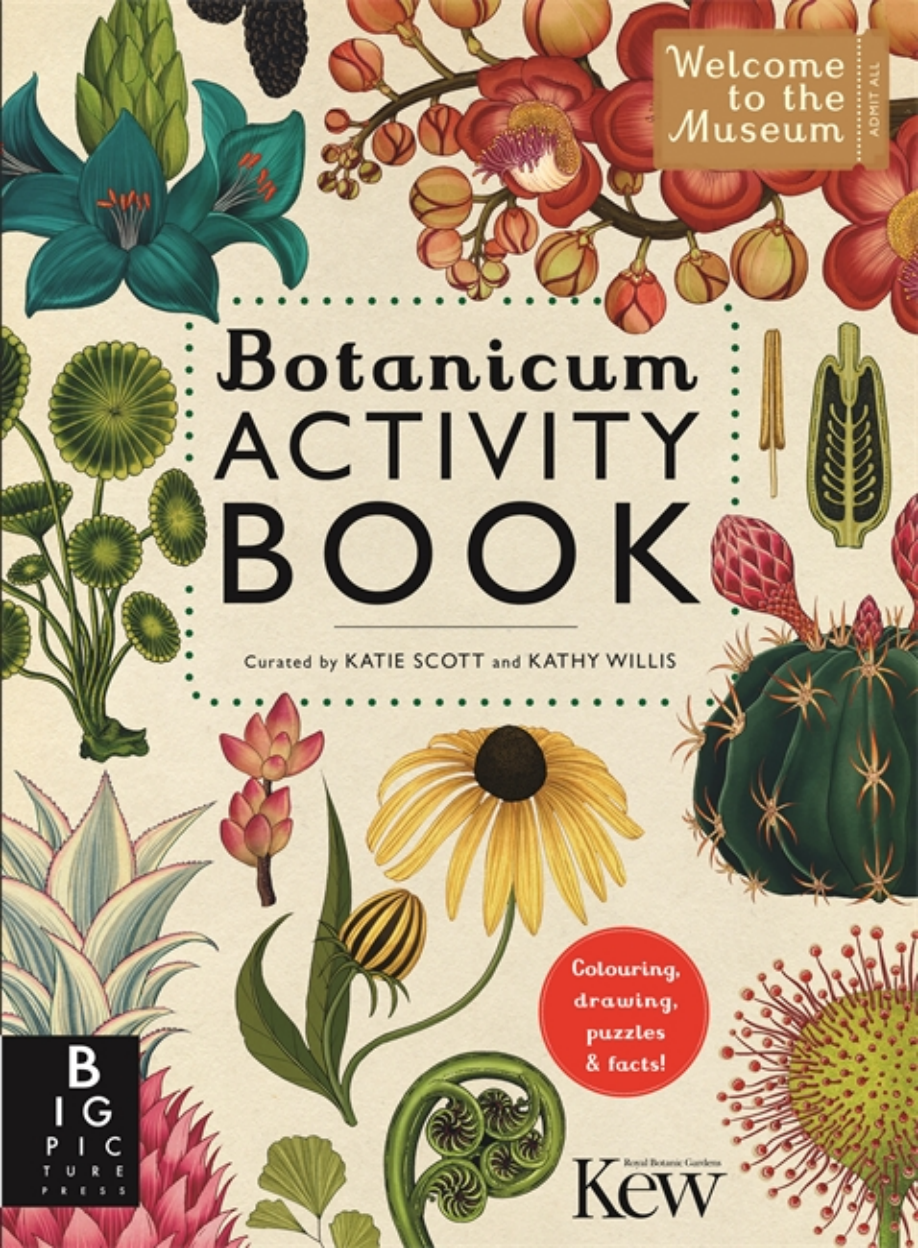




Welcome
to the
Museum

ADMIT ALL

Botanicum ACTIVITY BOOK

Curated by KATIE SCOTT and KATHY WILLIS

Colouring,
drawing,
puzzles
& facts!

