# Living things and their habitats

*Plant classification: characteristics of flowering and non-flowering plants*

*Year 6*
*Age 10-11*

**For parents**
*Thank you for supporting your child's learning in science.*

***Before the session:***
- Please read slide 2 so you know what your child is learning and what you need to get ready.
- As an alternative to lined paper, slide 5 may be printed for your child to record on.

***During the session:***
- Share the learning intentions on slide 2.
- Support your child with the main activities on slides 3,4 & 5, as needed.
- Slide 6 is a further, optional activity.
- Slide 7 has a glossary of key terms.

***Reviewing with your child:***
- Slide 8 gives an idea of what your child may produce.

Key Learning
- **Plants** can be divided broadly into two main groups: **flowering plants** and **non-flowering plants.**

- **Flowering plants** reproduce with seeds which are protected by a flower or fruit.

- **Non-flowering plants** include **conifers**, **ferns**, and **mosses.**

I can…

- Describe the characteristics of flowering and non-flowering plants.

- Use a statement key to classify a group of plants.

**Activities** (pages 3-5): 30 - 40 mins

- Use lined paper, a ruler and a pencil.

- Alternatively, print page 5 as a worksheet.

**Find out more…** (page 6): 30 – 60 mins

- Find out more about your local trees.
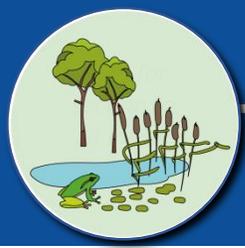
*The* **Association** *for* **Science Education**

Watch these two BBC clips about classifying plants.

https://www.bbc.co.uk/bitesize/clips/zsdkjxs

https://www.youtube.com/watch?v=cgVlrtGnG6s

- Think about these questions as you watch:
  - Which type of plants produce seeds?
  - Which type of plants produce spores?

A **Flowering plant** reproduces with seeds which are protected by a flower or fruit.

https://www.dkfindout.com/uk/animals-and-nature/plants/flowering-plants/

https://www.woodlandtrust.org.uk/trees-woods-and-wildlife/plants/grasses-and-sedges/

- Why are the flowers of some plants brightly coloured and those of other plants a dull green or brown?

Insect-pollinated plants usually have coloured petals. Many trees and grasses have dull, hanging flowers as they rely on the wind for pollination.

**Non-flowering plants** include **conifers**, **ferns**, and **mosses.**

- **Conifers** reproduce with seeds in cones.

- They often have needle-shaped leaves.



- Conifers include firs, pines, spruces and yews.

- Many are evergreen and do not shed their leaves in winter.



**Mosses** and **ferns** reproduce with tiny spores rather than seeds.

Mosses often grow in shady, damp places and do not have true roots.

More details about conifers, ferns and mosses:

https://www.dkfindout.com/uk/animals-and-nature/plants/non-flowering-plants/

https://www.woodlandtrust.org.uk/trees-woods-and-wildlife/plants/ferns/

## Use the key to classify these plants:

Hazel tree

Buttercup

Bracken

Moss

Spruce tree

Grass

# I can use a paired statement key to classify plants.



I can use a paired statement key to classify plants.

| 1 | reproduces with seeds | go to 3 |
| | reproduces with spores | go to 2 |

| 2 | has roots | plant A: |
| | has no true roots | plant B: |

| 3 | produces flowers | go to 4 |
| | does not produce flowers | plant C: |

| 4 | flowers are colourful | plant D: |
| | flowers are not colourful | go to 5 |

| 5 | has a rigid stem | plant E: |
| | has a flexible stem | plant F: |

A **paired-statement key** is set out as a list. You start at number one on the list and work your way through the statements. Identify plants A to F by looking at the pictures and using what you have learnt.

Hint: Some plants hold their seeds in cones.

Hint: Wind pollinated plants do not have colourful flowers to attract insects.

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You may like to find out more about your local trees. The Woodland Trust website has a wide variety of information about trees in the UK.
https://www.woodlandtrust.org.uk/trees-woods-and-wildlife/british-trees/how-to-identify-trees/

Alternatively, 'Trees for Learning' have three suggested activities for the Summer.

https://communityforest.org.uk/treesforlearning/download-ks2-activity-summer/

**Glossary of terms**

**Characteristic:** **Characteristics** are features of living things which help scientists **classify** them.

**Classification:** **Classification** is the method scientists use to group living things.

**Flowering plant:** A **flowering plant** reproduces with seeds which are protected by a flower or fruit.

**Non-flowering plant:** **Non-flowering plants** include **conifers**, **ferns** and **mosses.** Conifers reproduce with seeds in cones. Ferns and mosses reproduce with spores. Mosses do not have true roots.

**Paired-statement key:** A **paired-statement key** is set out as a list. You start at number one on the list and work your way through the statements until you reach the name of the living thing you are classifying.

