Burnet is a day flying moth

· Moths do not pollinate. Untrue: A large numbers are pollinators

· Moths are dull. Untrue: See the colours of the Elephant Hawk



**Websites** sussexmothgroup.org.uk ukmoths.org.uk

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### MOTHS IN SUMMERFIELDS WOOD



BLOXWORTH SNOL,



Moths trapped 9/9/17, led by Crystal Ray

Large Yellow Underwing Square-spot Rustic Setaceous Hebrew Character **Brimstone Moth Light Brown Apple** Light Emerald Snout **Bloxworth Snout** (one male, one female)



Small Blood-vein **Common Plume** 

**Chequered Fruit-tree Torti** Parsnip Moth

**Spectacle** 

Cochylis moliculana

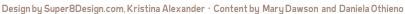
Epinotia ramella **Barred Sallow** 







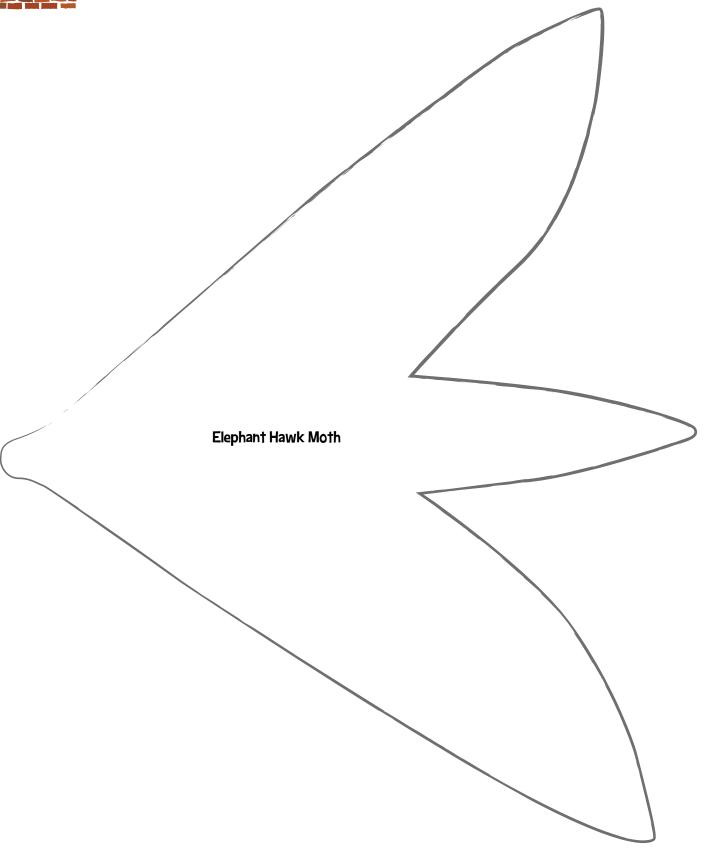








### **MOTH TEMPLATE**

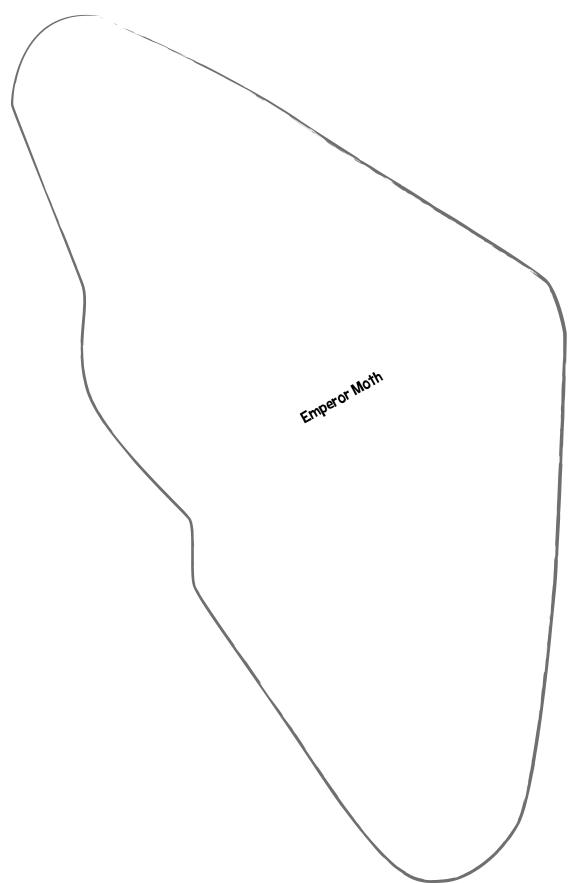








### **MOTH TEMPLATE**



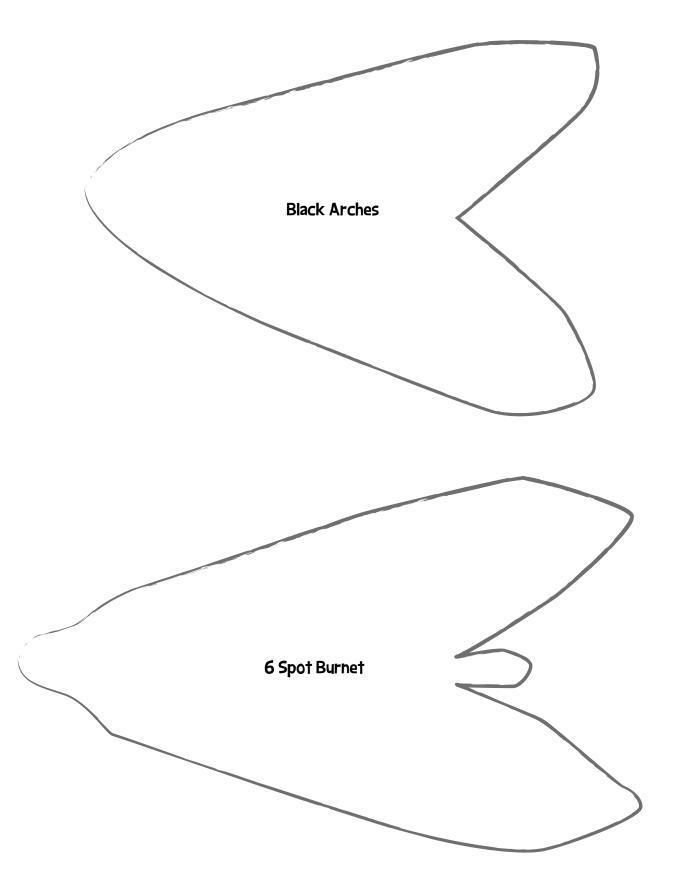








### **MOTH TEMPLATE**











### RAINBOW STORIES BY MARY DAWSON

BADGER SAYS 'NO' TO RUBBISH

It was dusk, the time of day when the light is fading but the stars are not yet lighting the night sky. Badger and his family emerge from the badger sett. The young badgers start to root about for food.

'Oh no' says Big Badger 'oh no not again more rubbish!'

Some people had been to the wood for a picnic and left crisp packets, foil and plastic sandwich wrappers, coke cans, orange peel, bits of food. It was all over the place where badger and his family needed to root for worms. The cubs were rooting in the rubbish and trying to eat it.

'No no its not good to eat' Big Badger told them.

Then they heard a loud scream....Big Badger ran to see what it was.



There was fox with his foot in a can. The visitors had been cooking on fire and that area was still warm and they had left a sharp-edged bean can.

Big Badger manages to pull the tin off fox's leg but it had left a nasty wound.

Badger returned to the young badgers who were playing with the rubbish and one had eaten some of the left food and was being sick.

The Hedge hog family had come into the clearing and the young ones were playing with the rubbish several of then had crisp packets sticking on their spines.

'Oh no' said Badger 'not again!'