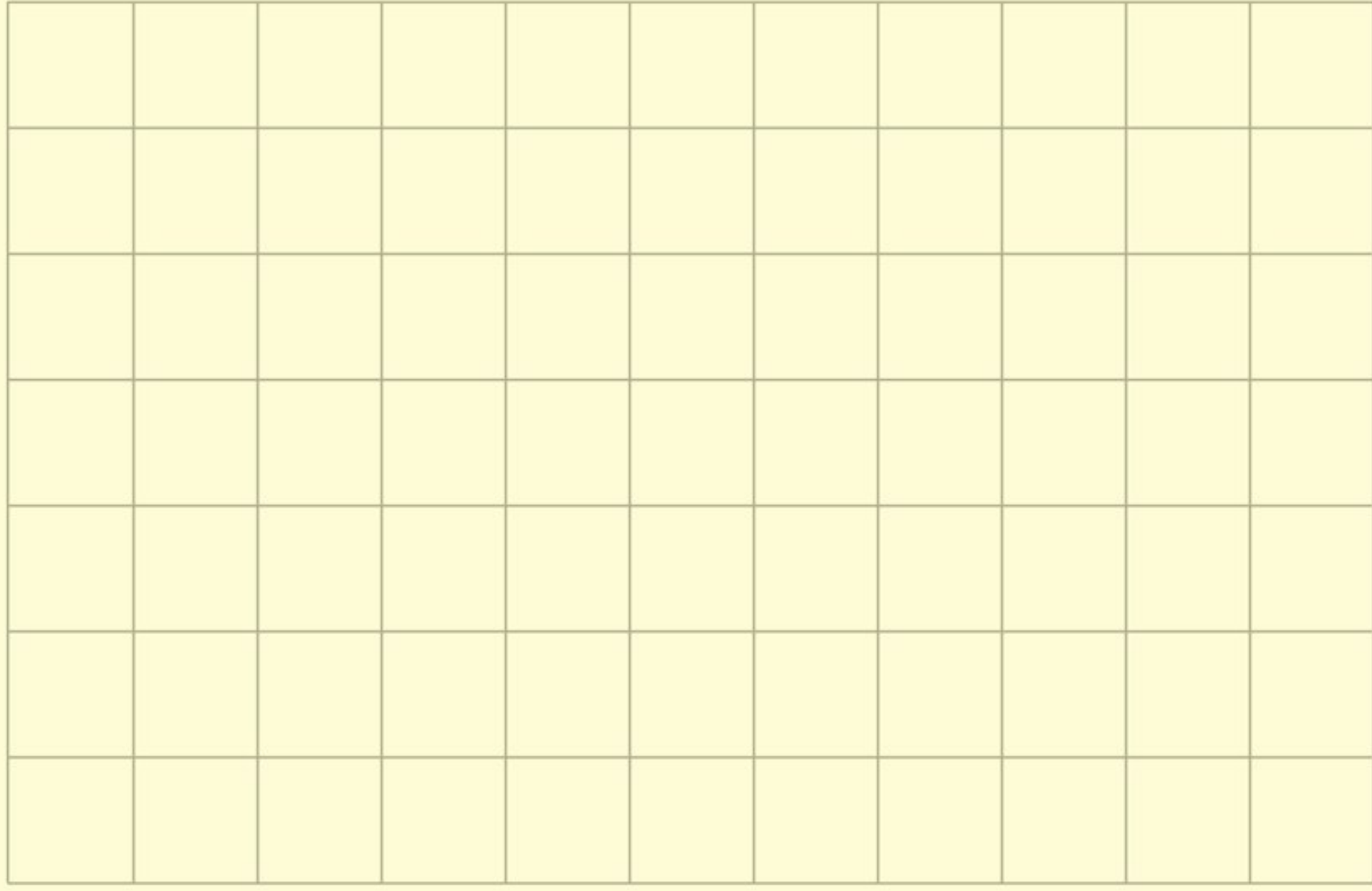
Royal Botanic Gardens
Kew

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Sunflower



Draw the sunflower





Common sunflower

Helianthus annuus

Height: up to 3m

The sunflower gives us tasty seeds which, as well as being eaten whole, can be pressed to release a versatile and flavoursome oil, used in salads, cooking and much more.

Sunflower oil has other uses too, including as biofuel, in soap making, and as a drying oil for paint.

Colour in this cannonball flower





Cannonball flower

Couroupita guianensis

Height: 23m

Native to the Guianas in South America, the cannonball tree has complex, waxy flowers that are beautifully scented and grow directly on the bark of the trunk. Its fruits look like rusty cannonballs hanging in clusters.

Label the layers of the rainforest



Understorey
Canopy

Undergrowth
Emergent layer

Answers



Rainforest

Permanently wet and warm, rainforests provide such a fertile growing environment that many different kinds of plants have learnt to live alongside (and often underneath) each other. Some are tall and thin, spreading high canopies to catch the sun; others cling on to another plant; others creep along the ground in the dark, drawing nutrients from the rich, damp soil.

Spot the difference

(there are 10 differences to spot)



Answers



Sponge gourd

Luffa aegyptiaca

Fruit length: up to 61cm long

The fruit of the sponge gourd is a popular delicacy in China and Vietnam, but in western Europe and the United States, it is probably best known for a completely different use – scrubbing your back in the bath. The luffa (or loofah) fruit is very fibrous when ripe. Remove the flesh, and you have an excellent scrubbing sponge.

How to draw a cycad tree



Try it yourself



Eastern Cape giant cycad

Encephalartos altensteini

Height: 6m

Cycads have a long, cylindrical trunk and usually no branches. Leaves grow directly from the top of the trunk, and typically fall off as the tree gets older, leaving a diamond pattern on the stem and a crown of leaves at the top. Unlike palms, cycads do not flower and bear their reproductive organs in cones.

