



Making Mini Greenhouses



Learning Objective:

To explore existing greenhouses

Back

Next



What is a
greenhouse?

What is it used for?

Think, pair, then share your ideas.

Back

Next

A greenhouse is a building in which plants (including flowers, fruit and vegetables) that need protection from cold weather are grown.



Greenhouses allow more control over the environment that plants grow in, and can protect them both from bad weather and harmful insects.

Greenhouses also enable some plants to be grown throughout the winter months, as the temperature can be regulated.

Back

Next

So, how does a greenhouse help plants to grow?

(HINT: think about what plants need in order to survive!)



Think, pair, then share your ideas.

Back

Next

In order to survive, plants need light, heat, air, water and nutrients.



Which of these requirements do you think a greenhouse can help with?
Use the picture to help you decide.



Think, pair, then share your ideas.

Back

Next

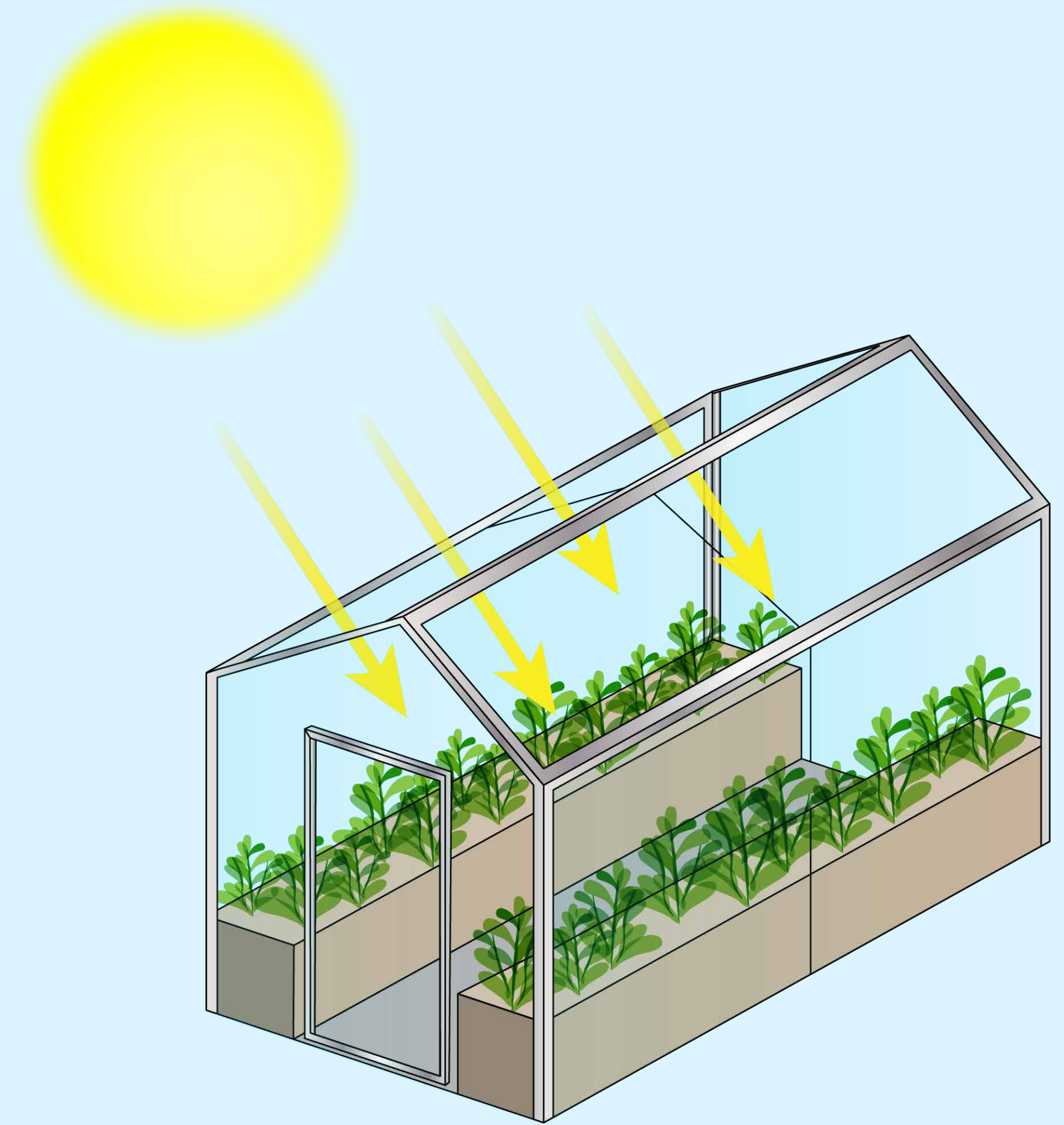
Greenhouses provide light and heat for plants.

