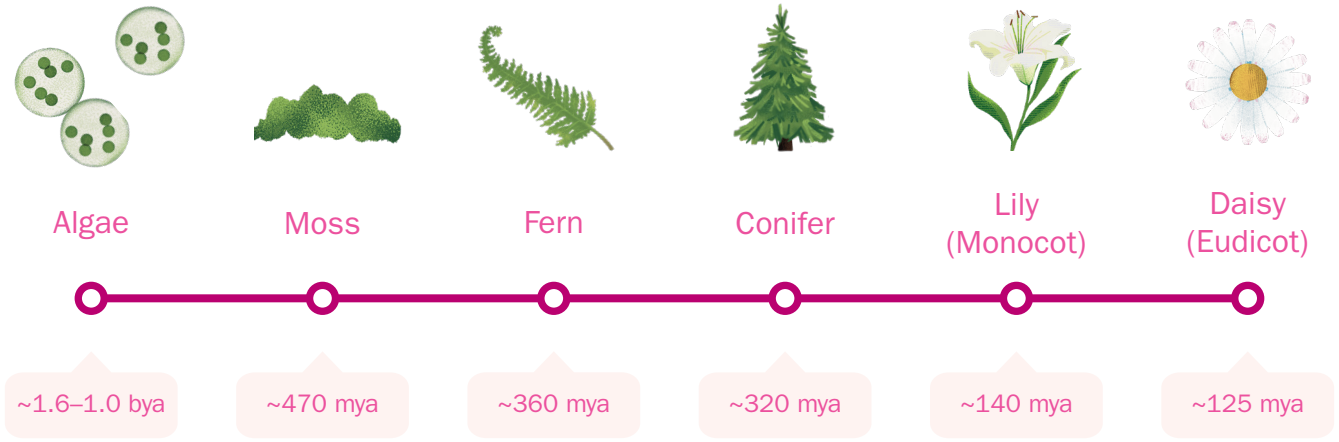
Time travel: Travel back 500 million years to find out how plants evolved



Hint: About 500 million years ago, plants evolved from algae - simple, plant-like organisms that live in water. Early plants, such as mosses, are non-vascular, meaning they lack specialised tissues called xylem and phloem to transport water and nutrients. Later, vascular plants evolved these tissues, allowing them to grow larger and live in different environments. Before flowering plants appeared, ferns reproduced with spores, and conifers produced seeds in cones.

Which plant evolved first?

See if plants have the following characteristics. These clues can help you determine their evolutionary order.

Presence of roots, stems and leaves

Waxy or waterproof surface

Spores

Seeds

Flowers

Challenge:

How did plants evolve? Explore the Gardens and look for clues to study the evolution of plants.

Key vocabulary:

evolution, adaptation, vascular, non-vascular, flowering plant, physical characteristics

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Type of plant	Notes on texture, appearance and size	Any roots, stems or veins in leaves?	Any waxy surface?	Does the plant produce spores or seeds?	Any flowers?
Moss					
Fern					
Conifer					
Lily					
Daisy					

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The climate is changing: we are now experiencing hotter summers and more-extreme weather in general. How might this affect plant evolution in the future? Create a labelled drawing showing how plants might look under the effects of climate change.