Match the seeds to the leaves



Answers



English oak acorn and leaf



Common beech seed pod and leaf

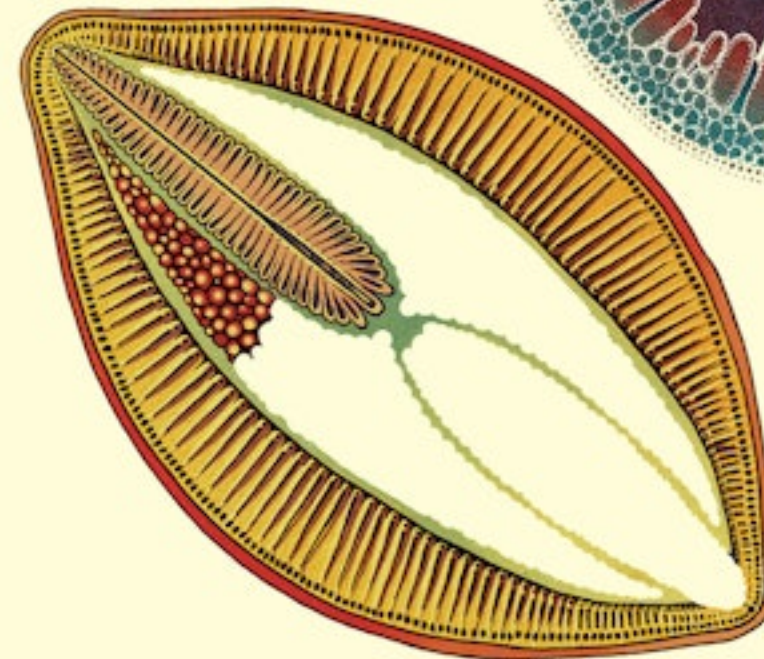
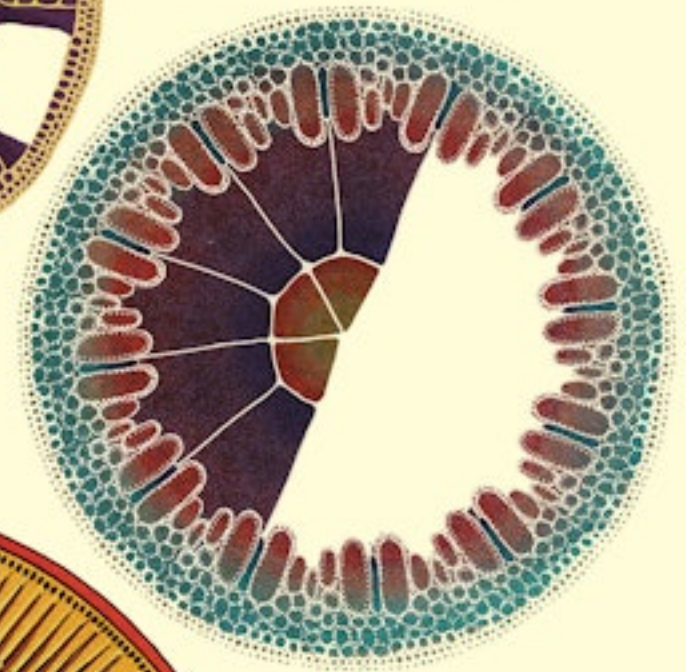
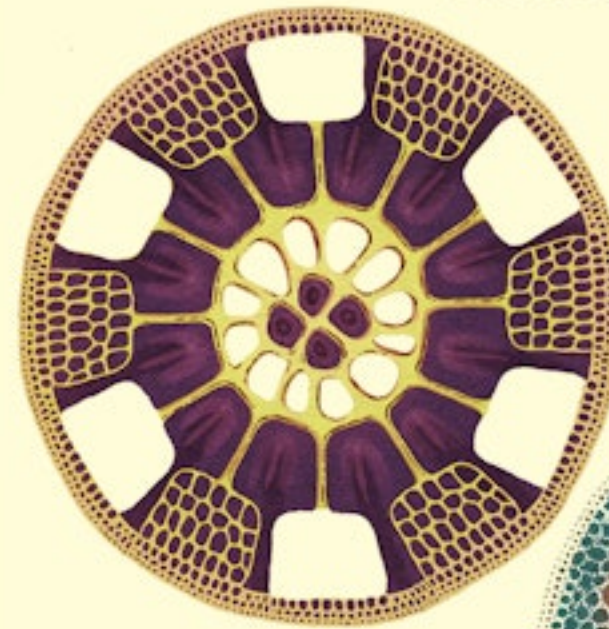


Sweet chestnut seed and leaf



Scarlet oak acorns and leaf

Complete the patterns and colour
in the algae





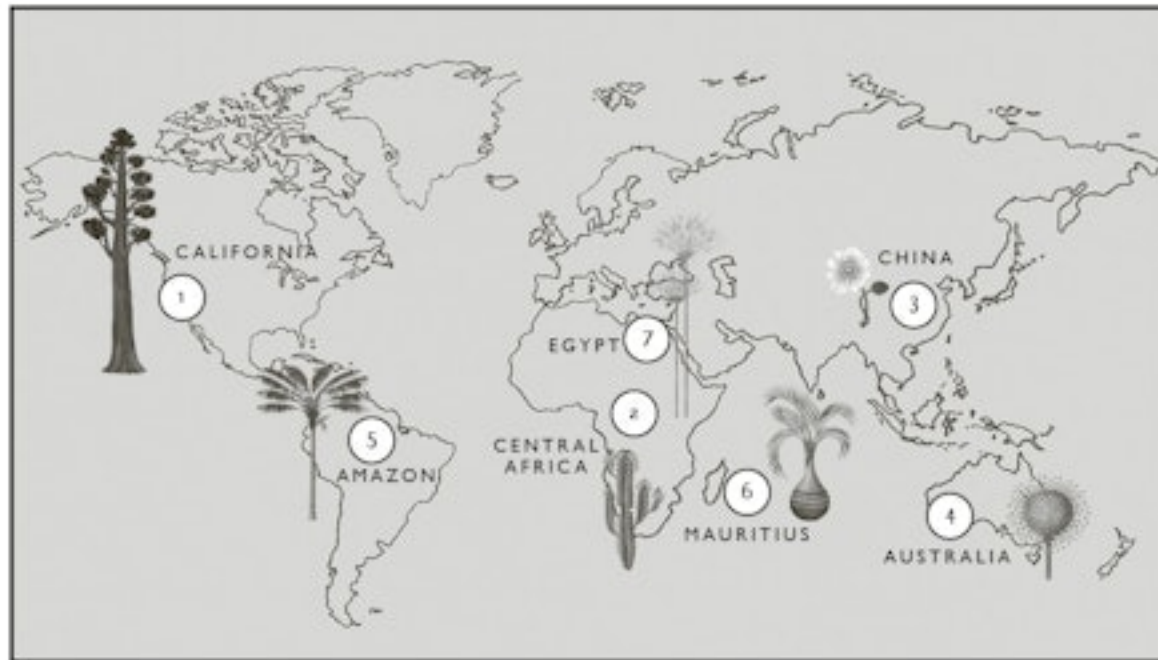
Wild flowers

Flowering plants that grow without being either planted or altered by human hands are known as wild flowers. Wild flowers are completely reliant upon nature to disperse their seeds.

