

Queenswood Country Park & Arboretum Educational Resource Pack

KEY STAGE 2

History, Geography, English, Science, Maths, Design & Technology, Art.



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This pack contains information and resources for KS2 groups to discover the history and heritage of Queenswood Country Park and Arboretum. The walk is suitable all year round but some of the activities are seasonal.

This is a cross-curricula, teacher-led education pack that includes seasonal activities devised specifically for Key Stage 2 to introduce children to the natural and historical heritage of the woodland site, its archaeology and how its management has changed over time.

Queenswood during the First World War can be explored as well as the wildlife species found there.

Background information for teachers

Queenswood Country Park and Arboretum is one of the most popular outdoor tourist destinations in Herefordshire, with about 450,000 annual visitations. The site includes 123 acres of semi-natural ancient woodland and an arboretum of 1,800 rare and exotic trees. A Site of Special Scientific Interest (SSSI) for semi-natural ancient woodland, Queenswood is also a Local Natural Reserve with open access under the Countryside & Rights of Way Act.

The entire woodland was saved from housing development in the 1930s following a successful public appeal led by the Campaign for the Preservation of

Rural England. Management of the Country Park and Arboretum was transferred from Herefordshire Council to a partnership between Herefordshire Wildlife Trust (HWT) and New Leaf sustainable development by way of a community asset transfer in spring 2016.

This pack was produced as part of the Queenswood
Heritage Gateway Project, funded by the National
Lottery Heritage Fund and the European Agricultural
Fund for Rural Development. The project explored
and showcased the heritage of the site with new
opportunities for visitors to learn about the arboretum
and history of Queenswood.

Queenswood is an ideal place to bring a group of children for educational sessions and fun events. In addition to the woodlands to explore, we have excellent facilities to ensure that everyone enjoys their visit.



How to find Queenswood Country Park

Postcode for sat navs: HR6 0PY

From Hereford (A49) - approx 9 miles:

Queenswood is situated at the top of Dinmore Hill on the A49. Follow the brown and white signs at the top of Dinmore Hill.

Facilities on site include:

Café

Toilets

Adventure playground

Optional room hire

Visitor centre & Gift shop

Picnic benches

Barbecues & pizza oven

Coach parking (£10 per day)

Hiring resources

You may bring your own equipment or hire it from us for a small deposit of £10 (in the Visitor Centre).

Please us know in advance so we can get it ready.

We have available to hire: binoculars, tape measures. bug pots, short lengths of rope. From Leominster (A49) - approx 5 miles:

Queenswood is situated at the top of Dinmore Hill on the A49. Follow the brown and white signs at the top of Dinmore Hill.

You will need to bring with you:

Educational pack

Printable resources

Pencils and Paper

Sturdy shoes

Outdoor/old clothes

Risk assessments

Please tell us when you are coming to Queenswood with your group and we will provide you with a generic risk assessment for you to adapt according to your requirements.



Resources required: i, ii, iii

A walk through the history of Queenswood

Your visit to Queenswood starts with a walk, which is a great way to enjoy being at Queenswood and to discover features which tell you about its past.

The walk is supplemented by a series of optional activities some of which require you to download resources prior to your visit or you can pick these up in the visitor centre during opening hours (10am - 4pm daily).

On the map provided (Resource i), decide on a route. As you walk around Queenswood look out for the archaeological features, monuments and buildings, making a note of what you see. Have a look at the list below for some ideas of where to visit.

On your return to school, you could add to the Queenswood timeline on page 21.

- First World War Commemorative Woodland
 Like much of Queenswood, this area was clear-felled (all the trees were cut down) 100 years ago to create timber for the war effort. As part of the Queenswood Heritage Gateway Project, this area now features
 - an artwork created by artist, Des Hughes. Read the interpretation panels to find out more.
- Tannery Building
 The Tannery Building is now the visitor centre and shop but was originally a 3 storey building in
 Leominster dating back to the late 17th or early 18th century. It was used for the tanning of animal hides to produce leather.
- Queenswood Cafe
 The Queenswood café was formerly a public house called the Essex Arms dating back to 1650-1720 and was originally located in Hereford.

