

Lily Hill Park

Discovery Pack

Borrow this guide to help you explore, discover & experience the history and wildlife of the park. Please return it after you have finished.



THE HISTORY TREE

Events that have taken place since this Cedar Tree was planted.

KEY PEOPLE IN HISTORY SINCE 1850

Count the tree rings to find the key dates missing

?	1809 – 1882	Charles Darwin “ <i>Origin of Species</i> ”
?	1820 – 1910	Florence Nightingale (Nurse in Crimean War)
1915	1850 – 1916	Lord Kitchener of Khartoum
1905	1858 - 1928	Mrs Emmeline Pankhurst
?	1874 – 1965	Winston Churchill - V for Victory
1942	1887 – 1976	Field Marshal Montgomery “Monty”
1917	1888 – 1935	Lawrence of Arabia
?	1925 - ...	Margaret Thatcher (Prime Minister)
1987	1942 - ...	Stephen Hawking (Physicist)
?	1929 - ...	Sir Roger Bannister – 4 minute mile
2000	1962 - ...	Steve Redgrave – Olympic Gold Medal rower

Reign

Monarchs since 1850

1837 – ?	Queen Victoria (b. 1819 d. 1901)
? – 1910	Edward VII (b.1842 d. 1910) - NOT CARVED
1910 – 1936	George V (b.1866 d. 1936)
1936 (abdicated)	Edward VIII (b. 1894 d. 1972) - NOT CARVED
1936 – ?	George VI (b. 1896 d. 1952) - NOT CARVED
? - ...	Elizabeth II (b. 1926 ...)

DEVELOPMENTS IN INDUSTRY SINCE 1850

Key Date

Event

1866	First Atlantic cable successfully laid
?	Trades Union Congress formed
?	Telephone invented by Bell
?	Electric power
?	Marconi perfected wireless telegraphy
?	Radium discovered
?	Television Service Started
?	Discovery of DNA genetic code
1856	First computer (Charles Babbage)
?	Apple Computers formed
?	CD invented
?	X Box launched

Bridges

1890	Forth Rail Bridge built
1964	Forth Road Bridge
?	ERII Bridge over Thames at Dartford
?	Millenium Bridge – “wobbly” bridge over Thames

FIND MISSING DATES BY COUNTING TREE GROWTH RINGS

<u>KEY DATE</u>	<u>CONFLICTS INVOLVING THE UK SINCE 1850</u>
1854	Crimean War 1853 to 1856 (Balaclava 1854)
1878 - 1880	Afghan Wars 1878 – 1880 2 nd Anglo-Afghan War 1919 – 3 rd Anglo-Afghan War 1979 – USSR-Afghan War 2001 – US overthrew Taliban
?	Zulu War
1880-1881	Boer Wars – 1880 - 1881 1899 - 1902
1885	Sudan Wars - General Gordon perished at Khartoum 1885 Sudan War 1898 Kitchener completed conquest of Sudan
?	World War I –The Great War
?	World War II –
1950-1953	Korean War -
?	Berlin Wall Built (Cold War)
?	Berlin Wall torn down
?	Falkland Islands War
1990-1991	Persian Gulf Wars 1990 – 1991Gulf War 2003 - Iraq War –Anglo-US invasion

TRANSPORT DEVELOPMENT SINCE 1850

<u>Key Date</u>	<u>Event</u>
?	Horse-drawn carriages still in use –
1856	Steam trains– Bracknell Station opened in 1856
?	Balloon hot-air Balloon flight reached height of 7 miles.
1869	Cutty Sark built – 3 masted Clipper
?	Penny-farthing bicycle
?	Petrol Engine invented – Daimler and Benz
?	Flight – Bleriot crossed channel in aeroplane 1909
?	Titanic sank – The supposedly unsinkable liner
?	Helicopter – first successful prototype by Igor Sikorsky
?	Apollo Moon landing– first manned-spacecraft to moon
?	Concorde – first commercial supersonic airliner.
2003	Final passenger flight of Concorde to Heathrow
?	Channel Tunnel opened – high speed trains
?	Queen Mary II – biggest ever luxury passenger liner
?	Beagle lander failed on Mars but US lander succeeded

FILL IN THE MISSING DATES IN BRACKNELL'S DEVELOPMENT

<u>Key Date</u>	<u>Event</u>
1851	Bracknell Church built
1856	Bracknell Station built
?	Broadmoor Asylum opened
?	Queensberry Rules adopted
?	Cricket Club opened
?	Bracknell Town Football Club
1900	Brick making industry flourishing
?	Wokingham & Bracknell Gazette published
?	Regal Cinema opened
1946	RMA Sandhurst amalgamated w. Woolwich
?	Bracknell designated as a New Town
?	Rugby Club formed
?	M4 through Berkshire opened
?	Bracknell Forest Borough Council formed
?	Restoration of Lily Hill Park

PHOTO SHEET ACTIVITY

Using the photo sheets provided see if you can spot the timber carvings that relate to each of the photographs.

