Discover the Water Gardens

Find out about the Water Gardens before and after the restoration!

Hemel Hempstead
Discovering the Water Gardens
Hemel Hempstead

For more information about the restoration of the Water Gardens go to:
https://www.dacorum.gov.uk/home%5Cregeneration/hemel-evolution/

For more oral history quotes collected by Friends of the Jellicoe Water Garden please go to:
http://www.ourdacorum.org.uk/content/category/places/jellicoe_water_gardens_hemel_hempstead

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Introduction

In 2017 Dacorum Borough Council completed the restoration of the Water Gardens, with support from the Heritage Lottery Fund and the Big Lottery Fund. As well as restoring and updating the Water Gardens, the stories of the Water Gardens have been collected by the Friends of the Jellicoe Water Gardens in the form of oral history interviews.

In this education pack we hope to inspire teachers and students to find out more about the Water Gardens and about Sir Geoffrey Jellicoe, the Landscape Architect who created the Masterplan for Hemel Hempstead New Town and for the Water Gardens.

There are activities in this education pack that relate to Key Stage 2 (for pupils aged 7-11) and Key Stage 3 (aged 11-14) in subjects such as geography, history, art and biology. The activities may be used in the classroom or in the Water Gardens. The Jellicoe Water Gardens are located between Leighton Buzzard Road and Waterhouse Street, with parking on two levels at the back. In the Gardens there is a play area, flower garden, as well as bridges and viewpoints along the river bank plus Friends Building and garden.

For further information about the Water Gardens and the community space in the park:
Dacorum Borough Council The Forum, Marlowes Hemel Hempstead HP1 1DN.

01442 228 000
watergardens@dacorum.gov.uk

Map showing the Flower Gardens today
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History and geography:
The River Gade at the heart of Hemel Hempstead

As with many other towns in Hertfordshire, there is evidence that people have lived in what is now Hemel Hempstead since the Bronze Age, over 3000 years ago. The River Gade has always played a key role, providing water for farming, transport and industry.

The River Gade rises from a spring in the chalk of the Chiltern Hills to the north of Hemel Hempstead and eventually joins the River Colne in Rickmansworth. In the late 1700s and early 1800s, as canals were being built all over England, the Grand Junction arrived in Hemel. The canal follows the Gade Valley, sometimes it runs alongside the river but in places the Gade becomes part of the canal.

In 1811 John Dickinson bought Nash Mill and produced paper there alongside his other local mills. The business used water from the river and relied on the Grand Junction Canal for transporting coal to the site and for taking the heavy paper to the warehouses in London. The last paper was produced in 2006 when the site was sold, the mill demolished and housing built. The residential area is now called Nash Mills, commemorating an important local industry.

In the 1920s the River Gade was divided into channels and served two corn mills as well as providing fresh water for the watercress beds that defined Hemel Hempstead at the time.
Activity 1

**Why were they here?**

*Here are some of the local industries. Can you think why they needed the river? Do you think clean water is important for either or both of these industries?*

<table>
<thead>
<tr>
<th>Watercress</th>
<th>Paper production</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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<td></td>
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</tbody>
</table>
Living near the River Gade before the new town

In the 1920s people were moving into the town to look for work, and houses were built near Bury Road and Marlowes. Where the river had previously been surrounded by fields and orchards, there were now private gardens running all the way down to the river.

The River Gade before the Water Gardens.

Copyright HALS
After the Second World War Hemel Hempstead was designated as a New Town and Geoffrey Jellicoe was appointed to draw up the plans. Jellicoe was appointed by the Ministry of Town and Country Planning on 4 October 1946 to create a plan for the New Town of Hemel Hempstead. At the heart of his plans were the river, the Water Gardens and the idea that Hemel would be.

“not a city in a garden, but a city in a park”.

The original plans for the town centre were amended and a less controversial scheme taken forward by the Hemel Hempstead Development Corporation, but Jellicoe was invited back to rework his designs for the Water Gardens in the late 1950s and his new plans were realised, giving us the Water Gardens we know today.

The course of the river through Hemel Hempstead today is engineered. The water we see in the Water Gardens is only some of the water flowing in the river; the rest runs in a culvert underneath the centre of Hemel Hempstead from the Bury at Gadebridge Park through to a fishing lake in Kings Langley.

Activity 2

Consult the map!

Look at this Ordnance Survey map from 1925.