Both buildings were relocated to the park in 1990 following a fundraising appeal to improve visitor facilities, but it was thought that building new buildings would be inappropriate. Reconstructing these two buildings here on site was like doing a giant jigsaw puzzle, the bricks and beams were numbered and placed in order one by one.

- Memorial Stone
 - The Memorial stone was placed here in 1935. This is a memorial to the Silver Jubilee of King George V, Queen Elizabeth II grandfather.
 - Note to teachers: this area can be muddy and is within close proximity to the A49.
- A Royal Visit

 Queen Mary (King George V wife) planted an oak tree near the memorial stone in 1937 and Queen

 Elizabeth II and Prince Philip planted 2 further oak trees on either side of the memorial stone in 1957?

 Can you tell which ones they are?



- Quarry (access from near Viewpoint)
 - The large sandstone blocks quarried from here (you can see some on the floor of the quarry) split easily and were used as roofing tiles. Quarrying at Queenswood took place during the 19th and 20th centuries. The old red sandstone rocks were laid down in the Devonian geological period 395 million years ago.
- Sawpits
 Sawpits can be seen around Queenswood that may have been in use during the 18th and 19th centuries.
 Imagine being at the bottom of a pit dug deep into the ground and holding one end of a very big saw, whilst your friend is standing at the top holding the other end of the saw. You would be pushing upwards to saw the tree, and he/she would be pushing downwards in turn. Think of the hard work and how much sawdust would you get in your eyes? (See picture Resource iii)
- Charcoal Burning Platforms

 These are the locations where charcoal makers built their charcoal mounds (see picture Resource iv). The charcoal makers would have slept in the woods in temporary shelters whilst keeping watch. Charcoal making has been going on for 30,000 years but was very popular in the 16th and 17th centuries when charcoal was used as a fuel, before coal became readily available. During the First World War charcoal was used to make explosives, and also in gas masks as it purifies the air charcoal must therefore have saved thousands of lives. Did you see anywhere the charcoal makers might have built their mounds?
- Holloways
 Once you know what you are looking at you will see Holloways in lots of places at Queenswood. These date back many years, possibly to the 1600's. Look for long furrows that were created by horses dragging timber out, creating well-worn routes. Did you see any?
- 10 Coppied Trees
- Coppicing is a traditional way of managing trees whereby the main trunk is cut above ground level and the tree responds by growing several stems. These stems can be cut after 5 to 10 years and used to make lots of useful items such as fences, bean poles, chair and table legs and for making charcoal. New stems will grow again so the process is completely self-sustaining. Look at the area below the viewpoint where we still manage the woodland as coppice.



D	• 1			
Resources	required:	v,	V1,	V11

Activity 1

Trees to win the war!

Context

During the First World War the site was clear-felled to provide timber for the war effort. The landscape of Herefordshire, and the UK at large, was changed forever by the Great War. Ancient woodlands were stripped; a generation of young men were lost; rural traditions and communities were changed forever.

Activity

In the First World War Commemorative Woodland the children will be trees, so spread them out and ask them to remain 'rooted' to the ground!

The telegraph was used in the First World War (WW1) to send orders from one location to another. Telegraph refers to the technology and the communications system. A telegram is a message sent via telegraph.

Ask a helper to relay telegram messages (Resource v) to the forester, played by a female helper/teacher.

Telegrams will be sent asking for a tree to be cut down for each of the following reasons in turn, in any order:

- 1. building trenches at the battlefront where the men were fighting
- 2. for Pit props in the coal mines
- 3. making charcoal for gas masks and explosives
- 4. building aeroplanes
- 5. building ships
- 6. making telegraph poles
- 7. making fences for farming
- 8. making rifles
- 9. making periscopes for use in trenches
- 10. making shovels for digging trenches

As each purpose is read out, the forester uses a pretend axe (use a suitable stick collected from the site) to fell a tree. That child squats down to represent having been felled. You can continue, repeating the uses of wood during WW1, until all the trees (children) are felled.

Additional Activity:

The Bodenham Roll of Honour gives the names and pictures of 22 soldiers who died during WW1, with another two who died after discharge. If this was, say, 25% of the local male population, calculate this percentage of boys in your class and remove them (temporarily!) from the group, to illustrate the significance of this loss.

Thoughts and Questions:

Whilst in the First World War Commemorative woodland, have a think about the huge effect that the war had here.