Just then the bats flew into the clearing. But they were flying all over the place

they seemed dizzy. Their echo location, needed for them to catch moths to eat was not working because there were plastic balloons hang in the trees. They were confusing the bats.

'Oh no' said Badger 'not again.'

Fortunately there was a call from the owl who flew in to the clearing. He knew what to do. He pecked each balloon so it floated down to the ground. So the bats could feed.

But the young badgers and hedge hogs were now trying to eat the balloons.

'Oh no don't eat that' said Big Badger.

The night sky was getting light and it was time for the nocturnal animals to go to their homes again.

The badgers and hedge hogs were hungry as they had not had any time to find food!

Big Badger settled down to sleep and was feeling very cross. Later that day he woke to hear happy children's voices.

Oh no' he said 'not again'

But then he heard a human say,

'Come on children we need to clear up this mess.'

It was the children who came to the wood to play and they never left rubbish. In fact they always cleared up any rubbish that others left.

Badger soon went back to sleep knowing that the wood would be clear of rubbish so he and his family could feed well and be safe in the wood the next night.

'No rubbish in our wood' said Big Badger as he snuggles down to sleep.







### A GARDEN FOR BEES & BUTTERFLIES

### GARDEN PICTURE

Make a picture of a garden, cut out colour, and paste in the garden your own bee and butterfly.

- 1. On card, paste pictures of flowers that attract bees and butterflies. Use pictures from old gardening magazines.
- 2. Cut out bees and butterfly shapes (templates included in this activity pack), colour and paste in the garden picture.

#### **WEB SITES**

RHS pollinator plants list **Bumblebee Conservation Society** 

#### **REFERENCE LIST**

List of Bees found in area of Summerfields and the garden 2016 by Derek Binns, included in this activity pack

Butterflies of Sussex 'A Twenty First Century Atlas' by Michael Blencome and Neil Hume



### PLANTING BULBS FOR BEES & BUTTERFLIES

The bulbs are different sizes so will need to be planted at different depths.

Rule for bulb planting: Plant twice the depth of the bulb and leave plenty of room for roots to grow down when planting in pots. Bigger pots are needed for bigger bulbs. Remember to water pots if kept inside, keep in the light, or put them outside over winter. If planting in the ground mark the bulbs and keep weed free. Examples to plant in the Autumn to flower April/May the following year.

#### **TULIPA** LINIFOLIA

Small pot, 2cm deep Small tulip, red Height 4/5 cms

#### **CROCUS**

Medium pot, 3cm deep Yellow & Purple Height 5/7 cms

#### **ANENOME BLANDA**

Small pot, 2cm deep Purple blue poppy like Height 4/5 cms

#### MUSCARI ARMENIACUM

Medium pot, 3/4cm deep Grape like pale purple flower Height 6/7 cms

#### **CHIONODOXA** LUCILAE 'ALBA'

Small pot, 2cm deep Pale blue petals white & yellow centre Height 4/5 cms

#### NECTAROSCORDUM **SICULUM**

Large pot, 4/5cm deep Pretty pink bell like flowers Height 4/5 cms

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### BEES SEEN NEAR BOHEMIA WALLED GARDEN



