

Plant Seekers



Use the parks to learn about the range of **wild and cultivated plants** that make up our **modern landscapes**, starting to differentiate what proportion of our planted gardens are indigenous, or have been introduced historically from foreign origins. Pupils will do their own plant surveys, make observational drawings and use their findings as inspiration for creative writing and discussion.

Suitable for KS2, adaptable for KS1

Curriculum areas covered:



Geography
Surveying
Migration



Mathematics
Numeracy
Tables and lists



English
Descriptive writing
Evaluation discussions



Art & Design
Observational
drawing



Science
Scientific methods
& processes
Plant knowledge
Habitats



Design & Technology
Exploring
Google technology



Physical Education
Extended
walking

Before your visit:

- Using the **Plant seekers resource sheet**, start a class discussion around how much of our modern environment is actually 'natural' and how much is by human design. Within this discussion also consider what the definition of 'natural' is.
- Introduce the idea of visiting a local parkland environment (Kearsney Abbey or Russell Gardens) as scientists interested in recording the plant population of the park, and differentiating how much of it is 'indigenous'.
- The class familiarises itself with the **Monthly wildflower spotter resource sheet**, seeing how many plants pupils easily recognise.
- The class considers and lists what information would need to be gathered easily in order to identify any given plant on the coming visit to the parks. Refer to the **Plant identification work sheet** as a comparison and decide whether to use this or whether pupils should run with their own survey design.
- Using the class computer, explore 'garden and wild plant identification uk' websites, to find plant ID tools for pupils' survey information to be inputted on return from the trip. Suggested sites:
<https://www.rhs.org.uk/plants/search-form>
<http://www.gardenersworld.com/plant-finder/>
<http://mywildflowers.com/identify.asp>

Where to go:

- Collect the **PUPILS' GREY and BLUE**, and **TEACHER'S BLACK RESOURCE RUCKSACKS**. Use the old billiards room as 'Base Camp' to start the parkland exploration activities from.



During the visit:

- Explore the parks observing the range of plants growing in different areas. Using the **Kearsney parks OS maps resource sheet**, write key words that describe the character of the changing habitats e.g. wild meadow, woodland, managed lawns, wild grassland, planted gardens.

- In a series of contrasting places, mark out 1m x 1m square quadrants on the ground, using string and tent pegs. Record the range and frequency of plants growing in the square and take a photo from above to record the quadrant. Mark each quadrant's location on the map as you go.
- Working as a group, make annotated observational drawings of the range of plants found, also taking close-up photos as an additional record.
- Using the **Monthly wild flower spotter resource sheet**, see if you can find any of the plants mentioned.

After the visit:

- Use the information collected on each plant, and the following websites, to help identify the range of plants found during the visit:
<https://www.rhs.org.uk/plants/search-form>
<http://www.gardenersworld.com/plant-finder/>
<http://mywildflowers.com/identify.asp>
- Create a range of plant population pie charts, based on varying factors e.g. colour, size, height.
- Most importantly create both bar and pie charts showing the numbers of plant types originating in this country compared to those brought into the country over the centuries.

NB. Bearing in mind this is just a small proportion of the plants in the park, do you think this survey is representative? How could you improve the survey?

- How would our gardens look without the importation of plants from other countries? Is there a parallel here to people migration?
- Looking at your drawings or photographs, choose one plant as inspiration for a simple simile poem e.g., 'Buttercups are as yellow as the sun/Petals look as glossy as new lipstick and feel as smooth as metal/Stems are as straggly as snakes etc.'
- Research one non-indigenous plant and write a poem or short piece of narrative writing about its journey to the UK. E.g. 'My family comes from Holland. We cluster together in the bulb fields, packed tight, supporting each other, all the colours of a rainbow. Here in England there are just a few of us etc.' Use the writing as the basis for a discussion about arriving to live in a new country.