What effect do you think that clear-felling the woodland would have had on the wildlife that depended on the trees to live?

With men away fighting on the frontlines who do you think took the jobs that were normally done by men?



Case Story

Female Forester: Marion Watkins

Queenswood was clear-felled to provide wood for the war effort by women from the Women's Timber Corps. Women felled big trees with saws and axes – see photo right (Resource vi).

See photos below and right from Herefordshire Histories (www.herefordshirehistory.org.uk) (Resource vii) taken in 1916 of local women, including Marion Watkins who was a very skilled forester.



She was quite probably part of the forestry corps and remarkably was able to use the heavy English Felling Axe with both her left and right hands. We can see the branch wood in the background neatly piled and held in place with round rods. We can also see a coppice in the background and Marion is felling some of the oak standards. Not a hard hat in sight!



Use of Horses

Horses were once a common sight in Queenswood. Eventually replaced by machinery in the 1970s, horses had been used for centuries, tushing or moving the felled timber.

Photo below: Mr Probert, on his horse, was the sole woodsman employed at Queenswood between 1959 and 1977.

His granddaughter Sarah Rivers:

"He used to say that he had to keep the brambles down so that a lady could walk in the woods without ripping her stockings."





Resources required: Map of the world www.mapsnworld.com/worldmap-bigger-size.jpg

Activity 2

Tree tour of the world

Context

Queenswood is also an Arboretum which is a collection of trees - usually rare and exotic - that would not normally be found growing in the UK. Think of it like a 'zoo for trees'! The planting of the arboretum at Queenswood began in 1953 to mark the coronation of Queen Elizabeth II.

Activity

Anywhere of your choice in the main arboretum area, each small group of 5 or 6 children, supervised by an adult, should choose a tree with a label.

The label will give the tree's species name and the country it naturally grows in (remember that an arboretum is a collection of exotic trees that have been collected from different parts of the world, they wouldn't naturally grow here).

Record as much information as possible about this tree, including:

- 1. name
- 2. country of origin
- 3. when it was planted at Queenswood

Photograph or draw your tree. When you get back to school, locate that country that the tree comes from on a world map.



Picture: The redwood grove. Redwood can grow to over 100 metres tall in their native country. They get their name from the distinct red colouring of the wood inside.



Resources required: Binoculars-bring your own or see details of hire

from the visitor centre see page 5, plus viii

Activity 3

Look at that view!

Context

The viewpoint is a popular destination for visitors to Queenswood. If it is a clear day, from the viewpoint at Queenswood you will be able to see for many miles.

Activity

Look at the features in the landscape - the buildings, the villages, the roads, the fields - and discuss how these might have changed over time.

Use the topography at the viewpoint to identify the notable landscape features.

See the photographs of the same view taken many

The Bull and the Bishop

A Hereford bull and a Hereford Bishop joined forces to commemorate the launch of Herefordshire's Unitary Authority in 1998. Bishop John Oliver proved better behaved than the bull, which stopped frequently to graze.





Activity 4

Resources required: Tape measure, Pencils.

Details about hire on page 5

How tall is that tree?

Context

Sometimes you want to know a tree's height without cutting it down or climbing it! We suggest two different ways to measure a tree's height.

1. Each small group should find a tall tree which has plenty of space around it.

One child stands with their back against the tree.

Another child faces them but several paces away, and holds a pencil between thumb and first finger, vertically at arm's length, so that when one eye is closed, the pencil point is at the top of the tree and the top of the thumb is level with the ground.

Keeping the thumb at the base of the tree, turn the pencil horizontally. The first child walks away from the tree until the second child shouts 'stop' – ie child 2 has reached the 'top' of the pencil!

Measure the distance between the first child and the tree base. This will be the same as the height of the tree.

2. Each small group should find a tree with plenty of space around it.

In turn, each child should stand with their back to the tree, then walk away from it in a straight line, stopping from time to time to bend down and peer between their legs to see if they can see the top of the tree yet.

When they can, they should stop there while another child measures the distance from there to the base of the tree trunk. That distance will be the tree height.

Do all the children have the same measurement for the same tree? Discuss their findings. The children could calculate the average height.





Resources required: Tape measure, bring your own or see page 5

Activity 5

How old is that tree?

