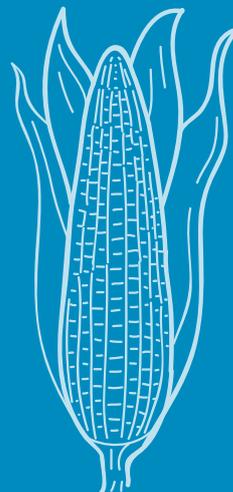
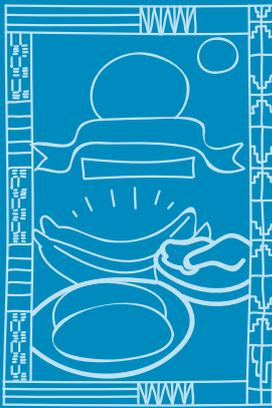


Royal Botanic Gardens

# Kew



Formal Learning, Kew 2019

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**Mobile Museum:  
Lesson Plan 2 –  
Why plants matter**

**Key Stage: 1 & 2**

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<b>Key Stage</b>	<b>1 &amp; 2 (can be adapted for all year groups)</b>
<b>Topic</b>	<b>Why plants matter</b>
<b>Duration</b>	<b>Half a day</b>
<b>Subject</b>	<b>Curriculum Links – Science, English, Geography, PSHE, Design and Technology, Art and Design</b>



## Overview

Explore why plants are so important in our daily lives for: food, shelter, medicine, materials, culture, environment and wellbeing. Take a look at some of the threats to plants and our human responsibility to protect plants.

Teachers can enhance this session by sourcing copyright-free images that show examples of how plants are used around the world.

## Learning outcomes

Pupils will be able to:

- explore the importance of plants and how we use them
- understand why plants are threatened
- appreciate the effects of human impact and our responsibility to protect plants

## Keywords

habitat, rare, endangered, environment, plant-based, percentage, sustainability, medicinal, photosynthesis, climate change, oxygen, carbon dioxide, producer, consumer, food chain, species, extinction, conservation, preservation

## Curriculum links

KS 1 and 2 Science  
KS 1 and 2 English  
KS 1 and 2 Geography  
KS 1 and 2 PSHE  
KS 1 and 2 Design and Technology  
KS 1 and 2 Art and Design

*Please see page 7–10 for curriculum information.*

## Resources and equipment

- pencils
- marker pens
- flip chart or A3 paper
- plant usage images

## Activity outline

### KEY STAGE 2

#### Activity one: Important Plants

Using a large sheet of flip chart paper or A3 paper, Post-it notes and pens, pupils work in small groups to brainstorm why they think plants are important to us

Write their ideas onto Post-it notes and stick them on the flip chart paper in order of importance

Ask groups to choose their “top 3” important plants

Take feedback from each group, asking pupils to explain their choices and decisions

Pupils may come up with the following:

- food
- medicine
- building materials
- household objects / utensils
- clothing
- oxygen supply and CO<sub>2</sub> absorption (as a result of plant photosynthesis)
- food chains (as producers at the base of food chains, plants support animal life)
- leisure and enjoyment

You could support pupil learning by:

- displaying images on the whiteboard showing examples of plants being used in some of the areas listed above
- displaying plant based objects/materials that are used every day such as wooden spoons, chopsticks, bathroom loofahs, bamboo products, cotton fabrics etc.

***See Curating a School Museum Teachers' handbook pages 14–15 for further information***

#### Activity two: We Need Plants

Pupils produce a poster, flyer, fact sheet or newsletter designed to promote and publicise the museum to family members and other visitors

It should include some information outlining why plants are so important to us and could contain a catchy slogan

As preparation for the activity the pupils could talk about what the world would be like if there were no plants

The posters etc can be hand drawn or created using computer graphics

These could be used in the museum as interpretation for the objects

### Activity three: Plants Under Threat

Introduce the fact that 20%, or one-fifth, of the world's plants are threatened with extinction

Talk about what the pupils understand by the word 'extinct'

In groups pupils attempt to answer the following question:

*What do you think are the main causes for plants to die out (become extinct)?*

Groups record their ideas onto flip chart paper

Share ideas with the whole group at the end

Pupils may come up with some of the following:

- deforestation – due to farming (including livestock, crop farming and plantations), logging, mining, repurposing land for housing and other development
- climate change
- pollution
- invasive plants
- other threats such as fire and plant diseases

You may want to support learning with images showing examples of the above.