Can you find:

- Houses that back onto the river
- An orchard
- The watercress beds
- A mill
- A bridge over the river
<table>
<thead>
<tr>
<th>Link to national curriculum</th>
<th>Catalyst/stimuli questions</th>
<th>Learning outcomes</th>
<th>Activity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Collect, analyse and communicate a range of data gathered through experiences of fieldwork that deepen understanding of geographical processes</td>
<td>What do you see when you visit the Gardens?</td>
<td>Observe and record the environment, using photographs, sketches and written descriptions</td>
<td>Survey the Water Gardens. Draw a map of the water garden/flower garden. Notice the route of the river, paths and open spaces. Add in details like street furniture old/new planting/bushes.</td>
</tr>
<tr>
<td>Build on knowledge of globes, maps and atlases and apply and develop this knowledge routinely in the classroom and in the field</td>
<td>Include using grid references and scale, topographical and other thematic mapping, and aerial and satellite photographs</td>
<td>Use Geographical Information Systems (GIS) to view, analyse and interpret places and data $$ use fieldwork in contrasting locations to collect, analyse and draw conclusions from geographical data, using multiple sources of increasingly complex information.</td>
<td>Activity 2: Consult the map! Ordnance Survey map 182: Plan your route from school to the Water Gardens.</td>
</tr>
<tr>
<td>Geography: Rivers History: Develop a chronologically secure knowledge and understanding of local history. Understand how our knowledge of the past is constructed from a range of sources.</td>
<td>What role does the river play in the town? Using maps, photographs and oral history of the Gade alongside research on the internet how has the river been used in the past, and how is it used in Hemel Hempstead today? Learn about rivers, different types of water, observe and research, where the river starts and where the river ends. Learn about the different uses of the river through time (industry, landscape, leisure).</td>
<td>Activity 1: Why were they here? On a map identify the beginning of the river Gade and its tributaries, and where it runs into the sea. Observe the different types of river banks, culverts, fish runs, and note where the river Gade joins another river. Note the difference between the river and the Grand Union Canal! Describe how the use of the river in Hemel has changed.</td>
<td></td>
</tr>
</tbody>
</table>
Art and Design

Modernism: Jellicoe, the Landscape architect

Without it (water) we could not live for more than a few days: with it we can survive, create civilisations, play with it and make works of art to express the joy of living.

Jellicoe

Sir Geoffrey Jellicoe trained in the modernist tradition, he studied at the Architectural Association in London and won his first prize in 1923. He was to become one of the most important landscape architects of the 20th century.

Modernism

Modernism is the single most important new style or philosophy of architecture and design of the 20th century, associated with an analytical approach to the function of buildings, a strictly rational use of (often new) materials, an openness to structural innovation and the elimination of ornament. The style is characterised by:

• asymmetrical compositions
• use of general cubic or cylindrical shapes
• flat roofs
• use of reinforced concrete
• metal and glass frameworks often resulting in large windows in horizontal bands
• an absence of ornament or mouldings
• a tendency for white or cream render, often emphasised by black and white photography

Can you think of examples of modernist architecture in Hemel Hempstead? The white surfaces of modernist architecture create a dynamic contrast for ornamental plants and trees.

The surfaces of the water in Jellicoe's roof and Water Gardens reflect the sky and the planting and mirror the white surfaces of the walls.
As a part of his architectural studies he studied traditional Italian and English gardens and was a founding member of the Landscape Institute in 1929. He wrote books about and designed gardens throughout his life. The Water Gardens were one of his largest landscape projects.

Jellicoe worked closely with his wife Susan, who was knowledgeable about plants, a writer, editor and photographer. In the Water Gardens she would select the plants for the flower gardens. She carefully documented the work of her husband Geoffrey Jellicoe and later they wrote books together, illustrated by his plans and her photographs.
Jellicoe’s Inspirations

Water
Jellicoe studied landscape history including the tradition of using water in parks and gardens. He was fascinated by the different effects of still, gently moving, bubbling, cascading and rushing water. Water often played an important role in Jellicoe’s designs, and in how he wanted his work to be experienced and viewed. This is reflected in his drawings and in Susan Jellicoe’s photographs of his finished landscapes and buildings.

Activity 3

What does water mean to you?