In the First World War Commemorative Woodland, find a tree stump. Count its rings. Each ring represents a year's growth. Were all the trees the same age when they were felled (cut down)?

a) Sometimes you want to know a tree's age without cutting it down! Foresters estimate the age of a tree from its girth measurement. This is the distance around the trunk at your shoulder height.

Somewhere other than the First World War Commemorative Woodland, find a living tree and, using a calculator, divide the girth measurement (in centimetres) by 2.5 to give an approximate indication of its age.

For example, I measured a tree's girth and it was 130cms around the trunk at shoulder height.

 $130 \times 2.5 = 325$

My tree is 325 years old.

b) If you know what type of tree you have measured, you can be more specific with estimating its age. Different tree species grow at different rates. Measure the tree's girth, then use the table below to see the age of your specific species.

Whichever method you used, can you work out what year was your tree planted in? Check your estimate against the tree's information plaque.

Forester's Table

Measure the girth of your tree at your shoulder height. Read along the girth measurement row to see how many years old your tree is.

GIRTH (Cms)	30	40	50	60	70	80	90	100	110
Oak or Beech	16	21	27	32	37	43	48	53	59
Sycamore	12	16	20	24	28	32	36	40	44
Holly	24	32	40	48	56	64	72	80	88
Larch	15	19	24	29	33	39	43	32	-
GIRTH (Cms)	120	130	140	150	160	170	180	190	200
Oak or Beech	64	69	74	80	85	90	96	101	106
Sycamore	48	52	56	60	64	68	72	76	80
Holly	96	104	112	120	128	136	144	152	160
Larch	-	-	-	-	-	-	-	-	-



Resources required: Paper and pencils

Activity 6

Acrostic Poetry

An acrostic is a poem in which the first letters of each line spell out a word or phrase. The word or phrase can be a name, a thing, or whatever you like, but we suggest an idea below.

Each line should relate to the subject. Children can compose their own or work in small groups.

Here is an example:

Wonderful wild place

Old trees

Owls love it

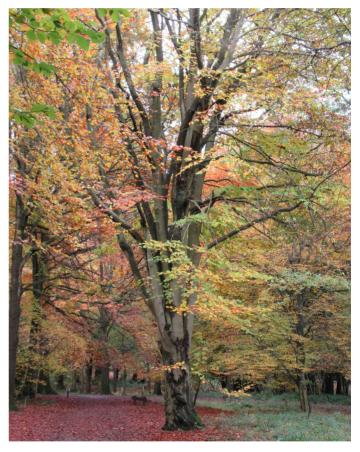
Dead trees are alive with beetles

Living statues

Allow it to grow forever

Nature flourishes within it

Decide to plant more trees and create new woodlands



Give the children the same word or another of your choice that is relevant to Queenswood.

For more woodland and nature inspired poetry listen to tracks 2 and 3 of the Lyrics, Leaves and Lives audio trail, for First World War Poetry, head to the First World War Commemorative Woodland.



Resources required: Activity 7 - birdsong www.british-birdsongs.uk.

Activity 8 - Resource x

Activity 7

Quiet spots

Find a quiet spot, stand or sit still and listen carefully. Can you hear birds singing? Can you identify any birds from their song? Birds we are likely to find here are:

Robins, Thrushes, Blackbirds, Great tits, Wrens, Sparrows, Wood pigeons.

In the past, there would have been many more different types of birds here at Queenswood (such as woodcock and pied flycatchers) and in all Britain's woodlands. Can you think why there are fewer about these days?

Teacher's notes: habitat loss, people disturbance.

Do you think it would have been quiet here during WW1?

Teacher's notes: whilst the war itself would have been noisy, but there would have been greater numbers of birds and other wildlife which may have been heard. There would have been fewer lorries/less traffic on the road.

Top Tip: There is bird song on track 7 of the Lyrics, Leaves and Lives audio trail, these audio points are located in oak monoliths around the Arboretum. You can pick up a guide for the trail in the Visitor Centre or the telephone box outside.

Activity 8

Find your feathered friend

In the spring, birds pair up in order to build a nest, lay eggs and raise a family of chicks.

Deal out the cards you have made, one per child.

Children may run about making the noises given (they may need help reading them!)

As they make the noises they look and listen for someone else making the same sound. This will be their mate.

The game can be repeated as often as you like.