**Tawny Mining Bee** Andrena fulva - Female



Yellow-Legged Mining Bee Andrena flavipes



**Ashy Mining Bee** Andrena cineraria - Female



Orange-tailed Mining Bee Andrena haemorrhoa - Female



Tree Bumblebee Bombus hypnorum



Gooden's Nomad Bee Nomada goodeniana



Common Carder Bee Bombus pascuorum



Red Mason Bee Osmia bicornis



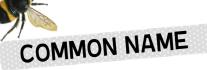
Early Bumblebee Bombus pratorum







### BEES SEEN NEAR THE WALLED GARDEN 2016



### LATIN NAME

Tawny Mining Bee · · · · · Andrena fulva

Early Mining Bee · · · · · Andrena haemorrhoa

Buffish Mining Bee ..... Andrena nigroaena

Wilke's Mining Bee · · · · · Andrena wilkella

Wool-Carder Bee ..... Anthidium manicatum

Little Flower Bee · · · · · Anthophora bimaculata

Hairy-footed Flower Bee · · · · · Anthophora plumipes

Honey Bee····· Apis mellifera

Tree Bumblebee · · · · · Bombus hypnorum

Red-tailed Bumblebee ..... Bombus lapidaries

White-tailed Bumblebee Bombus lucorum

Common Carder Bee · · · · Bombus pascuorum

Early Bumbebee ..... Bombys pratorum

Buff-tailed Bumblebee · · · · · Bombus terrestris

····· Colletes hederae

Common Furrow Bee ..... Lasioglossum calceatum

Leaf-cutter Bee····· Megachile centuncularis

Gooden's Nomad Bee · · · · Nomada goodeniana

Marsham's Nomad Bee ..... Nomada marshamella

Fork-jawed Nomad Bee · · · · Nomada ruficornis

Red Mason Bee····· Osmia bicornis

Blue Mason Bee · · · · · · ····· Osmia caerulescens

····· Shecodea spp. Sweat Bee·····









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# BUTTERFLIES SEEN NEAR BOHEMIA WALLED GARDEN



Butterflies are INSECTS!



SPECKLED WOOD



RED ADMIRAL

Butterflies help pollinate flowers. Their presence or absence indicates a lot about the health of the local environment.

The life cycle of a butterfly is made up of four parts, egg, larva (caterpillars), pupa (chrysalis) and eventually the adult.



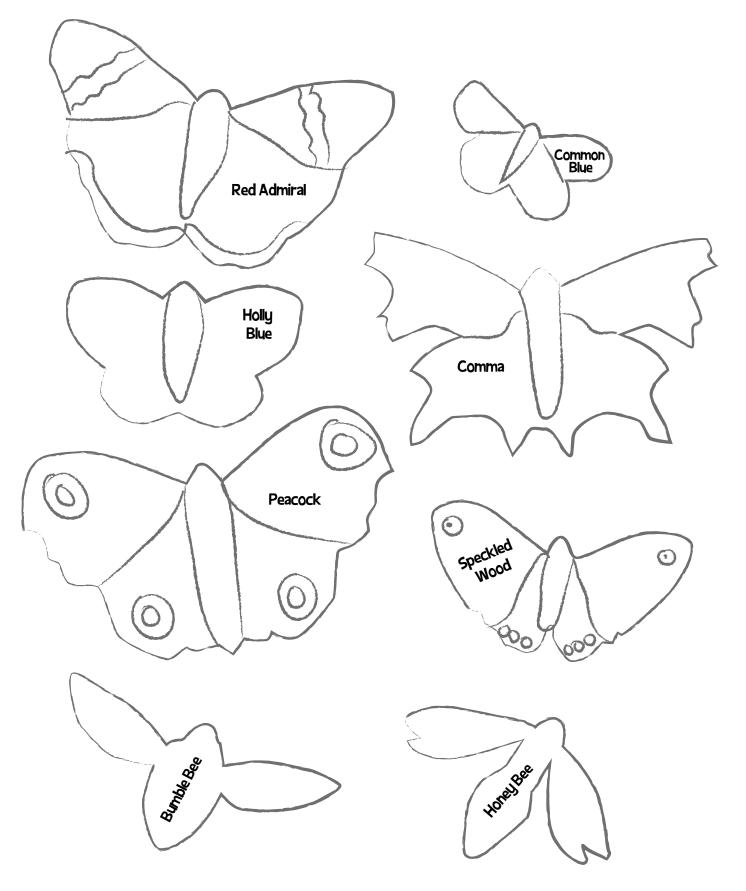
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### BEES & BUTTERFLIES TEMPLATES









### pH, WORMS & BUGS: AGES 8-14

#### What is pH?

It is a measure of how acid a liquid or soil is. The range is between 0 -14: Acid is 0-6, Neutral is 7, Alkaline is 8-14

#### How do we measure pH?

There are many difference metres that can be purchased. Also litmus paper which is inexpensive. Instructions will be given with these.