Further information can be found in the *State of the World's Plants* reports:

[stateoftheworldsplants.org/2016/](http://stateoftheworldsplants.org/2016/)

[stateoftheworldsplants.org/2017/](http://stateoftheworldsplants.org/2017/)

### Activity Four: Protecting Plants

In groups pupils consider what they can do to protect plants

Pupils may be encouraged to think of some of the following:

- make careful choices about what we buy (pupils may be able to discuss what the term 'sustainable' means in relation to products, and the significance of information on labels and packaging)
- help with local events such as school gardens, wildflower planting schemes, litter picking or other initiatives which promote care for wildlife including plants
- focus on a local single issue that might affect the plants which live there – for example, a local housing development
- support organisations that protect plants locally and further afield.  
You may find the Grow Wild website useful: <https://www.growwilduk.com>

## **KEY STAGE 1**

### **Activity One: Important Plants**

Pupils identify and record items which may have come from plants

Use Post-it notes or coloured stickers to identify the plant-based items

Pupils group the items into foods, building materials, useful objects (such as pencils, paper and cotton clothing)

Pupils discuss and/or research which part of a plant has been used for specific objects e.g. bark, trunk, flower, fruit, leaf fibres, seeds etc.

*See Curating a School Museum Teachers' handbook pages 16–17 for further information*

Pupils write an interesting observation about one of the objects and share it with the rest of the group

### **Activity Two: We Need Plants**

Pupils produce a poster to tell their families and other visitors about the museum

### **Activity Three: Plants Under Threat**

Pupils imagine a world without plants. Take a look around the class if all the things in the room made from plants were removed what would be left

Pupils could add information to the poster from activity two about why plants are so important to us and other animals

Talk about what things in the world could cause plants to die out

Pupils could add some WARNING signs and pictures to their posters telling people about the things that can damage the plants of the world

### **Activity Four: Protecting Plants**

Pupils work in pairs to create an instruction comic strip telling people how to look after their plants so that they stay healthy and strong

## Curriculum links

### KEY STAGE 1

#### Science

##### Plants

- identify and describe the basic structure of a variety of common flowering plants, including trees
- use the idea of a simple food chain to describe how animals obtain their food from plants and other animals, and identify and name different sources of food

##### Everyday materials

- distinguish between an object and the material from which it is made
- identify and name a variety of everyday materials including wood, plastic, glass, metal, water, and rock
- describe the simple physical properties of a variety of everyday materials

##### Working scientifically

Pupils will be using the following practical scientific methods, processes and skills:

- observing closely
- Identifying and classifying
- using observations and ideas to suggest answers to questions
- gathering and recording data to help answer questions

#### English

- write for different purposes
- discuss their writing with the teacher or other pupils

### Geography

- develop knowledge about the world, the United Kingdom and their locality
- understand basic subject-specific vocabulary relating to human and physical geography and begin to use geographical skills, including first-hand observation, to enhance their locational awareness

### PSHE

- take part in discussions with one other person and the whole class
- take part in a simple debate about topical issues

### Design and Technology

#### Design

- generate, develop, model and communicate ideas through talking, drawing, creating templates and mock-ups and, where appropriate, information and communication technology

#### Evaluate

- evaluate ideas and products against design criteria

## **KEY STAGE 2**

### **Science**

#### **Plants**

- Identify and describe the functions of different parts of flowering plants: roots, stem/trunk, leaves and flowers

#### **Working scientifically**

Pupils will be using the following practical scientific methods, processes and skills:

- report and present findings from enquiries, including conclusions
- identify scientific evidence that has been used to support or refute ideas or arguments
- recognise that environments can change and that this sometimes poses danger to living things.
- making systematic and careful observations

### **English**

#### **Lower KS 2**

- retrieve, record and present information from non-fiction
- discuss and record ideas

#### **Upper KS 2**

- retrieve, record and present information from non-fiction
- note and develop initial ideas, drawing on reading and research where necessary

### **Geography**

- extend knowledge and understanding beyond their locality, to include the location and characteristics of a range of the world's most significant human and physical features
- develop use of geographical knowledge, understanding and skills to enhance their locational and place knowledge

### PSHE

- discuss opinions and explain views on personal and societal issues
- discuss and debate topical issues, problems and events

### Design and Technology

#### Design

- generate, develop, model and communicate ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design

#### Evaluate

- evaluate ideas and products against their own design criteria and consider the views of others to improve their work

### Art and Design

- improve mastery of art and design techniques, including drawing, painting and sculpture with a range of materials (for example pencil, charcoal, paint and clay)