Teacher's notes:

Robin - TIK-TIK-TIK-TIK-TIK-TIK-TIK

Chaffinch – PINK-PINK PINK-PINKPINK-PINK

Magpie - CHAKA CHAKACHAKA

Jackdaw – JACK JACKJACKJACK

Great tit - TEACH-ER TEACH-ER TEACH-ER

Woodpigeon - COO-COO-COO-CUCOO-COO-COO-CU

Chiffchaff - CHIFF-CHAFF CHIFF-CHAFFCHIFF-CHAFF

Cuckoo - CUCK-OO CUCK-OO

Chaffinch - ZEEP ZEEPZEEPZEEP



Resources required: Activity 9 -Bug pots -bring your own or see details of hiring page 5. Activity 10 - String and Scissors (bring your own)

Activity 9

Nature detectives

As you walk around the park try to find clues of animals that live here today. What sort of clues will you look for? Droppings, half eaten food, footprints, bird nests, holes, squirrel dreys etc. Take a photograph or draw a picture of anything you find, for identification later.

Why might you not actually see the animals themselves? (Teacher's notes: They might be shy/nocturnal/migrate/camouflaged/die or hibernate in the winter etc.)

Go on a minibeast hunt and use the bug pots and identification sheets to work out what you have found. Remember to collect creatures very carefully and return them unharmed to the woodland once you have had a good look at them.

Record your finds.

Activity 10

Weaving

Many items, from rugs to baskets, were made in the past using a technique called weaving. Old worn out clothes would have been torn into strips to use as rags for rug-making. Nothing was wasted.

First, collect your natural materials for weaving. As you are in a woodland you will be collecting natural materials. You need to use flexible materials for weaving, like hazel or willow twigs, leaves, grass and feathers.

Build a frame by placing 4 stiff sticks in a square shape on the ground.

Tie each overlapping corner with string.

Find narrower stiff sticks and tie them to the frame in one direction with string. Weave your objects in and out.







Resources required:

Activity 11 - Resource xi. Activity 13 - Resource xii

Activity 11

Leaf shapes

Collect leaves from trees that naturally grow in this country, eg Oak, Silver Birch, Beech, Hazel, Holly, Ash, Rowan, Sycamore.

Divide the children into 2 teams, lined up one behind the other. Arrange one of each leaf in a line a short running distance away from the teams.

Number the children in order down the lines so that the first child in each team is number 1, the second child in each team is number 2, and so on.

Call out 'number 4s – Oak' and the 2 children this number applies to run to the line of leaves and select a leaf – the first to point to the oak leaf gains a point for their team.

They should not collect any leaves!

Use the tally sheet provided to keep the scores!

Continue until all the children have had a turn – or all the leaves have been learned!

Activity 13

Colour wheels

Print out one colour wheel per small group.

As you walk around, how many of the colours can the children find? Collect or photograph natural materials that represent each colour.

Which colours are the hardest to find? Why do you think this is?

Might the colours you find change with the seasons?

What colours can you find that shouldn't be here? Don't collect them. Where should they be instead?

Activity 12

Autumn rainbow

Whilst this activity can take place anywhere at Queenswood, the Autumn Garden is particularly stunning during this season.

During the spring and summer, leaves are filled with green chlorophyll, so they appear green. In the autumn, in response to the days shortening and the temperature dropping, the chlorophyll breaks down, revealing the other colourful pigments in the leaves - red, orange, yellow, purple...

Make a whole class colourful rainbow on the ground, using only fallen leaves (please don't pick any from the trees). Take a photograph and leave it there for other visitors to enjoy.





Resources required: Activity 14 -Short lengths of rope (please bring your own or see details of hiring page 5.

Activity 14

Be a Timber Horse

At the holloways, tie a timber hitch knot onto a short length of stick and drag it along behind you, as if you were a horse dragging felled trees out of the woodland (a horse logger)!

How to make a timber hitch knot:

https://www.whichknot.com/timber-hitch.html

Activity 15

Whittling and knitting

During World War 1 people had to be resourceful and mend their clothes when they were torn or damaged, and clothes were handed down to younger siblings/ cousins/friends. They could not go and buy new clothes as we do today.

Experience being a child during WW1 by trying these everyday crafts back at school.