Gather your ideas here:

Think like an artist: Artists often think about how things make them feel or use things (like water in this case) as symbols of something else (like sending a secret message to people who “speak” art).
Artists

Jellicoe was inspired by abstract artists like Paul Klee who was fascinated by the relatively new field of aerial photography. He also worked with Ben Nicholson, one of Britain’s most well-known abstract artists.

The Snake

He was also interested in the symbolic reading of his designs, “concealing a ghost within the visible”.

If you look at the Water Gardens on a plan or from the air, it resembles a snake: the tail curves at the northern end, while at the south is the head, with the fountain for an eye. Along the body the cascading weirs echo the movement of a snake. The flower garden is meant to be a howdah (a seat for riding on the back of an elephant, often with a canopy) on the back of the snake.

Definition of Landscape architecture:
The art and practice of designing the outdoor environment, especially designing parks or gardens to harmonize with buildings and roads.
Jellicoe came from a background combining the built environment with dramatic landscapes like the Caveman Restaurant in Cheddar Gorge where the pond on the flat roof created a mirror reflecting the rugged plants and textures of the gorge framed by smooth, light concrete structures.

Other projects by Jellicoe:

• 1934–36 Caveman Restaurant, Cheddar Gorge, Somerset
• 1956 Harvey’s Store Roof garden, Guildford, Surrey – this is another roof garden with an intricate water design in several layers, originally including a waterfall.
• Kennedy Memorial at Runnymede
• 1980–86 Sutton Place Garden, Surrey – this garden reflects the human journey and is considered a late masterpiece of Jellicoe’s garden design.
Activity 4

Be a landscape architect

Imagine you are a landscape architect and design your own park with a ghost within, hiding a secret image that can only be seen from the air or on your plan.

You are inspired by Jellicoe, so must use water in your design.
# Activity 5

<table>
<thead>
<tr>
<th>Sculpture hunt</th>
<th>Picture</th>
<th>Describe it</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Think about:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>The style the artist has used</td>
<td></td>
<td></td>
</tr>
<tr>
<td>How it makes you feel</td>
<td></td>
<td></td>
</tr>
<tr>
<td>What it adds to the Water Gardens</td>
<td></td>
<td></td>
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</tbody>
</table>

**Rock and Roll 1960**
by Hubert Yencesse
commissioned by the Development Corporation,
Photo HALS

**Kangaroo, Joey and Platypus** – Given by the town of Elizabeth in Australia.
# Activity 6

**Plan your own sculpture**

<table>
<thead>
<tr>
<th>Step</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Select a place for a new sculpture</td>
<td></td>
</tr>
<tr>
<td>Decide on materials</td>
<td></td>
</tr>
<tr>
<td>Decide on a theme</td>
<td></td>
</tr>
<tr>
<td>Draw up the design idea for your sculpture</td>
<td></td>
</tr>
</tbody>
</table>
Flower gardens
Jellicoe wrote his first book on flower garden design in 1926 and continued to write throughout his life, sharing his scholarship and using it to inform his own work. His first book was about the gardens of the Italian Renaissance, then he wrote about Baroque Gardens in Austria. Both of these famous periods of garden design used symmetry and geometry to lay out grid like patterns. In Hemel Hempstead, the flower garden was laid out using a grid design, designed by Geoffrey Jellicoe, to which Susan Jellicoe added informal drifts of planting.

Activity 7

Design a garden based on geometry

Make a geometric garden design. What shape will you use? What materials will you use for the paths? Will you use water? Or any sculpture? Once you have the structure, you can fill the flower beds with colour.

Take it one step further . . . think about the different seasons, how will your design look all year round?

You will need another sheet of paper for this exercise.
### Art & Design lesson plan with curriculum links:

