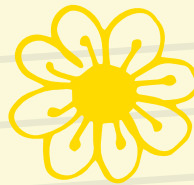
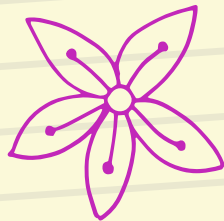


Colourful Geometry

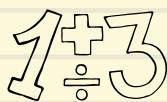


Use the parks to learn about the range of **wild and cultivated plants** that make up our modern landscapes, exploring the **geometry** of their flowers to develop into botanical artworks.

Suitable for KS2,
adaptable for KS1



Curriculum areas covered:



Mathematics

Numeracy
Geometry
Position and movement



Art & Design & Arts Award

Colour
Observational drawing
Composition
Rendering techniques
Learn about great artists and analyse and respond to their work



Science

Habitats
Plant knowledge
Plant reproduction



Design & Technology

Exploring
Google technology



Physical Education

Outdoor exercise



English

Spoken language
Composition
Presentation



Before your visit:

- Discuss with the class the colour spectrum, seeing how many colours everyone can name, and then putting them into sequential order.
- Looking at how the colour spectrum can be linked through into a colour circle, and make colour wheels based on the following method:
 - o Draw the following series of segmented circles, using 'circular geometry' construction methods, using only compasses and straight edge (no protractors):
 - 3 segment circle
 - 6 segment circle
 - 12 segment circle
 - o Create the colour wheels by colouring sequentially each of the constructed circles, and titling each segment:
 - 3 segment colour wheel
 - o Primary colours - red, yellow, blue.
 - 6 segment colour wheel
 - o Primary and secondary colours – red, orange, yellow, green, blue, purple
 - 12 segment colour wheel
 - o Primary, secondary and intermediate colours – red, red-orange, orange, orange-yellow, yellow, yellow-green, green, green-blue, blue, blue-purple, purple, purple-red.
- Introduce the idea of pupils working as botanical artists, making a trip to Kearsney Parks to collect botanical inspiration.
- Use the Internet to research the work of famous botanical artists and illustrators. Each pupil chooses a flower image that they really appreciate the rendering style of.
Some artist suggestions:
 - o Georgia O'Keeffe – 'Red Poppy'
 - o Vincent Van Gogh – 'Sunflowers'
 - o Claude Monet – 'Chrysanthemums'
 - o Andy Warhol – 'Flowers'
 - o Pierre-Joseph Redoute – 'Rosa gallica regalis'

Where to go:

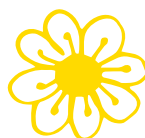
- Collect the **PUPILS' GREY & BLUE,** and **TEACHER'S BLACK RESOURCE RUCKSACKS.** Use the old billiards room as 'Base Camp' to start the parkland exploration activities.

During the visit:

- Explore the parks, observing the range of plants growing in different habitat areas.
- Flower colour hunt – create a colour spectrum of flowers found in the park, making thumbnail sketches of the radial faces of the flowers in some sequential formation on the page. Take close-up pictures of the radial flower heads to back up the finds.
- Each pupil chooses one flower to make a series of close observational drawings, creating an artist's study sheet of the plant.
- Survey the park, counting how many different flower types for each colour are present. Create a bar chart as a method of colour counting.
- Discuss whether there is any purpose to plants flowering, or is it all just for show? Is there any reproduction reason or benefit to different plants being different colours and shapes, and flowering at different times of the year?

Resources during visit:

- Use **PUPILS' GREY and BLUE RESOURCE RUCKSACKS** for clipboards, magnifying glasses, binoculars and waterproof mats in case of rain.
- You will also need the **TEACHER'S BLACK RESOURCE RUCKSACK** for the same items.
- **School to supply:** Colour wheels created in class, drawing materials (pencils and paper), cameras.





After the visit:

- Using 'circular geometry' techniques, explore ways of constructing radial flower heads based on each pupil's chosen flower study. Use large compasses, straight edge, and protractors where needed.

TIP: Segment a large drawn circle based on the number of petals on a chosen flower.

- Create the first petal by drawing a perpendicular cutting across a chosen segment line. Cast 2 equal arcs from the perpendicular, reflecting each other, to sweep across either side of the segment line to create a petal shape. Adapt the petal tip into a curve if necessary by casting an arc from the segment line to meet the 2 curved sides of the petal.
- Rotate the final petal shape (repeating the same construction technique) around the sequence of segment lines to create the flower head.
- Reproduce each flower image by drawing it onto new paper using carbon paper. Exclude any lines that are purely constructional.
- Discuss 2 composition methods – 'open composition' and 'closed composition'.
 - 'Closed composition' is where all the elements of an image are neatly contained in the frame, and there is a main area of focus generally in the centre e.g. Van Gogh's Sunflowers.
 - 'Open composition' is where there is less focus on a single area of interest, and the image runs off the edge of the page, creating a more dynamic feeling e.g. Georgia O'Keeffe's Red Poppy or Golden Hibiscus.
- Pupils choose which form of composition they wish to use and crop their images accordingly.
- Each pupil colour renders their flower image in the style of their chosen botanical artist, experimenting briefly with oil pastels, soft pastels, paint and colour pencil to find the most suitable medium.
- Pupils could also research the life and work of their chosen artist and produce a presentation about them.

Curriculum links:

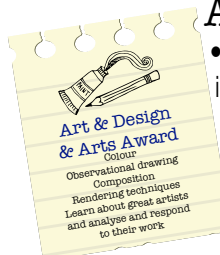
Mathematics:

- 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.

- Can solve problems by applying their mathematics to a variety of routine and non-routine problems with increasing sophistication, including breaking down problems into a series of simpler steps and persevering in seeking solutions.

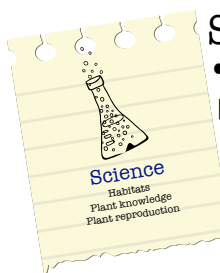
Art & Design:



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

- Evaluate and analyse creative works using language of art, craft and design.

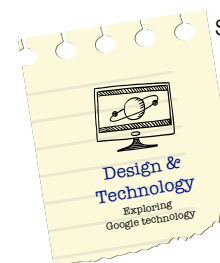
- Know about great artists, craft makers and designers, and understand historical and cultural development of their art forms.



Science:

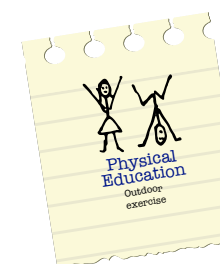
- Develop understanding of the nature, processes and methods of science through different types of science enquiries that help them to answer scientific questions about the world around them.

- Develop scientific knowledge and conceptual understanding through the specific disciplines of biology, chemistry and physics.



Design & Technology:

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

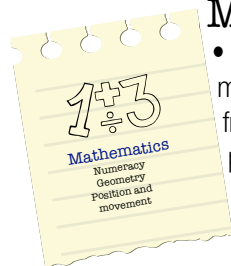


Physical Education:

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

English:

- Participate in discussions, presentations, performances, role play, improvisations and debates.
- Composition (articulating ideas and structuring them in speech and writing).
- Write clearly, accurately and coherently, adapting their language and style in and for a range of contexts, purposes and audiences.



Resource Sheet - Kearsney Parks Sketch Map