- 1. Darn a sock
- 2. Whittle a stick Collect a stick to take back to school.
- 3. Knitting

Video on how to darn a sock -https://www.you-tube.com/watch?v=4nY1jTVyBE0

Activity 16

Season 'ticket'

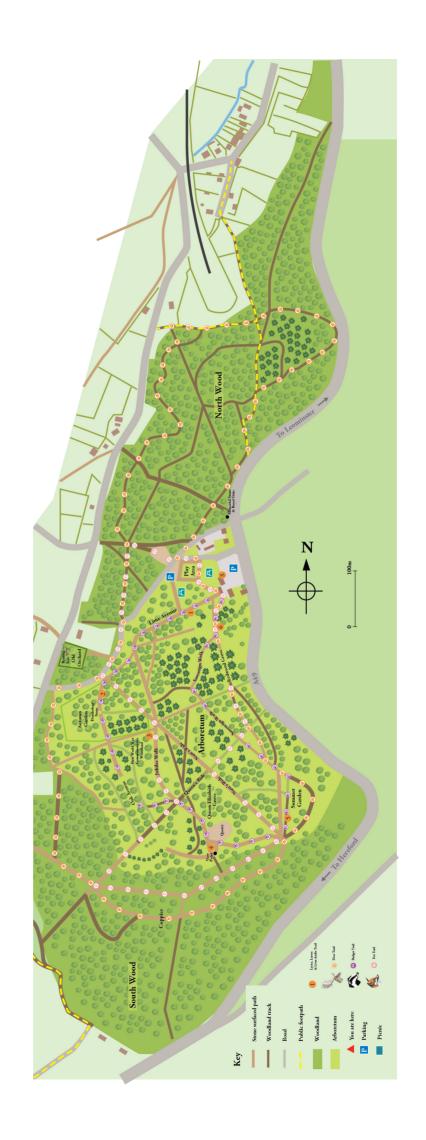
We encourage you to come here once a term to observe how a chosen tree changes over the seasons. You can take a photograph of it, draw it, describe its bark, shape and leaves, and make a collage of your observations.

In spring, summer, autumn and winter you could record the leaf shape and colour (perhaps do a leaf rubbing or collect fallen leaves in the autumn), whether it keeps its leaves, whether it has any flowers, any wildlife seen, it's bark.





Queenswood Map Resource i



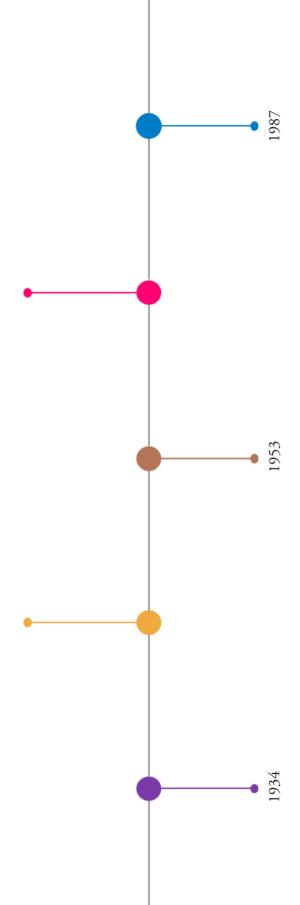


Queenswood Timeline Resource ii

1935

The land was gifted to Herefordshire Council to be managed 'as an open space for the enjoyment of the public for all time'.

Queen Elizabeth II visits Queenswood on her tour of the country.



The land was purchased following a public appeal by the Campaign for the Preservation of Rural England.

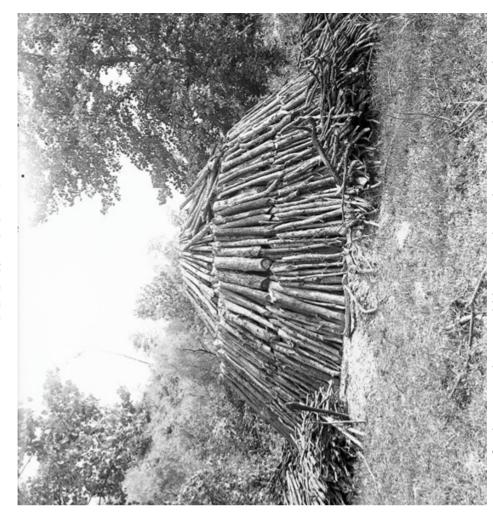
Public appeal was launched to mark the coronation of Queen Elizabeth II and to plant rare and beautiful trees.