Match these plants to the regions where they are found

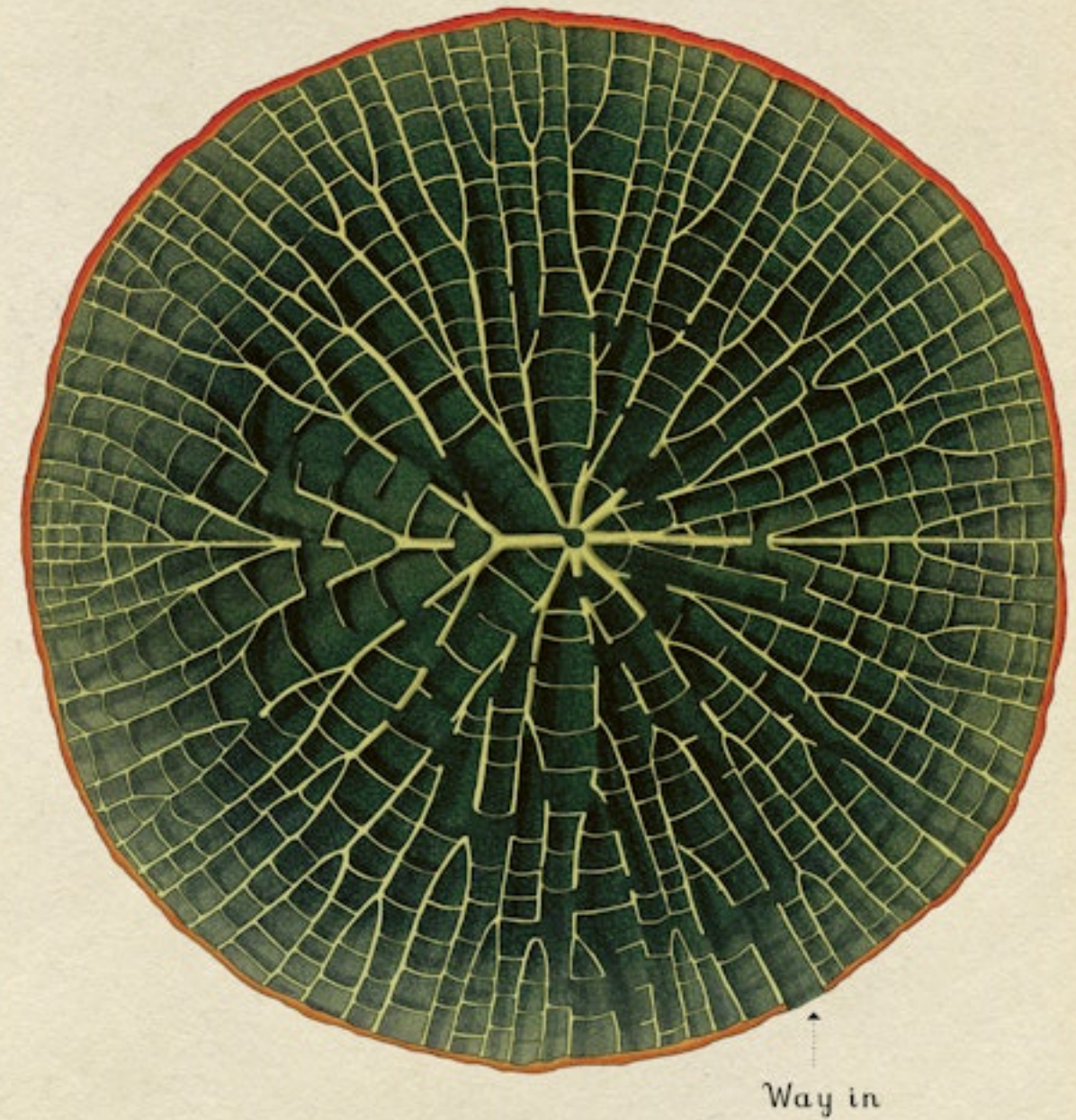


Answers



- 1 - Giant sequoia
- 2 - African milk tree
- 3 - Japanese anemone
- 4 - Common sundew
- 5 - Bacaba
- 6 - Bottle palm
- 7 - Papyrus

Find a way through the maze to the
centre of the water lily



Answers



Amazon water lily

Victoria amazonica

Width: up to 2.5m

The leaves of the Amazon water lily are so buoyant that they can easily support the weight of a small child of up to 45kg.

Draw in the other half of this buttercup





Creeping buttercup

Ranunculus repens
Height: up to 30cm

The buttercup is a radially symmetrical flower – so it is possible to draw many lines of symmetry on the face of the flowers.
Buttercups are pollinated by insects.

Spot the difference

(there are 10 differences to spot)



Answers



Alpine habitat

Alpine plants can survive anywhere in the world with the right conditions. These include: very low temperatures, regularly below 0°C for months at a time, but often covered by a blanket of snow; dryness; high levels of ultra-violet radiation; and a very short growing season.

Draw a line connecting each plant to where it grows



Desert

Coniferous
forest

Swamp

On other
plants

Rainforest



Answers



Mistletoe
On other plants



Oil palm
Rainforest



Umbrella liverwort
Swamp



Crow's claw cactus
Desert



Loblolly pine
Coniferous forest

Circle the parasitic plants



Answers



Aquatic primrose



Bee orchid



Asiatic witchweed



European
dodder



Stinking corpse
flower



Cobra pitcher
plant

Parasitic plants

All plants need food, water and nutrients. Most get their own from the sun, rain and soil. Some, however, use other plants to do it for them. These are called parasitic plants.