#### Why is pH important?

In gardening it is very useful to know the soil pH. This is because plants need certain nutrients to grow. The soil pH affects which nutrients are available in the soil for a plant to take in to grow. Many plants but not all like a neutral soil.

#### Reference Chart

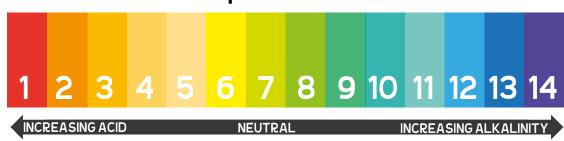
Shows how pH affects the availability of plant nutrients. Gardening books will give information regarding soil pH for plants.

The session included collecting soil from different areas of the garden and tested and recorded the results. It was also compared to the pH of shop bought compost. (See chart below to record)

#### **Worm Count**

The students also noted how many worms they found in the different areas.

### pH Chart



LOCATION	WHERE SOIL WAS COLLECTED?	WHAT WAS THE pH?	DID YOU SEE ANY WORMS?







**WORMS ACTIVITY: AGES 2-8** 

# **WORMS ARE AMAZING!**

Worms break down soil so it is fertile for growing plants so they are' the gardeners best friend'

The famous scientist Charles Darwin studied worms for 39 years and said 'LIFE

There are 34,000 different worms

On Earth.

On Earth.

If worms are accidentally cut in half the part with the saddle (pink fat segment) lives

Thatch out little worms

Worms only ear dead material dead material as of soil

hey can live up to 10 years!

Worms are HERMAPHRODITE each worm is male and female

Worms have lived on earth for 600 million years

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### MAKING A WORMERY

#### Whu?

To show how worms break down dead materials to make compost

#### Time?

To make about half an hour. Time to observe the worms activity will be a couple of weeks

#### **Equipment**

Group: Can be made in big glass jar or old glass fish tank Individual: Make in clean glass jars (note safety keep on flat surface)



Sand or and fine gravel

Old leaves

Food, veg and fruit peelings, tea leaves

• Earth worms collected in plastic pots

• Card to make a lid

Black paper or card

Scissors

• Elastic band or masking tape to fix lid to jar

Old spoons and trowels

#### Method

- 1. Find a flat surface to work on table or on the ground
- 2. Put thick layers of soil then sand/gravel until pot is almost full. Leave about 7cms clear to the jar top
- 3. Children collect worms...tell them to be gentle with the worms
- 4. Talk about worms how amazing they are!
- 5. Worms are put in jars and put leaves and food waste on top
- 6. Make a lid and fix it. Make a few holes in the lid
- 7. Put the black card around the jar
- 8. Put the jar in a safe place
- 9. Check that the soil does not dry out
- 10. After a couple of weeks. See what has happened to the food. The worms will have pulled it down into the soil and sand and made compost.
- 11. The worms will need to be returned to the soil after the observations has taken place









### **BUG HUNT: ANY AGE**

#### Bug ID Charts & Book

The Woodland Trust Nature Detectives has a great chart to download:

www.woodlandtrust.org.uk/naturedetectives/ activities/2015/06/creepy-crawly-spotter-sheet/

- ·Bugs can be hunted at any time when out in gardens, woods, fields or beach
- ·Bugs will hide under logs, stones or in hollows of tree trunks. On wild flowers and in bushes and in long grass. Always lift up logs etc very slowly and quietly or the bugs will hide away
- · Children need to be told to be gentle when getting them into pots etc
- · It is possible to collect in pots, in fabric, and in nets but be very careful, using small brushes or soft pieces of wood
- · After looking at them then PUT THE BUG BACK WHERE THEY WERE FOUND

#### **Equipment**

- · There are many types of bug pots/lens/microscopic hand lens
- · You can also use binoculars 'the wrong way round'!