Resources during visit:

- Use on-site **PUPILS' GREY and BLUE RESOURCE RUCKSACKS** for clipboards, tent pegs, rubber mallet, tape measures, string, magnifying glasses and waterproof mats in case of rain.
- You will also need the **TEACHER'S BLACK RESOURCE RUCKSACK** for the same items, plus the laminated **Kearsney Park OS map resource sheet** and the **Monthly wildflower spotter resource sheet**.
- **School to supply:** drawing and writing materials (pencils and paper).
A3 printouts of the **Kearsney parks OS maps**.
A4 printouts of the appropriate **Monthly wildflower spotter resource sheet**.
A4 printouts of the **Plant identification work sheet**.

Curriculum links:

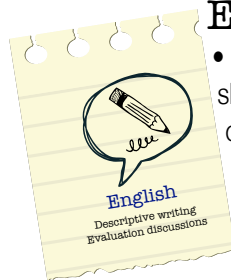
Geography:

- Understand the processes that give rise to key physical and human geographical features of the world, how these are interdependent and how they bring about spatial variation and change over time.
- Collect, analyse and communicate with a range of data gathered through experiences of fieldwork that deepen their understanding of geographical processes.
- Interpret a range of sources of geographical information, including maps, diagrams, globes, aerial photos and Geographical Information Systems (GIS).
- Communicate geographical information in a variety of ways, including through maps, numerical and quantitative skills and writing at length.

Mathematics:

- Become fluent in the fundamentals of mathematics, including through varied and frequent practice with increasingly complex problems over time, so that pupils develop conceptual understanding and the ability to recall and apply knowledge rapidly and accurately.
- Reason mathematically by following a line of enquiry, conjecturing relationships and generalisations, and developing an argument, justification or proof using mathematical language.

English:



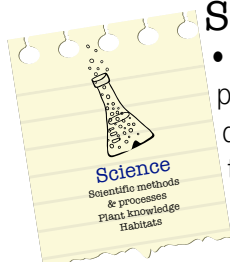
- Use discussion in order to learn; they should be able to elaborate and explain clearly their understanding and ideas
- Comprehension (both listening and reading).
- Articulate and justify answers, arguments and opinions.
- Consider and evaluate different viewpoints, attending to and building on contributions of others.
- composition (articulating ideas and structuring them in speech and writing).

Art & Design



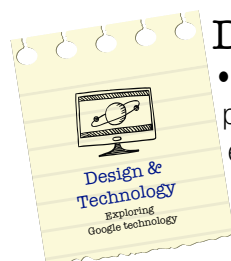
- Produce creative work, exploring their ideas and recording their experiences.
- Become proficient in drawing, painting, sculpture and other art, craft and design techniques.

Science:



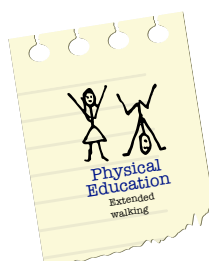
- Develop understanding of the nature, processes and methods of science through different types of science enquiries that help them to answer scientific questions about the world around them.
- Develop scientific knowledge and conceptual understanding through the specific disciplines of biology, chemistry and physics.
- Are equipped with the scientific knowledge required to understand the uses and implications of science, today and for the future.

Design & Technology:



- Develop the creative, technical and practical expertise needed to perform everyday tasks confidently and to participate successfully in an increasingly technological world.

Physical Education:



- Are physically active for sustained periods of time.
- Lead healthy, active lives.

Resource sheet 1(a) Plant Seekers



Gentiana farreri, drawn August 1915 in pencil and watercolour by Reginald Farrer (1880–1920), was found on an RHS-sponsored trip.



Susan Garnett-Botfield (1870–1954) in spats, 1937. She and her daughter Ruth McConnel are best known for introducing *Rhodohypoxis* from southern Africa.



Chinese passport used by James Herbert Veitch (1868–1907) during his 1891–93 trip to the Far East to collect plants for Veitch Nurseries. He described his travels in the book *A Traveller's Notes* (1896).

The plant seekers

Fanatical plant-hunting adventures – and close shaves – are celebrated in an exhibition of material from the RHS Lindley Library in association with the Garden Museum, London

Author: **Lucy Waitt**, RHS Images Curator. Images: **RHS Lindley Library**

The amazing wealth of plants growing in gardens today is testament to the debt gardeners owe a determined band of plant hunters who endured harsh terrains, political unrest and disease.