Add detail to the pumpkin plant
and colour it in





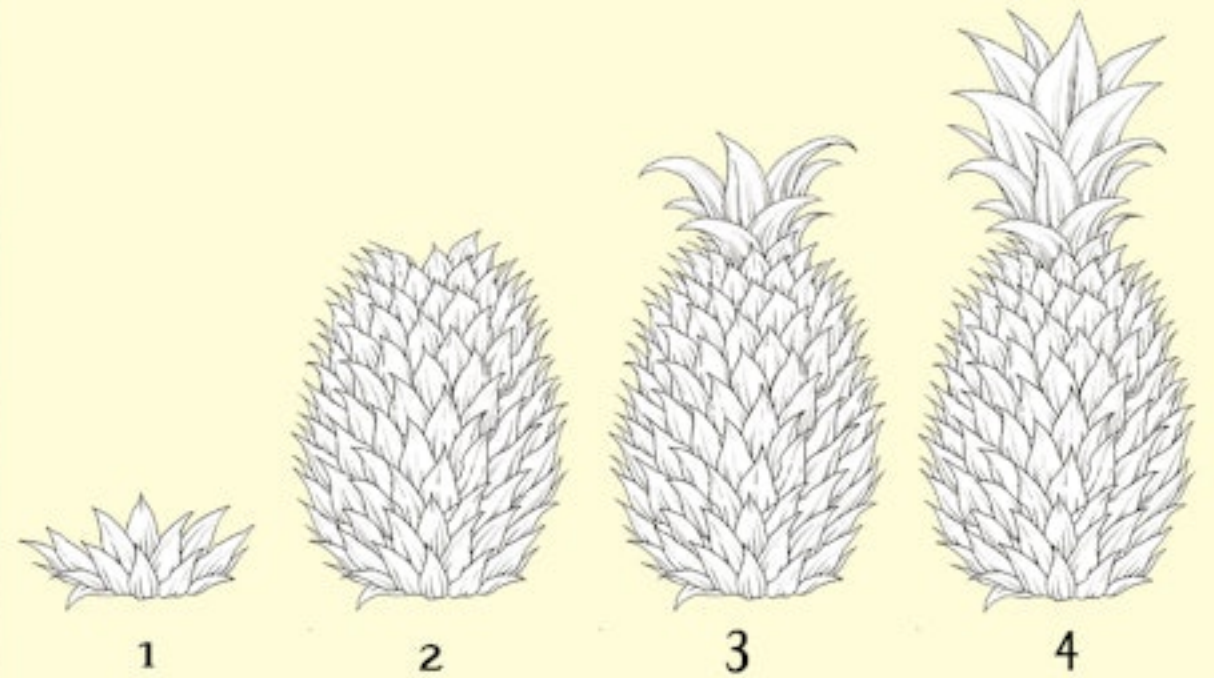
Pumpkin

Cucurbita pepo

Height: 70cm

The pumpkin is one of the oldest domesticated plants. Archaeological sites in northern Mexico have revealed fragments dated 7000-5500 BC, and in the southwestern United States to AD 610. An integral part of the diet of Native American peoples before the arrival of European settlers in the fifteenth century it is still an important crop in these regions.

How to draw a pineapple



Try it yourself



Red pineapple

Ananas bracteatus

Plant height: 1.2m

A pineapple is not a simple fruit but consists of a whole bunch of fruits melted together into one large, fleshy structure. In tropical America, where pineapples are native, tapirs love to eat the fruits of wild pineapples and help disperse their seeds. Cultivated pineapples are bred to be seedless.

Draw the dandelion life cycle
in the correct order



1

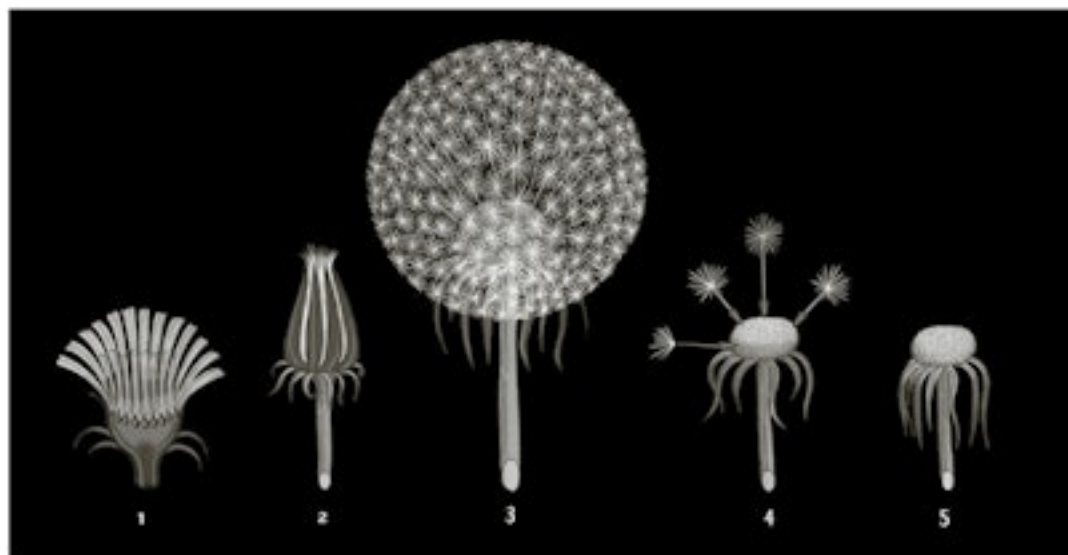
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5

