

Characteristics Matter! Biodiversity & Classification at the Park...

Student Introduction

- As well as enjoying the activities you can also find out about some of the plants that are growing at Robin Hill. You can:
- ✓ Study the classification and variation charts.
 - ✓ Observe the characteristics and leaves of the various plants.
 - ✓ Classify the plant according to its characteristics, and complete the worksheet using your observations.



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Step 1

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- » Study the classification chart on page 2 (non-flowering plants).
- » Observe the characteristics of the plant as listed in the chart.
- » In the space next to the photo you can write the name of the species, draw what you see or take a photo using your mobile phone.

Step 2

- » Study the classification chart on page 3 (flowering plants)
- » Find another example of a Eudicotyledons (dicotyledons) flowering plant and enter the details into the empty box.



Step 1

Living Things

105122

ANIMALS

FUNGI

(moulds, yeasts,
mushrooms)

PROKARYOTES

(bacteria, algae)

PROTOCTISTIS

(paramecium,
amoeba)

PLANTS

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Ferns



Characteristics:

- ▶ true stem
- ▶ complex leaves with branching veins
- ▶ reproduce by spores

Moss

Characteristics:

- ▶ small
- ▶ grows close to ground
- ▶ no true root
- ▶ spore-producing capsule
- ▶ no true vascular system

Horsetails (equisetum)



Characteristics:

- ▶ reproduce by spores
- ▶ whorls of branches
- ▶ whorls fused into nodal sheaths

Step 2

Living Things

105122

ANIMALS

FUNGI

(moulds, yeasts, mushrooms)

PROKARYOTES

(bacteria, algae)

PROTOCTISTIS

(paramecium, amoeba)

PLANTS

Non-flowering

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Hydrangea



Characteristics:

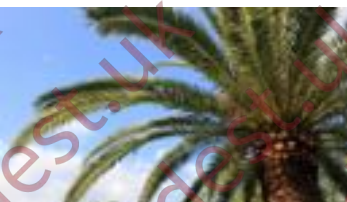
- ▶ 2 seed-leaves
- ▶ leaves with branching veins

Characteristics:

- ▶
- ▶
- ▶

Monocotyledons

Palm Tree



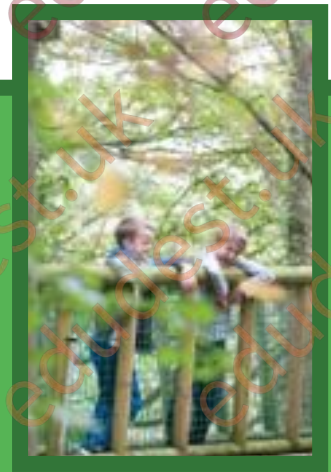
Characteristics:

- ▶ one-seed leaf
- ▶ parallel veins in leaves

BIODIVERSITY

Useful information:

- ▶ Biodiversity is the wide range of different species of plants and animals.
- ▶ Biodiversity is environmentally important in maintaining sustainability.
- ▶ Plants biodiversity is important for the development of drugs,



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Task

Step 3



1. Study the variation chart on page 5.
2. Observe the leaves of different plants.
3. Search for a Redwood tree and a Banana plant.
4. Draw their leaves onto the chart.
5. Fill in the first two columns of the chart.
6. Look for leaves with a different structure.
7. Write the name of the plant onto the chart, there is usually a label close by.

Variation in Leaves

Name of plant	Drawing of leaf	Benefit of this plant to the animal	Benefit of this plant to Man
Redwood Tree			
Banana			

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Step 4

Think about the possible benefits of the leaf structure to the plant.

Complete the third column of the chart on page 5.

You can choose one of the following or write your own ideas:

- ▶ Spikes/thorns for protection from pests
- ▶ Smaller surface area for reduction of water loss



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Step 5

Read through the possible benefits to Man:

- Maintains sustainability of ecosystem
- Important for the development of drugs
- Important as a food source
- Important for pollination
- Can be used as a fuel
- Can be used to produce fires
- Important for the development of fodder
- Can be used in the dyeing process
- Important to allow adaptation to climate change.

1. Consider how your plants could possibly benefit Man.
2. Complete the last column of the chart.