**Pollination:** **Pollination** is the transfer of **pollen** from one flowering plant to another, usually carried by insects, animals or the wind.

I can use a paired statement key to classify plants.
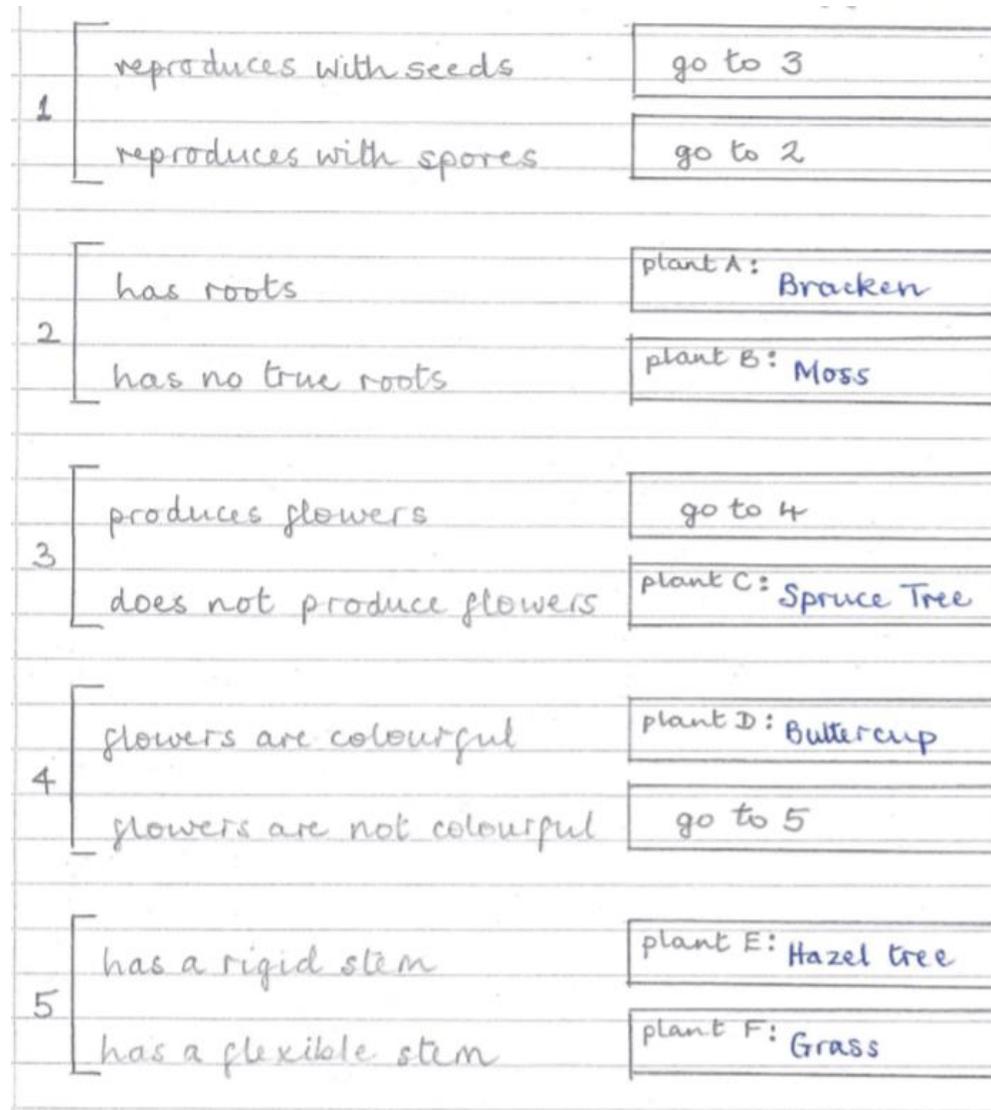
Plant A: Bracken. It is a fern. It reproduces with spores. It has roots, stems and leaves.

Plant B: Moss. Moss reproduces with spores. It has no true roots and usually grows in damp, shady places.

Plant C: Spruce Tree. It does not produce flowers. It has seeds contained in cones.

Plant D: Buttercup. It has brightly coloured petals that attract insects for pollination.

Plant E: Hazel Tree. It has catkins as flowers which hang down so the pollen is carried by the wind.

Plant F: Grass. Grasses usually have dull green or brown flowers and stems which bend in the breeze.

| 1 | reproduces with seeds | go to 3 |
|---|---|---|
| | reproduces with spores | go to 2 |
| 2 | has roots | plant A: Bracken |
| | has no true roots | plant B: Moss |
| 3 | produces flowers | go to 4 |
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| 4 | flowers are colourful | plant D: Buttercup |
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| 5 | has a rigid stem | plant E: Hazel tree |
| | has a flexible stem | plant F: Grass |