You will have to move around the tree looking at all the history biscuits to find the carvings you need.

F - FOX BENCH



What happens in the park when you all go home? The image carved on this bench shows who eats who! A complex predator / prey fight for life goes on all the time. Every plant and animal in the park is trying to get the solar energy it needs for life. Solar energy is captured by the plants' leaves, these are eaten by herbivores which in turn are eaten by carnivores - solar energy is passed on down food chains.

Food Chain Exercises

1. Write out a series of foodchains that you can see in this picture
for example: Sun - flower - woodmouse - adder
2. Combine all the food chains into one large food web with the sun in the centre of the diagram as the source of the energy for all the different food webs.

When you visit Lily Hill Park you will see some wildlife in the park, lots of plants and a certain number of animals.

3. Make a list of all the animals and plants you can see in four different columns
 - * those which get their energy directly from the sun via photosynthesis (*plants*)
 - * those which get their energy by eating plants (*herbivores*)
 - * those which get their energy by eating other animals (*carnivores*) and
 - * those which get their energy by eating dead plants or animals (*decomposers*).

Once you have finished add up the number of different species in each column

4. Which column has the most entries?
5. Which column has the least entries?
6. Draw a pie chart to show the proportion of animals in these different groups.

G - THE BEETLE BENCH

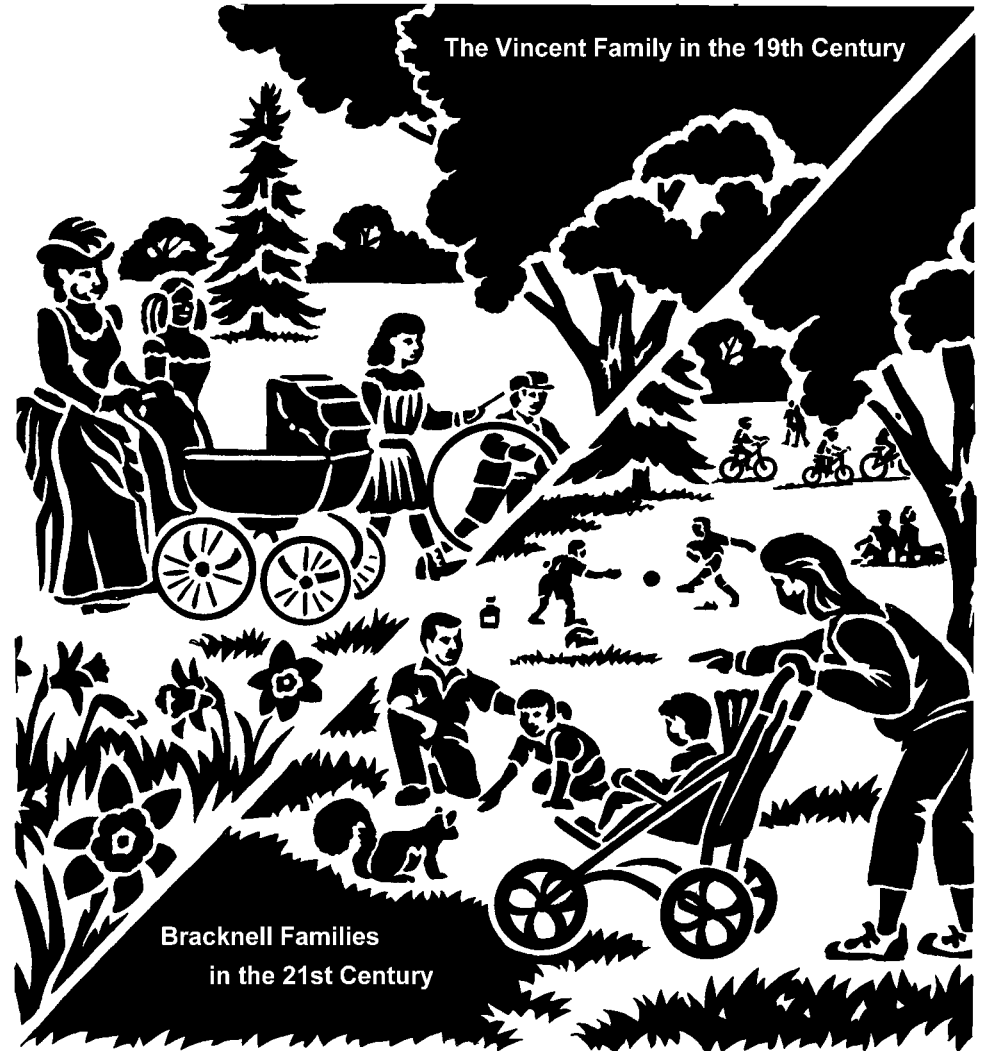


The artwork engraved on this bench shows fungi on the rotting wood giving off smelly alkaloids, these attract beetles which lay eggs in the rotting wood. The beetle eggs hatch into larva which eat the rotting timber. The same alkaloids also attract parasitic wasps which eat the beetle larva. A complicated story made more fun! Can you spot the smelly word in this image?

Leaf Decomposition Exercises

1. Find a fresh leaf growing and pick it.
2. Look on the ground around the tree and find a leaf that fell last autumn.
3. Dig carefully in the soil to find a leaf skeleton from the year before.
4. Describe the difference in appearance of the three leaves.
5. Can you find any of the minibeasts that ate these leaves while they were living in the tree or after they had dropped to the ground?
Use bug boxes to collect the different leaf munchers you can find.
6. Look at the way deciduous leaves break down over time and the way evergreen tree leaves break down over time.
7. All the leaves break down to form topsoil which plants need to grow. How deep is the topsoil at different places in Lily Hill Park? Work with the ranger to dig small holes to look at the depth of topsoil and the type of subsoil you find underneath.

H - VINCENT FAMILY BENCH



In the nineteenth century one family owned this whole park - how many people do you think you would see in the park? What would they be doing? Family members, gardeners etc. What would the Vincent Family members who walked in this park 150 years ago say if they stepped in a time machine and arrived in Lily Hill Park today?