#### Have FUN!























### MINI CREATURES FOUND IN SUMMERFIELDS WOOD

#### DRAGON & DAMSELFLIES

(Odonta)

Azure Damselfly Large Red Damselfly **Broad-bodies Chaser** Common Darter Southern Hawker Vagrant Darter





### **BUTTERFLIES & MOTHS**

(Lepidoptera)

Comma Common Blue Gatekeeper **Holly Blue** Large Skipper

Meadow Brown

Peacock

Purple Hairstreak

Red Admiral

**Small Copper** 

Small Tortoiseshell

Small White

Speckled Wood







2-spot Ladybird 7-spot Ladybird

10-spot Ladybird

14-spot Ladybird

Cream Spot Ladybird

Orange Ladybird



**MILLIPEDE** 











### TREE TRAIL

These sheets can be adapted for use in different woods. You will need to make a map for the wood trail that you walk in. Included in this Nature Activities pack is an example of the Tree Trail for Summerfields Wood in Hastings. These sheets can be adapted for different ages by including less trees, less questions in the quiz.



#### TREE TRAILS CAN BE USED FOR:

A lovely walk

A walk to learn to identify trees

A walk to measure and calculate the age of trees

A walk and bird watching (Invite a local bird watcher/ **RSPB** member

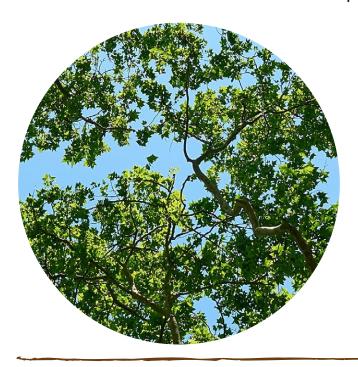
A walk to collect rubbish and learn about the harmful affects of rubbish on animals. See story, Badger Says No to Rubbish', included in this pack)

A walk combined with other activities, example making animal habitats

A walk and art using mud to make sculptures, leaves for landscape art

A walk and story/drama adventure

Games like Hide and Seek, Grandmother's footsteps





#### **REFERENCES**

Id charts (FSC) see list of web sites/information Woodland Trust Nature Detectives (buds/leaves ID) downloadable **EXCELLENT BOOKS** 

Collins Tree Guide Owen Johnson & David Moore Dr Owen Johnson is the national Tree registrar he lives in Hastings Pocket book Collins gem Trees

Nature's Play ground Fiona Danks and Jo Schofield

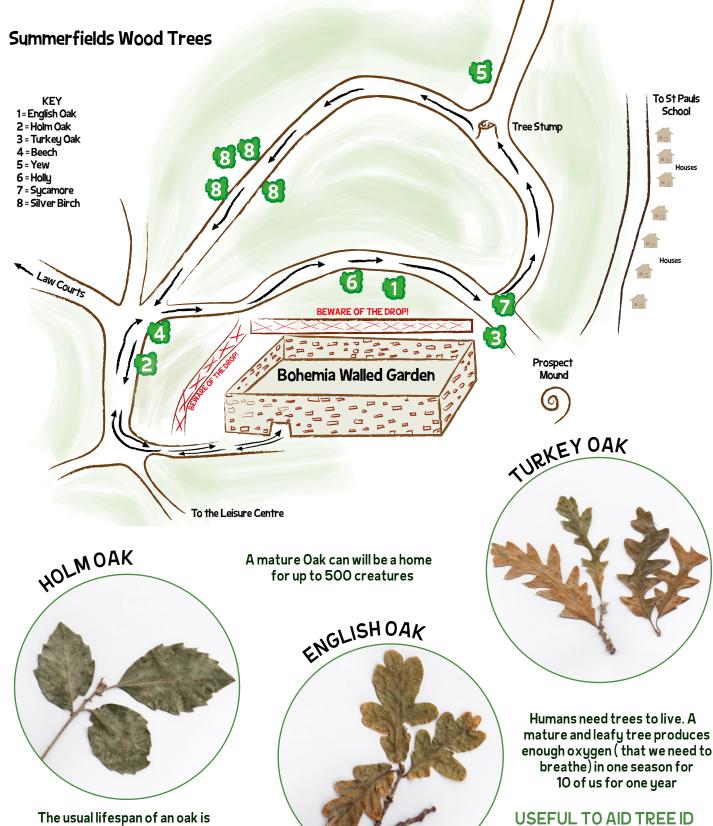
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### TREE TRAIL: SUMMERFIELDS WOOD