<table>
<thead>
<tr>
<th>Link to national curriculum</th>
<th>Catalyst/stimuli questions</th>
<th>Learning outcomes</th>
<th>Activity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Learn about great artists, architects and designers in history</td>
<td>How was Jellicoe connected to artistic movements in his time?</td>
<td>A range of influences coming together in a design plan.</td>
<td>Create an illustrated timeline of the life of Jellicoe.</td>
</tr>
<tr>
<td>Produce creative work</td>
<td></td>
<td></td>
<td>Activity 3 The ghost within: design your own park with water</td>
</tr>
<tr>
<td>Become proficient in a range of techniques</td>
<td></td>
<td></td>
<td>Activity 4 Sculpture hunt</td>
</tr>
<tr>
<td>Analyse and evaluate creative work.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Learn about the history of art, craft, design and architecture, including periods, styles and major movements from ancient times up to the present day.</td>
<td>What is Modernism? Can you see any examples of Modernist design in your town?</td>
<td>Understand key characteristics of modernism.</td>
<td>Modernist architecture looks really good in black and white photography, can you find a local building that would look good in a black and white photograph? Experiment and compare the use of colour and black and white photography.</td>
</tr>
<tr>
<td>Use a range of techniques to record and explore ideas.</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
| Learn about the history of art, craft, design and architecture, including periods, styles and major movements from ancient times up to the present day. | Find the sculpture in the Gardens. What do you like/dislike about them?                 | Understand different styles of sculpture and how people respond to them.      | Activity 5: Plan your own sculpture  
Activity 6: Design a garden using geometry  
Link to maths (symmetry and geometry)  
Link to biology (choice of plants) |
| Produce creative work       |                                                                                           | Understand the principles of Renaissance Italian and Baroque garden design.          |                                                                          |
| Become proficient in a range of techniques |                                                                                           |                                                                                    |                                                                          |
| Analyse and evaluate creative work. |                                                                                           |                                                                                    |                                                                          |
The Gardens are built – 1957-9

Tim Edwin remembers the Water Gardens being built, along with the town centre:

I can remember this big bulldozer... it was just ... pushing these trees down. Big willow trees, big oak trees. ... They also started building the bypass road in as well. When it was not being used as a bulldozer, they would take the bulldozer blade off it and they would put a scraper, it was actually made by a company called Onion, so it was always called an onion scraper. So they used that to level out, but also used that to dig out the base of the Water Gardens.
Discovering the Water Gardens
Dacorum Borough Council

Building the Gardens

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Taking out trees that weren’t needed.

Copyright HALS

One of the older trees that Jellicoe chose to keep

Copyright HALS

An early photograph of the Water Gardens

Copyright HALS

Copyright Dacorum Borough Council
## Activity 8

### Tree observation

<table>
<thead>
<tr>
<th>On site, walk along the Lovers Walk and using the map, the tree survey and tree schedule, identify the trees.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Describe them, record them (photos, sketches, relevant data: date and time, weather, anything else?)</td>
</tr>
<tr>
<td>Find an original tree that was left by Jellicoe and his team.</td>
</tr>
<tr>
<td>Find a tree that was planted by Jellicoe and his team in the 60s.</td>
</tr>
<tr>
<td>Find newly planted trees.</td>
</tr>
<tr>
<td>When you get back to school can you find out the name of the tree?</td>
</tr>
</tbody>
</table>
Record your observations here:
Biology: On growing in towns and gardens:

Urban green spaces and gardens are an important habitat for a diverse range of plants, animals and birds. They are part of a network of corridors that link together to allow wildlife to connect. Increasingly they play a vital part in protecting pollinators like bees, butterflies and hoverflies. Mature trees store carbon and trees and shrubs help clean the air of gases and particulates, helping make the towns we live in better places to be. A park or garden provides space for people to be and to see the natural world up close.

Activity 9

How old is that tree?
How to work out the age of a tree based on its circumference.

Find a tree in the Water Gardens or near you. What kind of tree is it?
Find the growth factor for your tree.

<table>
<thead>
<tr>
<th>Tree Type</th>
<th>Growth Factor</th>
<th>Tree Type</th>
<th>Growth Factor</th>
</tr>
</thead>
<tbody>
<tr>
<td>White Birch</td>
<td>5</td>
<td>Elm, ash or beech</td>
<td>2.5</td>
</tr>
<tr>
<td>Oak</td>
<td>2</td>
<td>Pine or spruce</td>
<td>3.25</td>
</tr>
<tr>
<td>Sycamore</td>
<td>2.75</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Willow</td>
<td>2</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Measure the circumference of the trunk in inches at a height of 4 ½ feet from the ground.

Do the maths:
Circumference in inches divided by 3.14 (pi) = _________________diameter

Diameter x growth factor = estimated age of tree.

The Water Gardens were completed in 1962.

Can you work out how old trees planted then would be today?
Activity 10

**Plant ID**

Learn the names of five plants in the gardens

Identify the following:

1. Rosemary
2. Viburnum
3. English Yew
4. Lavender
5. Blue Periwinkle
People in the Water Gardens

Parks and gardens are public spaces, designed for everyone to be able to enjoy. Here are some quotes about what people used to do in the Water Gardens.