Answers



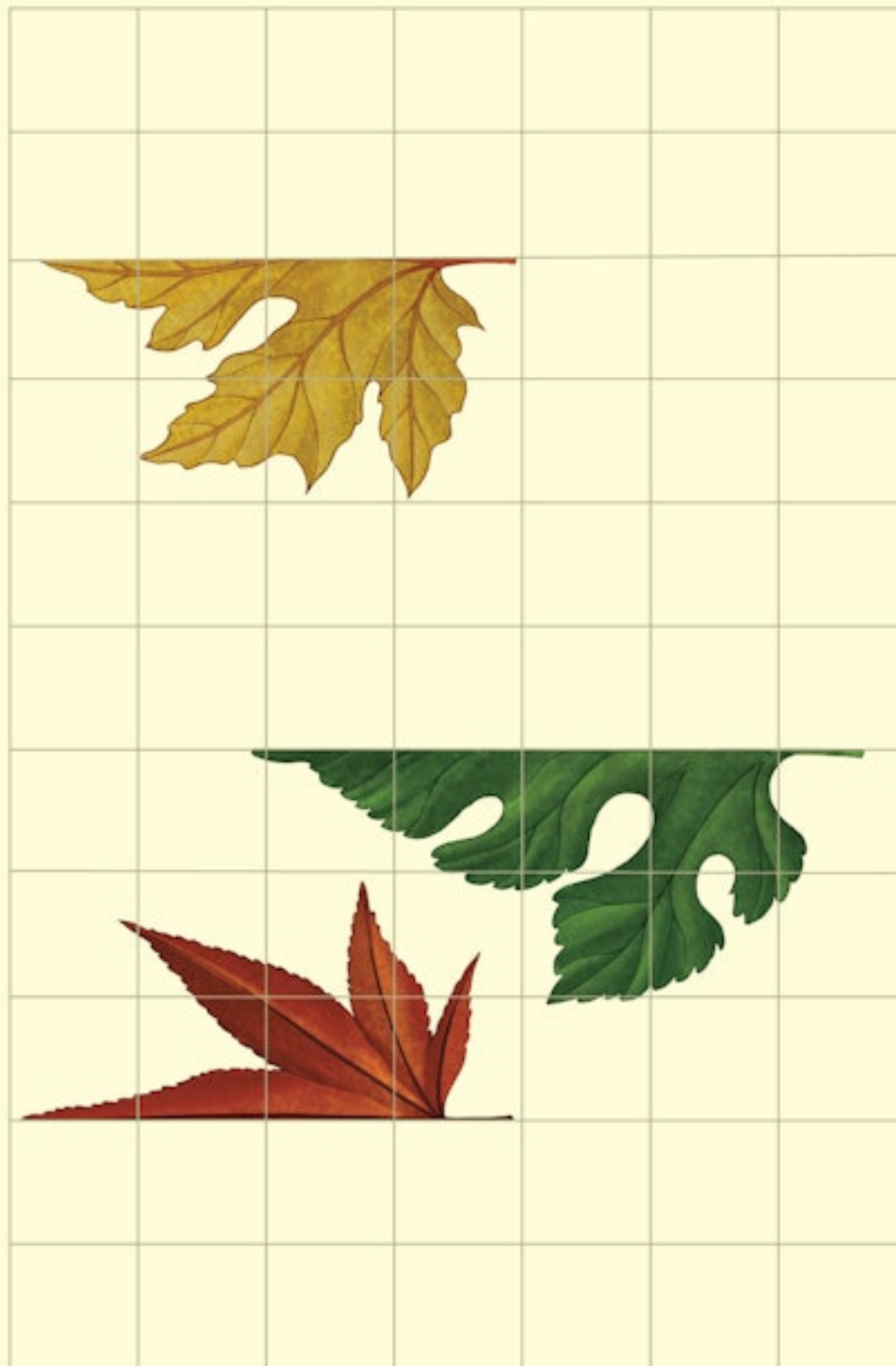
Dandelion

Taraxacum officinale

Height: up to 30cm

Dandelions look like they have one, large yellow flower, but they actually have lots of very small flowers collected together into a composite flower head. Each single flower in a head is called a floret.

Finish the leaves





White mulberry tree



Japanese maple



Broadleaf maple

Draw a line connecting each plant to
the food it makes



Chocolate

Coffee

Cashew nut

Banana

Answers



Cashew nut

The hard kidney-shaped part of the cashew fruit contains the seed, which we call a 'cashew nut'.



Banana

Thousands of years of domestication have produced a delicious edible fruit.



Chocolate

The dried, fermented seeds of the cacao plant are ground up to yield cocoa powder, which is used to make chocolate.



Coffee

The small red drupes (fruits with an outer fleshy part containing a hard seed) seen on the coffee plant contain two 'beans'.

Match each bulb to its name
and finish drawing it



Crocus



Garlic



Tulip



Onion

Answers



Crocus



Garlic



Tulip



Onion

Draw more fish around this
water lettuce





Water lettuce

Pistia stratiotes

Height: 15cm

This lives in most subtropical fresh waterways.
Its free-floating roots are well adapted to
absorbing nutrients from flowing water.

