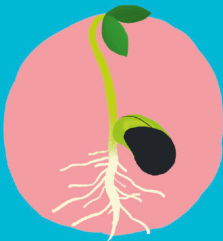
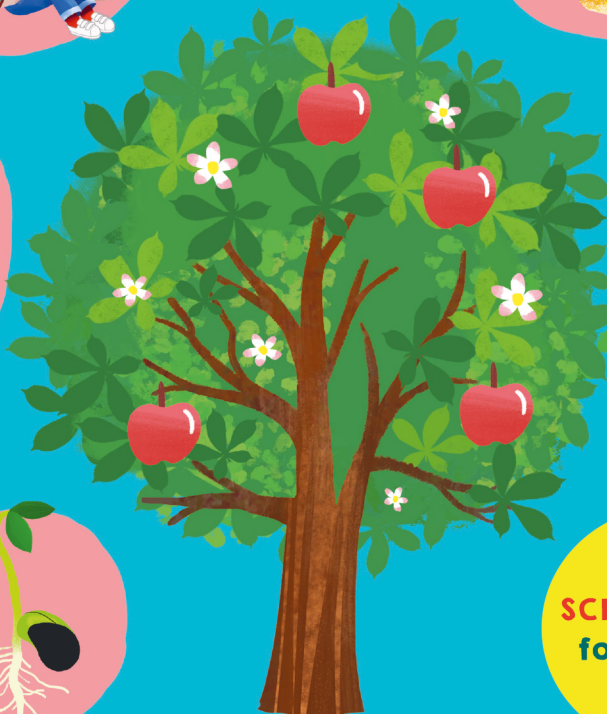
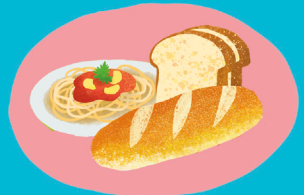




Tell me about...

# PLANTS



**A FIRST  
SCIENCE** book  
for curious  
minds!

*Written by Emily Dodd  
Illustrated by Chorkung*

Royal  
Botanic  
Gardens **Kew**

# Parts of a Plant

Plants are made of parts that can look quite different to each other. This tree has a thick woody stem called a trunk. The buttercup growing beneath it has a thin bendy stem. But they are both still stems!

Leaves let gas in and out and they make food.

Flowers are colourful parts of the plant that attract insects.

Buds make new branches, leaves and flowers.

Fruit contains seeds to make new plants.

The stem carries water and goodness around the plant. It holds the whole plant up.

The roots anchor the plant and take in water and goodness from the soil.

Strawberry stems grow across the ground, not up!

Some plants store food in lumps in their stems, called tubers. A potato is a tuber.

The carrot plant stores food in its roots over winter. We dig the tasty orange roots up and eat them!



# Getting Planted

Plants need their seeds to grow into baby plants – their plant children! But first, a seed needs to leave its parent and reach the ground. There are many ways a seed can get planted in the ground including....

Using a tiny parachute to drift in the wind

Hiding in tasty fruit, being eaten and... being pooped out!



Bird poo has goodness in it that helps plants to grow!

Exploding through the air



Helicoptering away



Being buried by animals



Hitching a ride by getting stuck on animal fur... and falling off later.



Rolling, rolling, rolling...



Floating in the sea and washing up on a beach



Not all plants grow from seeds. The peppermint plant can send stems called runners overground. They start new plants when they touch the soil!



# Making Food

Imagine you didn't need to eat breakfast and instead you could lie in the sun and food would magically appear inside your belly! It sounds ridiculous, but it happens inside plants. It's called photosynthesis. That's a big long word but if we break it down, photo means 'light' and 'synthesis' means to put together. So a plant puts together food using light!

## Ingredients

- 💧 **Water:** from the soil
- **Carbon Dioxide Gas:** from the air
- ◆ **A pinch of salt** (from the soil)
- ☀️ **Sunshine**



Pretend the leaf is a mixing bowl and sunshine is the energy needed to mix the ingredients.

Sunshine makes the ingredients change into something new - a sugar and some waste gas. The sugar is food for the plant.

The food made in the leaves is a sugary juice. It travels round the plant through tubes.

**Did you know...?**  
Tiny green parts in leaves called chloroplasts are where food gets made during photosynthesis.



When juicy food from the leaves reaches the roots they grow a little longer.


When the leaf makes food there are some leftovers that the plant chucks out. The leftovers are a gas called oxygen. It floats away out of the leaves.

We need the oxygen gas that is chucked out by leaves during photosynthesis. It's the gas we breathe in! So next time you take a breath, remember to thank plants!




# Defence


Plants work hard to make flowers and fruit and to spread their seeds. Some have invented ways to protect themselves so that they can stay alive!




Thorns are branches with sharp tips. Spines are super spiky leaves or parts of leaves.



Giraffes have leathery tongues so they can eat prickly plants without getting hurt.




A cactus has spines for protection. Spines lose less water than leaves – that's useful if you live in a hot, dry desert!



Some plants can sting us. Nettles have tiny hairs on their leaves that inject a bit of poison when the top breaks off – ouch!


Yum!

Caterpillars can eat nettles because they are too small to break the hairs and get stung.



**WARNING!**  
Never eat wild plants – they might be poisonous.

Poisonous plants make animals sick when they eat them. They can be tasty to some animals but deadly to others.



Deadly nightshade is poisonous to humans but rabbits can eat it!