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Woodland Trust Nature Detectives

(Buds/leaves ID) downloadable

Pocket book Collins gem Trees

about 200 years, but some live

over 1,000 years. Other trees

like Yews can live even longer



### TREE TRAIL QUIZ: SUMMERFIELDS WOOD

Adapt for your wood you may not have 3 different oaks

Put the laminated tree clue on front and answer on the back, tie to the tree

Best to use one clue only for each tree

Give a map & clue sheet to each child/family

#### WHO AM 1?

#### 1 ENGLISH OAK

There are 3 different trees of my family in the wood I am called the English...

I can live for 1,000 or more years

I am often called the King of the wood and many creatures live on me

#### 2 HOLM OAK

I am in the same family as English ... I came from far away and I like to be near the sea My bark is very dark almost black

My leaves are ever-green (do not drop in Autumn)

Leaves are dark green and soft to touch on the underside

#### 3 TURKEY OAK

My name tells you which part of the world I came from The name is also a type of bird that some people eat at Christmas My acorns have no stalks but the acorn cup has wiggly whiskers My leaves are deeply lobbed (indented)

#### 4 BEECH

My bark is smooth and shiny silver/grey My leaves feel silky I have nuts that have prickly husks that squirrels love to eat

#### **5 YEW**

I can live many many years and am often found in old churchyards My leaves are very thin and my red berries are poisonous so beware!

#### 6 HOLLY

My red berries are food for birds in winter I am in a Christmas song the ..... and the Ivy My bark is often dotty and my leaves are prickly

#### 7 SYCAMORE

There are a lot of these trees in Summerfields wood I am in the Maple family and can grow very big My leaves are very colourful (red/yellow) in Autumn I have 'keys' that children call helicopters and use them as spinners

#### 8 SILVER BIRCH

My bark is silvery/white I have catkins in spring and small leaves I am often tall and thin I am often called the 'Lady of the wood'







### **MEASURE YOUR TREE**

#### **HOW OLD IS YOUR TREE?**

With a tape measure ....measure the circumference (around the trunk)

Use this formula: Circumference x + 4 and divide by 10 = the age

#### **Examples**

Circumference = 250cms  $\times$  4 = 1000 divide by 10 = 100, tree is 100 years old