Match the crops to their names

Pearl millet

Oats

Teosintes

Bread wheat



Goat wheat

Rice

Emmer wheat

Maize

Answers



Teosintes



Maize



Goat wheat



Emmer wheat



Bread wheat



Rice

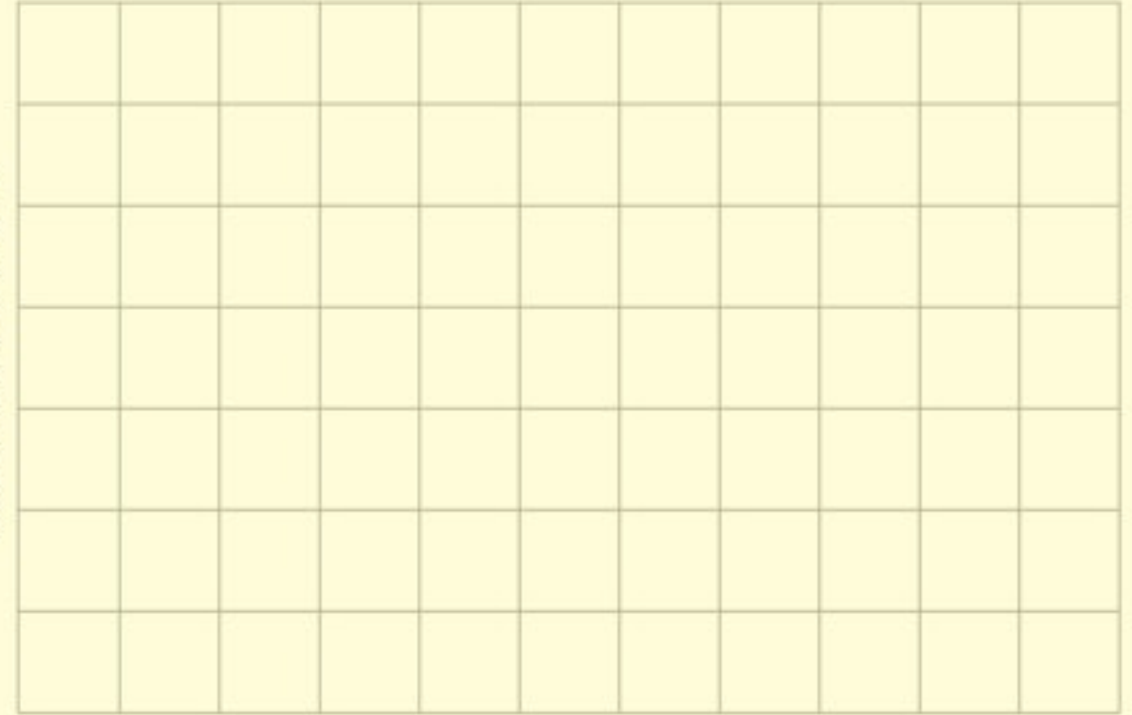


Oats

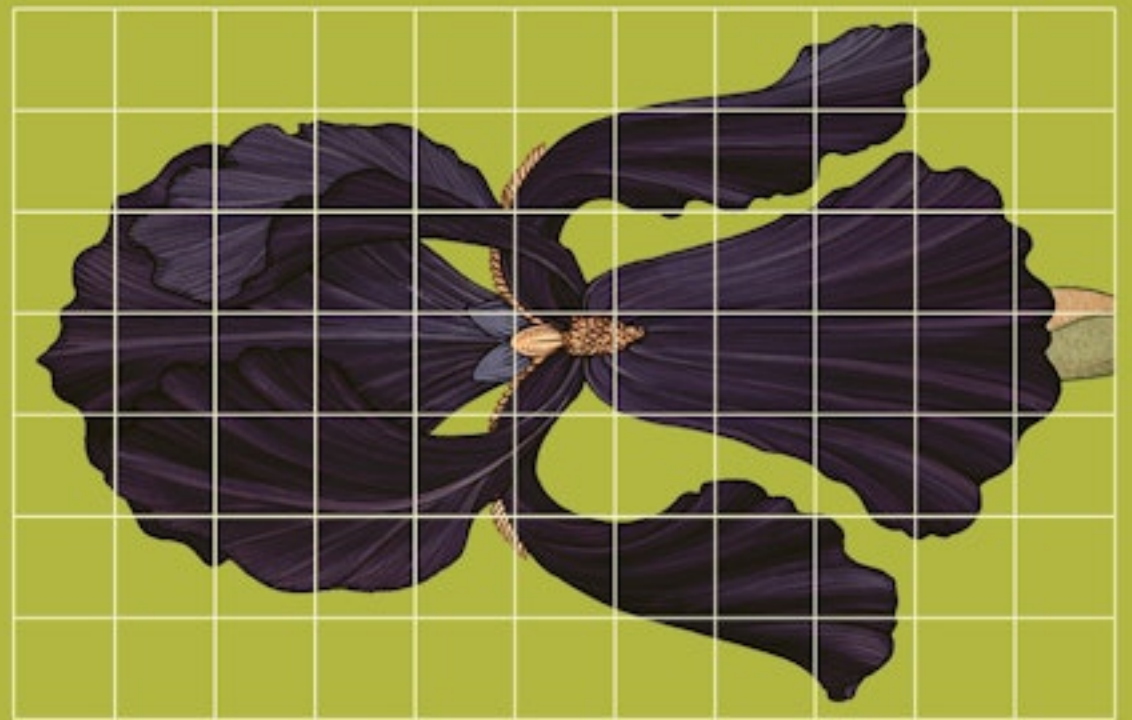


Pearl millet

Draw the iris



Iris





Bearded iris 'Old Black Magic'

Iris x germanica hybrid
Height: 60-90cm

Along with other flowers, the iris is grown for its scent. To make this, an iris's rooting structure – known as a rhizome – needs to be stored for three years. When taken out of storage and squeezed, it exudes a distinctive, butter-coloured oil called orris, which smells of violets. Orris also has the unusual property of making other scents smell stronger.

Draw your own cactus – it can be as spiky and colourful as you like





Zebra cactus



Prickly pear



Crow's claw cactus

Spot the difference

(there are 10 differences to spot)



Answers



The Christmas star orchid

Angraecum sesquipedale

Height: up to 1m

This beautiful white orchid comes from Madagascar. It grows up to 1m high and is epiphytic, growing off tree trunks. It holds its nectar in a nectar spur, a long, elongated hollow tube (up to 30cm in length) extending behind the flower, accessible only to its long-tongued pollinator, the hawkmoth.

Draw the rest of
this Carboniferous forest





Carboniferous forest

The transition from the first, small, herbaceous land plants to massive trees 40–50m high, happened over 90 million years, between 389–299 million years ago. By the end of this period, known as the Carboniferous period, the Earth was covered with dense forests. These earliest forests gave us the first trees that reproduced by seeds.