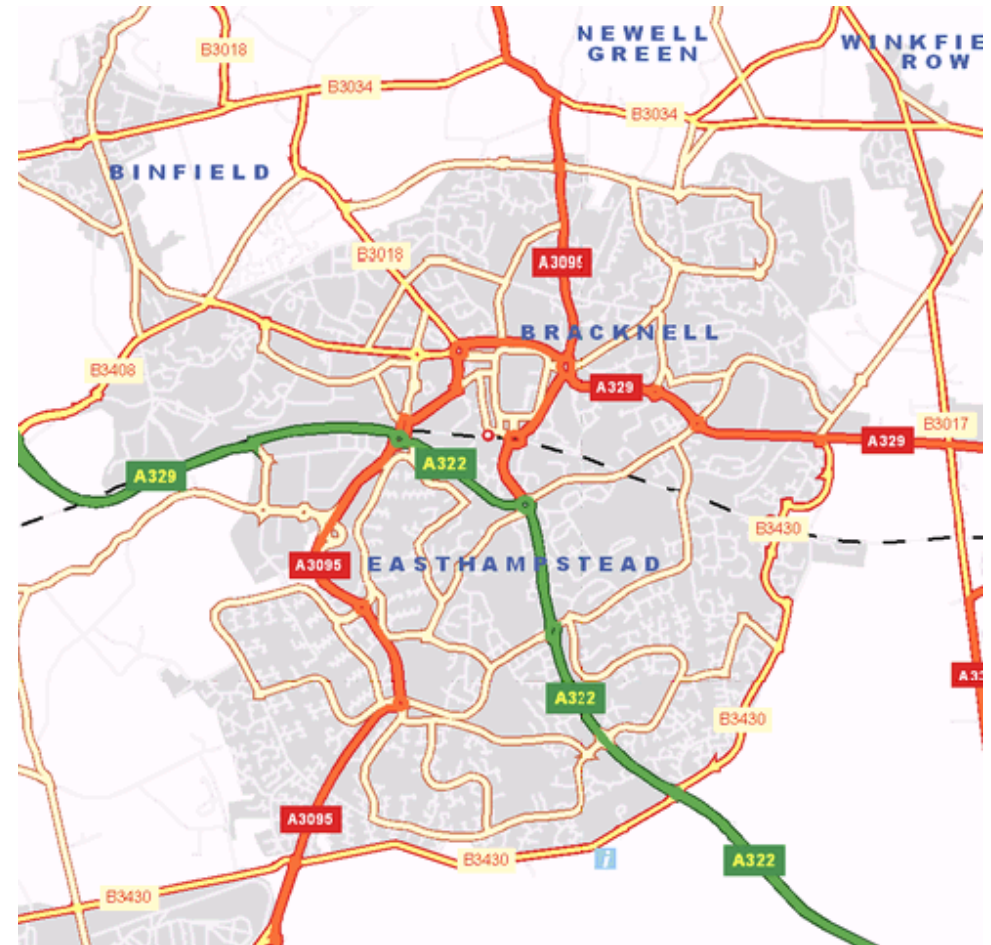
Vincent Family Bench Exercises

1. Count how many people you can see from one viewpoint in the park (not including your own group).
2. Describe the different types of people you can see in the park: parents with children, children playing on their own, Park Rangers or gardeners, old people relaxing on benches, people walking dogs, people playing a sport, people riding bikes or skateboards?
3. Design a way of recording how many of each type of visitor you can see doing different activities in the Park.

Follow-up Maths Exercise

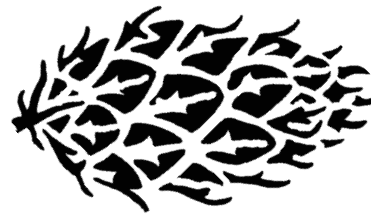
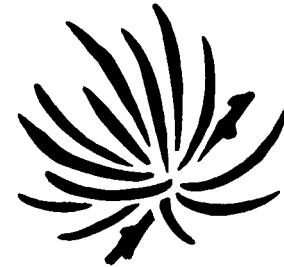
4. When you get back to the classroom you can make a graph of the different visitors you saw in the park.
5. Are some people in more than one group: Old people walking dogs? Family groups with dogs? Young people sitting on benches? Family groups playing a sport?
6. Can you draw a Venn Diagram to show the links between these different activities.

I - THE MAP BENCH

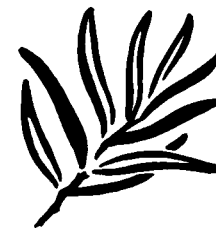
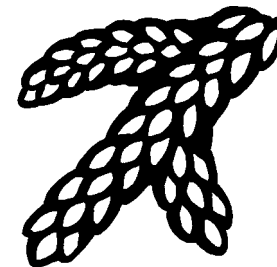
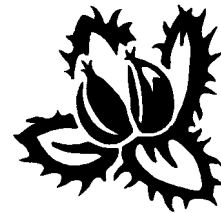
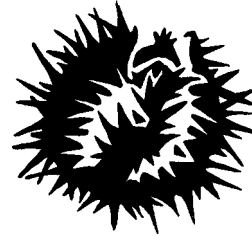


On this recent map of Bracknell use a marker pen to show how big Bracknell was at different times in the past and add a key to explain what you have marked. Compare this map with an aerial photograph of Bracknell, is it up to date or has Bracknell grown further?

J - TREE SEEDS & LEAVES



Use the bench carvings to identify these different tree seeds and leaves



J - TREES & WILDLIFE

HOW TALL IS THAT TREE?

To measure the height of a tree find a straight branch that is the same length as your arm. Face the tree you want to measure and hold the branch at arm's length in front of you. Carefully walk backwards – have someone beside you to make sure you don't trip up – holding the branch at arm's length until the tree looks the same size as the branch. Mark the spot where you are standing. Measure the distance from this spot to the base of the tree. This distance is the height of the tree.

In the classroom can you draw a sketch of this activity and explain how it works?

TREE PROSE EXERCISE

The groups should choose one tree to observe.

Each member of the group must think of two adjectives that describe the tree.

In groups of two or three try and use all the adjectives from the whole group to make sentences which describe the tree.

These sentences should be read out loud to the whole group gathered on the zig-zag picnic bench.

Teachers' Note

You may have a better response if you do not use the word "poetry" when starting the exercise – it may put the students off.

When the sentences are read aloud the children may realise that it is poetry that does not rhyme.

WILDLIFE IN THE TREES

Lay out a white sheet under each of the tree species that you had identified and with the Ranger's help give one of the branches a really good shake. Using collecting jars see how many different minibeasts you can find on the white sheet from each of the trees. Do not worry about being able to identify them – just look and see how many different types of creature there are. Repeat this activity for each of the tree species and keep a record of the number of different types found.


Many of the signs and seats in Lily Hill Park have been made from the trees which was selectively removed from the Park during the recent renovations project.

The carved logs, etched benches and zig-zag picnic benches were made by **Greenspace Designs Limited**.

Greenspace have also produced an educational resource for this park which can be found on the internet at:

www.greenspace.co.uk/Lily.htm

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