Another public appeal was launched to enable major improvements to take place at Queenswood





Resource iv



After burning, there would be a raised circular area on the ground (charcoal hearth) where the charcoal had been stacked.



Country Park & Arboretum

Telegrams

Resource v

Copy these onto card and cut them out or read them out.

	כמות מוות כתו נוזכונו סתו סו זכמת נוזכונו סתו.
Post Office Telegraph	Post Office Telegraph
Please supply timber for building trenches at the battlefront From Secretary, War Office	Please supply timber for Making periscopes to use in the trenches From Secretary, War Office
Post Office Telegraph	Post Office Telegraph
Please supply timber for Pit Props for the coal mines From Secretary, War Office	Please supply timber for making telegraph poles From Secretary, War Office
Post Office Telegraph	Post Office Telegraph
Please supply timber for charcoal for making gas masks From Secretary, War Office	Please supply timber for building aeroplanes From Secretary, War Office
Post Office Telegraph	Post Office Telegraph
Please supply timber for charcoal for making explosives From Secretary, War Office	Please supply timber for building ships From Secretary, War Office
Post Office Telegraph	Post Office Telegraph
Please supply timber for charcoal for making explosives From Secretary, War Office	Please supply timber for making fences From Secretary, War Office
Post Office Telegraph	Post Office Telegraph
Please supply timber for charcoal for making rifles From Secretary, War Office	Please supply timber for charcoal for making shovels to dig trenches From Secretary, War Office

Resource vi

Resource vii

© www.herefordshirehistory.org.uk



Women's Land Army sawing logs during the First World War, 1914-18

Image of Marion Watkins felling an Oak 1916

Resource viii

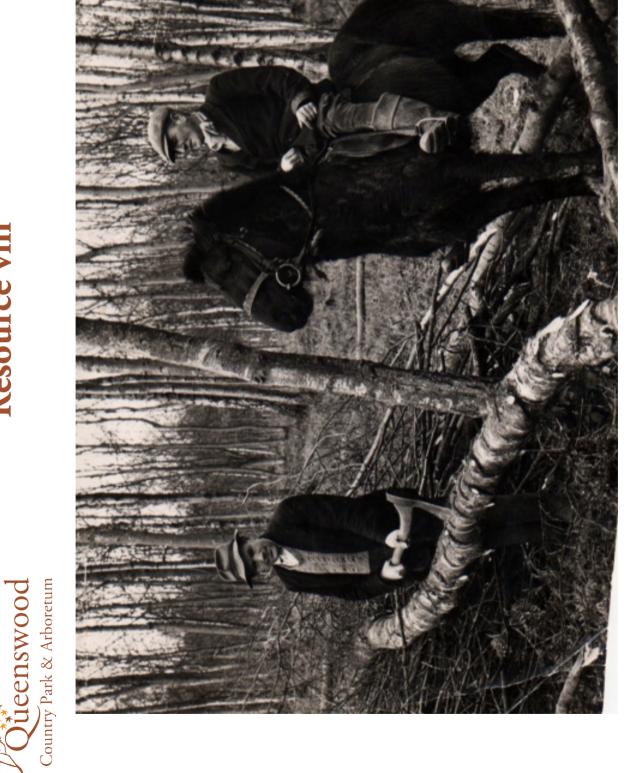


Image of Mr Probert and Mr Davies working at Dinmore Hill





Resource ix

Copy these onto card and cut them out or read them out.

COO-COO-COO-COO- CO COO-COO-COO-	CHIFF-CHAFF CHIFF-CHAFF	ZEEP ZEEP ZEEP ZEEP ZEEP ZEEP
JACK JACK JACK JACK JACK JACK JACK	TEACH-ER TEACH-ER TEACH-ER	CUCK-OO CUCK-OO CUCK-OO
TIK-TIK-TIK-TIK-TIK-TIK-TIK-TIK-TIK-TIK-	PINK-PINK PINK-PINK PINK-PINK PINK-PINK	CHAKA CHAKA CHAKA CHAKA CHAKA