Circle the plants that do not make seeds



Answers



Bromeliad



Buttercup



Saxifrage



Carrot



Honeysuckle



Hornwort



Horsetail



Magnolia



Red algae



Moss

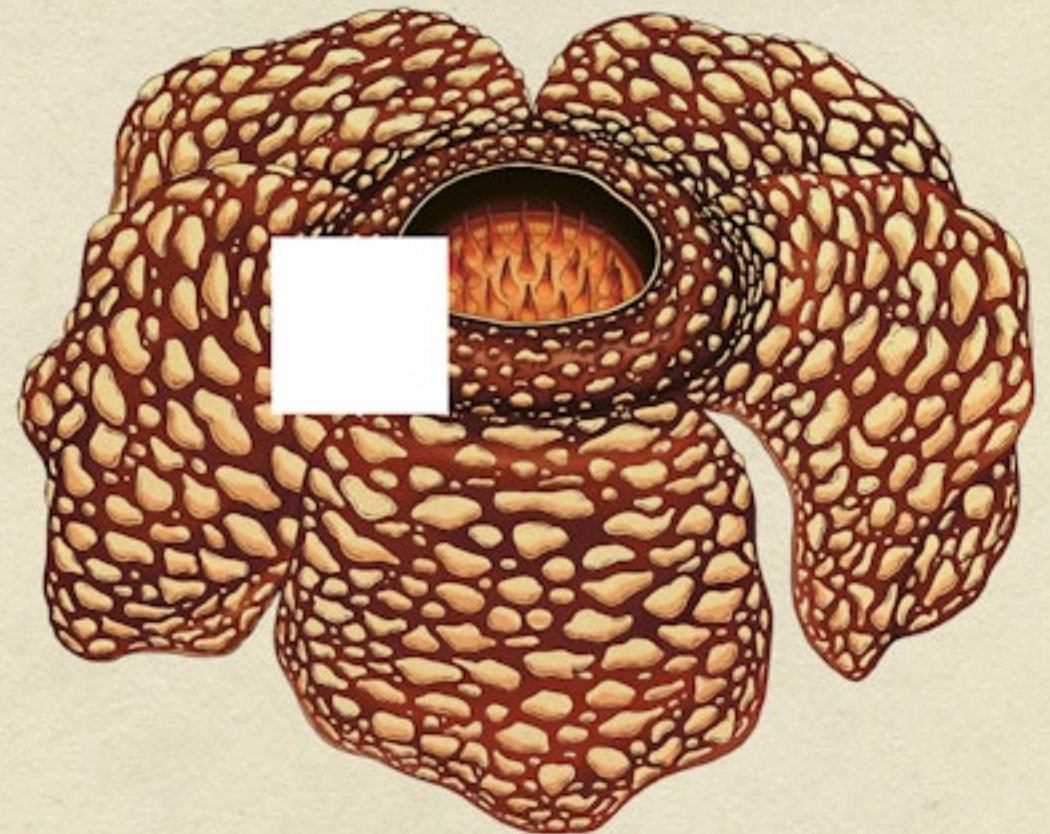


Club moss

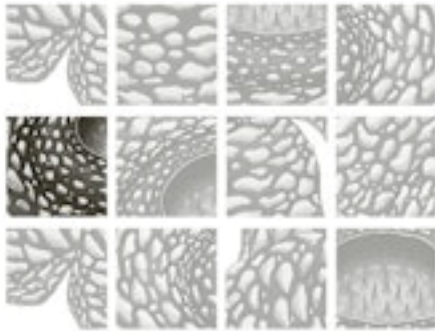
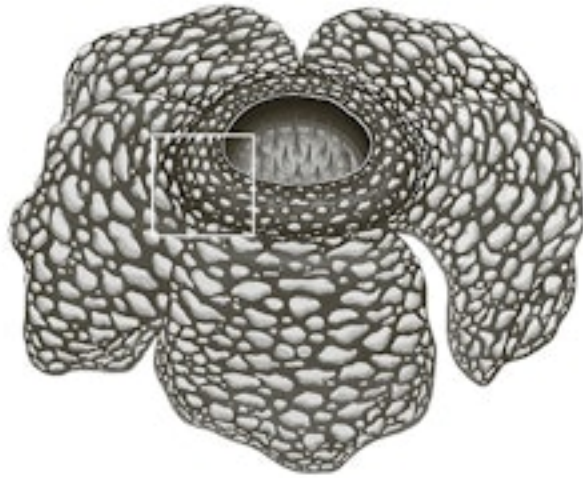


Orchid

Find the missing square



Answers



Stinking corpse flower

Rafflesia arnoldii

Diameter: up to 1 m

This flower has two notable claims to fame.

The first is that it produces the largest individual flower on Earth. The other is that it stinks. The smell is similar to rotting flesh.

Finish the orchids





Vampire orchid



Cattleya aclandiae



Rothschild
slipper orchid



Umbrella orchid

Match the carnivorous plants to the
way they catch their prey



Uses a pitfall trap -
prey slips down
and is trapped



Snaps shut
when it detects
movement



Traps flies
with its sticky
leaves

Answers



Common sundew

Traps flies with its sticky leaves



Rajah pitcher plant

Uses a pitfall trap – prey slips down and is trapped



Venus fly trap

Snaps shut when it detects movement

Practise drawing details on the leaves,
then make up some leaves of your own!





Ginkgo

Draw two more carrots





Carrot

Daucus carota

Root length: 14–25cm

Root vegetables include tasty delicacies like carrots, turnips, swedes and radish. Below ground, they grow as a swollen root, and can worm themselves into all sorts of shapes. Leaves grow directly from the above-ground shoulder of this tap root, and there is little or no above-ground stem, only leaves.

Which of these are not types of fungi?
Circle the odd ones out



Answers



Bryophyte



Fly agaric



Leathery goblet



Echeveria laui



Lane Cove waxcap

Spot the difference

(there are 10 differences to spot)



Magnolia x soulangeana

This magnolia is a small, deciduous shrub with large white, pink or purple, goblet-shaped flowers up to 25cm, and is a popular garden hybrid produced from two natural species from China.

A detailed botanical illustration of various root vegetables. The image includes several whole carrots of different shapes (tapered, bulbous, and knobby), a whole turnip, and a whole radish. There are also cross-sections of these roots showing their internal structures. A carrot plant with its feathery leaves is shown, along with a turnip plant. A small cluster of carrot seeds is depicted. The illustration is a black and white line drawing with fine hatching for shading.



Below-ground edible plants

Root vegetables, rhizomes and tubers all provide a way for the plant to store starches, proteins and nutrients to provide energy for regrowth during the next growing season. Many food crops are provided by these below-ground storage organs.

Complete the other half of this plant
using the grid to help





Ackee

Blighia sapida

Height: up to 30m

Although this tree is native to tropical West Africa, it is widespread in Jamaica and is the defining ingredient in Jamaica's national dish 'ackee and saltfish'. The brightly coloured fruits contain three large black seeds, each bearing a yellowish-white appendage.