Parks are great for picnicking, but remember to take home your rubbish. My mother used to take my two girls up there, she’d buy them sandwiches and things and they’d sit up there and eat them. It was all roses in the garden.

June Groome

Lesley and her friends enjoyed fishing and swimming in the cool chalk stream. But the workmen building the new town didn’t think their dam was a good idea!

We would fish for what we called rainbow trout, they were small fish about 5, 6 inches long. And they’d got a couple of white spots on both sides. And could jump extremely well, if you put them into a bucket, they were out.

Lesley Hopkins

Hot summers, we would dam it, so that we could swim in the deeper water. This was fine for the first little while. I think the workmen downstream building, you know, police stations and town hall and shopping centre, perhaps just thought the water had dried up a bit really. But as time passed they realised just what was going on!

Matt Hatton
Matt remembers taking his first steps towards independence.

(Mum would) let me cross the bridge on my own, and then walk along the grass on the other side, so ... it was like her letting me having my little bit of independence... it was a lot safer then, ... so she felt that she could do this. I would walk along that side and then cross over the bridge with her, walk for a little bit and then she’d let me cross over again, and we’d do that all the way down until we’d get to Bridge Street where then we’d meet dad for lunch.

Sally remembers playing with toy boats.

This one was an MTB (a motor torpedo boat). And it was massive, and it was matt grey and very ugly as far as I was concerned. But the great thing about it was, it was the first one that had a motor. And you could turn very sharp corners, and the wake was really quite considerable.

My brother wanted to drive fast. And of course, inevitably, he didn’t turn the corner quite fast enough. He rammed this exquisite little fishing boat, and sank it. I remember standing there with the boat just sinking into the middle of a foot of oily water, and another foot I’m sure of mud, and not knowing how on earth we were going to get it back. But the man with the fishing boat, he just put on some waders, and waded out, and picked the boats up.

Sally Prue

**Activity 11**

As you walk around the Water Gardens, look for evidence that people are using them.

<table>
<thead>
<tr>
<th>Use</th>
<th>Good/Bad?</th>
<th>Why?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bench</td>
<td>Good</td>
<td>Rest, reflection, view</td>
</tr>
</tbody>
</table>
### Science/Biology

<table>
<thead>
<tr>
<th>Link to national curriculum</th>
<th>Catalyst/stimuli questions</th>
<th>Learning outcomes</th>
<th>Activity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Observe life-cycle changes in a variety of living things, for example, plants in a vegetable garden or flower border.</td>
<td>What can you see when you visit the gardens?</td>
<td>An understanding of how plants change throughout the year.</td>
<td>Activity 8: How old is that tree?</td>
</tr>
<tr>
<td>Use the local environment to raise and answer questions that help to identify plants and animals in their habitat.</td>
<td>Can you see any living things? Where are they? What are they doing?</td>
<td>An understanding of how animals and plants differ depending on different habitats, particularly around water.</td>
<td></td>
</tr>
<tr>
<td>Group, identify and name a variety of living things.</td>
<td>Can you see the same plant in more than one place? Why do they grow well there? Can you see any similarities? Differences?</td>
<td>Understand how to use the principles of classification to identify plants.</td>
<td>Activity 9: Plant ID.</td>
</tr>
<tr>
<td>Explore the impact of human activity (both positive and negative) on environments.</td>
<td>What evidence do people leave behind them?</td>
<td>Understand good and bad impacts of people on their environment.</td>
<td>Activity 10: People in the Water Gardens.</td>
</tr>
</tbody>
</table>
Links to further resources:

For an overview of the Water Gardens before the conservation project started follow this link:

To see a film of Monty Don from the BBC flying over the Water Gardens and talking about Jellicoe’s work, click here. Your school has been given the password, if you need to get it again, please get in touch. click here.

Geocaches can be found in the Water Gardens. Geocaches are part of a worldwide GPS led treasure hunt. To find out more about the geocaches click here.

Sign up and enter Hemel Hempstead in search box and locate the three Water Gardens geocaches named Jellicoe Water Gardens 1, Jellicoe Water Gardens 2 and Jellicoe Water Gardens 3.

To find out more about building the new town of Hemel Hempstead please download the Thinking New Towns education pack.
Thanks to all of the volunteers, teachers and children who have helped put this education pack together.

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