Circumference = 60cms x 4 = 240 divide by 10 = 24, tree is 24 years old

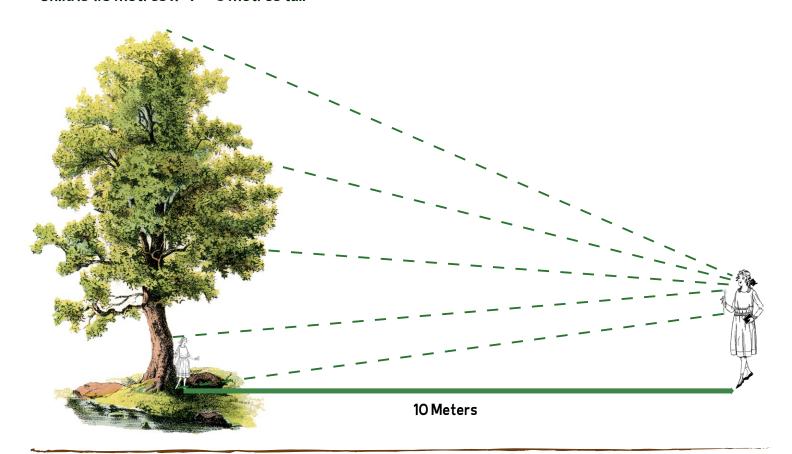
#### **HOW TALL IS YOUR TREE?**

- 1. Child 1 or adult stands next to the tree. Measure that child's or adult's height
- 2. Child 2 or adult walks 10 metres away (measure with tape, 1 metre x 10) and faces the tree
- 3. Find a straight twig
- 4. With a twig and the arm straight, line up the twig with child 1 or adult HEAD (who is by the tree)
- 5. Mark or break twig where it lines up with child or adults FEET
- 6. Then count how many times the twig's marked length fits into the height of the tree

#### Formula

Child or adults height x the number of times the twig fits into the height of the tree = tree height Example

Child is 1.5 metres x 4 = 6 metres tall









### RESOURCES

sussexmothgroup.org.uk Information about local species as well as Sussex Moth Group and local Hastings branch events

rx-wildlife.squarespace.com Events and wildlife sightings from **Dungeness to Hastings** 

mothscount.org Lots of information about moths

nationalmothnight.info An annual national counting scheme

ukmoths.org.uk

Help identify British moths

hantsmoths.org.uk

Great site to help identify moths and a handy 'What's flying now guide which lists 100 most common moths for any week of the year

ukleps.org

Dedicated to identification of eggs, larva and pupa of many British moths and butterflies

**BUTTERFLIES** butterfly-conservation.org

buglife.org.uk

**BEES** 

bumblebeeconservation.org beewalk.org.uk

**BATS** bats.org.uk

**LADYBIRDS** ladybird-survey.org **DRAGONFLIES** british-dragonflies.org.uk **AMPHIBIANS AND REPTILES** arc-trust.org

**GENERAL SITES** 

rspb.org.uk

wildlifetrusts.org

gov.uk/government/organisations/ natural-england

Government's adviser for the natural environment in England. Information and policies

plantlife.org.uk

British conservation charity working nationally and internationally to save threatened wild flowers, plants and fungi

woodlandtrust.org.uk

rspca.org.uk/adviceandwelfare/litter Raising awareness of how littering and rubbish affects animals

LOCAL SITES

sussexwildlifetrust.org.uk sussexwildlifetrust.org.uk/rye harbour Forest School, Nature Tots, bird watching, beach cleans etc

rspca.org.uk/mallydams

educationfuturestrust.org Forest and beach school

**EDUCATIONAL RESOURCES** & ACTIVITIES

muddyfaces.co.uk Resources for children

field-studies-council.org Resource of environmental field studies papers available as pdf

downloads. Aimed at non-specialists rbkc.gov.uk/subsites/wildlife.aspx The Ecology Centre at Holland Park

runs a series of events, activities. educational visits and workshops for schools

woodlandtrust.org.uk/naturedetectives/ Discover exciting wildlife activities to help kids explore nature!

outdoorstudiosarts.com Artist-led workshops for creative experiential learning that explores

environments, landscape, and place

### **GARDENING ADVICE**

rhs.org.uk/science/conservation-biodiversity/.../plants-for-pollinators Pollinator advice and downloadable lists from Royal Horticultural Society gardenersworld.com

Practical gardening advice on what to do in your garden and greenhouse

#### SPOTTER GUIDES, IDENTIFICATION SHEETS & APPS

Helping you to spot & identify wildlife and nature

wildlifewatch.org.uk/spotting-sheets

nationaltrust.org.uk/lists/summer-wildlife-spotter-guides

rspb.org.uk/birds-and-wildlife/wildlife-guides/identify-a-bird/

plantlife.org.uk/uk/discover-wild-plants-nature/spotter-sheets

reading.ac.uk/Herbarium/KiteSite/hrb-KSsppidguides.aspx

opalexplorenature.org/identification

nhm.ac.uk/take-part/identify-nature/

buglife.org.uk/bugs-and-habitats/bug-identifier

ispotnature.org/

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