Their motive was almost universally the desire for botanical and horticultural knowledge, and the excitement of introducing new plants to our shores. Their determination, deprivation and the danger they endured has changed the face of gardens forever.

By the 17th century, plant hunting was funded by wealthy sponsors seeking to embellish their gardens with rare and exotic new plants. Expeditions to Europe, Russia and North America by John Tradescant (c1570–1638) and his son John (1608–1662) introduced plants such as *Gladiolus communis* subsp. *byzantinus*, *Syringa x persica* and *Tradescantia*.

This is the first time that many artefacts from RHS Lindley Library are on public display in the Garden Museum's exhibition space.

Notable plant hunters

❖ RHS founder member **Sir Joseph Banks** (1743–1820) endured seasickness, blizzards and the threat of shipwreck on Captain Cook's first voyage to the Pacific (1768–1771). Banks developed a methodical approach to plant hunting, and in 1817 he arranged with tea inspector John Reeves to send plant specimens and artwork back to the Horticultural Society of London (later the RHS). Some of his plants include camellias, peonies and chrysanthemums.



❖ **David Douglas** (1799–1834) first visited North America in 1823. In 1834 his trampled body was found in a bull pit in Hawaii. His horticultural legacy remains in plants such as *Ribes sanguineum* (American currant), widespread in gardens today, and *Pseudotsuga menziesii* (Douglas fir).

❖ From 1904 onwards, **George Forrest** (1873–1932) amassed prodigious quantities of plants in western China including clematis, magnolias, primulas and rhododendrons, and discovered more than 1,200 species new to science. In 1905, after falling 60m (200ft), he walked across mountains for nine days, evading capture by Tibetan rebels, to find he had been reported dead by the Foreign Office. Forrest died on his final trip, leaving a multitude of plant introductions.

Significant introductions

Across the world, through the centuries, the finds of plant hunters have extended the range of what we grow, giving our gardens greater diversity and year-round colour. On occasion we have been able to reintroduce some plants back to their native countries when they have been lost. But is the role changing? Modern plant hunters such as the Wynn-Joneses (see p91) are still collecting, but the future may lie more in researching plants' natural growing conditions to aid better cultivation, as well as seeking out key plant-based compounds for scientific use. ●

Resource sheet 1(b) Plant Seekers



This lantern slide is from a lecture series called *On the Roof of The World* by plant hunter, horticulturist and author Reginald Farrer, who influenced the development of rock gardening. Farrer made several plant-collecting expeditions to the Far East and Europe, and died while on a plant-hunting trip to northern Burma in 1920.

Plant hunters exhibition

THE GARDEN MUSEUM

5 Lambeth Palace Road, London SE1 7LB;
020 7401 8865; www.gardenmuseum.org.uk
✦ The Plant Seekers exhibition, 17 Jul–21 Oct, daily 10.30am–5pm (Sat to 4pm in summer). Admission: adults £7.50, concessions £6.50, art fund/full-time students £3, children under 16 free. **Special offer: RHS members half price** – show membership card when buying tickets.



Claude Aubriet (1665–1742) was the first artist to accompany a plant-hunting expedition, and later became the royal botanical artist in France. This painting, using gold on vellum, is of *Jatropha multifida*, a plant from the Americas.

Famous
plant
hunters
event
p83



This plant transportation box from about 1917 is stamped with the addresses of RHS Garden Wisley and JC Williams, who co-funded plant-hunting trips for George Forrest and Ernest Wilson. These trips supplied the plant collections at Grade II*-listed Caerhays Castle Gardens, Cornwall.



This woodcut illustration is probably the first published work by a plant collector. It is a map of the Mediterranean sea by Pierre Belon (1518–1564), from his 1555 publication *Les observations... trouvées en Grece, Asie, Judée, Egypte, Arabie...* It includes observations from his travels through Greece, Crete, Asia Minor, Egypt, Arabia and Palestine.

ARCHIVE IMAGES PHOTOGRAPHED BY ARMANDO RIBEIRO



Resource sheet 2

Plant Identification worksheet

[illegible]

Resource Sheet - Kearsney Parks Sketch Map