How it works:

Greenhouses are mostly made from **transparent** materials (usually glass or clear plastic). This means that sunlight can shine through and warm both the air and plants inside.



A transparent material is one that can be seen through clearly.



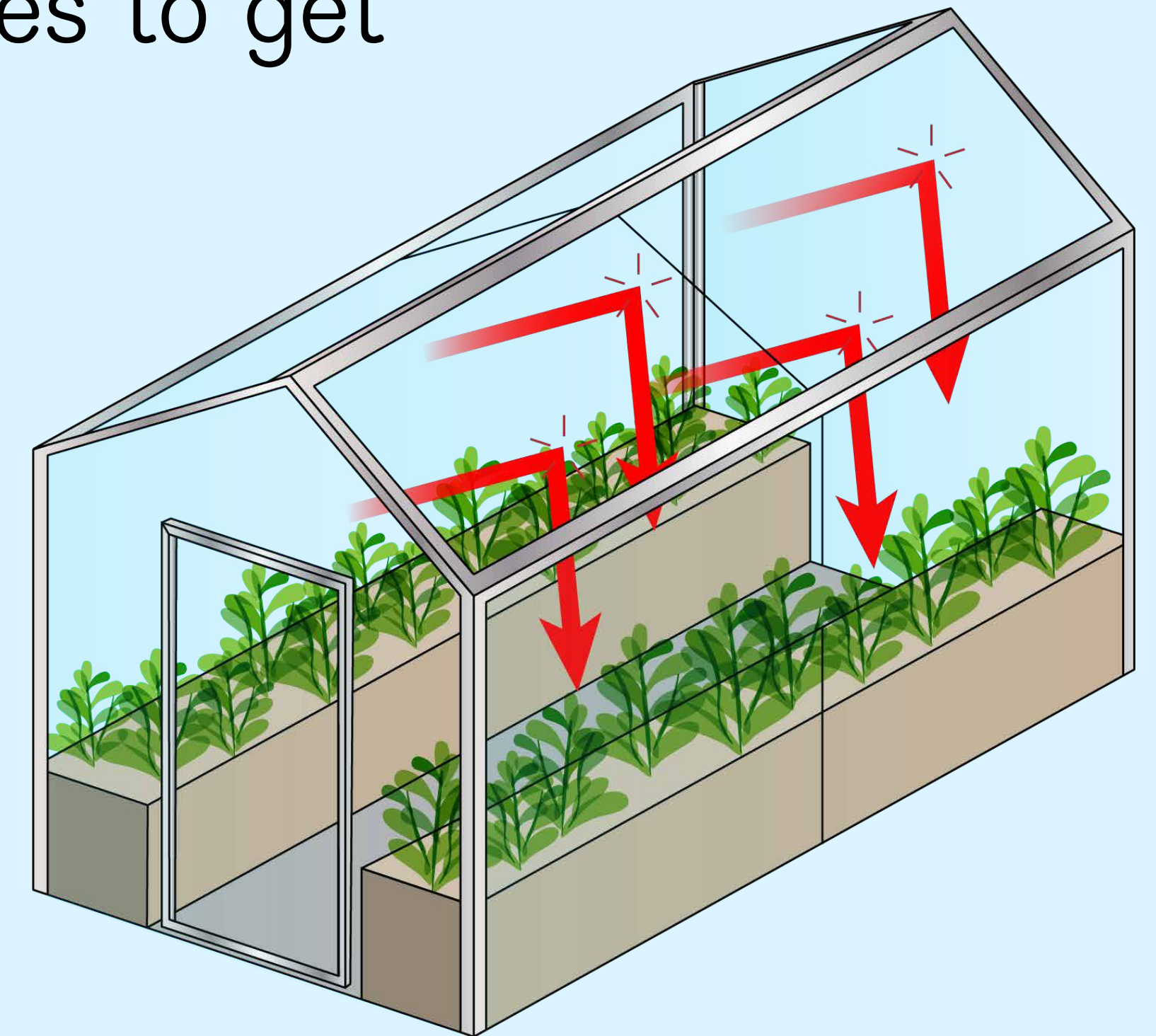
Sunlight enters the greenhouse

Back

Next

The glass or plastic helps to trap the heat inside the greenhouse, so that it stays warm and continues to get warmer throughout the day.

This is the same effect as leaving a car in a sunny parking space for a few hours!



However, sometimes a greenhouse may become too hot....

The heat is trapped inside the greenhouse

Back

Next

If the temperature in a greenhouse becomes too high, the plants may overheat and die, so it is important to be able to ventilate the greenhouse when needed.



Ventilating means allowing fresh air to enter and circulate a room or area by opening a door or window. In a greenhouse, this lets some of the heat escape, and cools down the temperature.

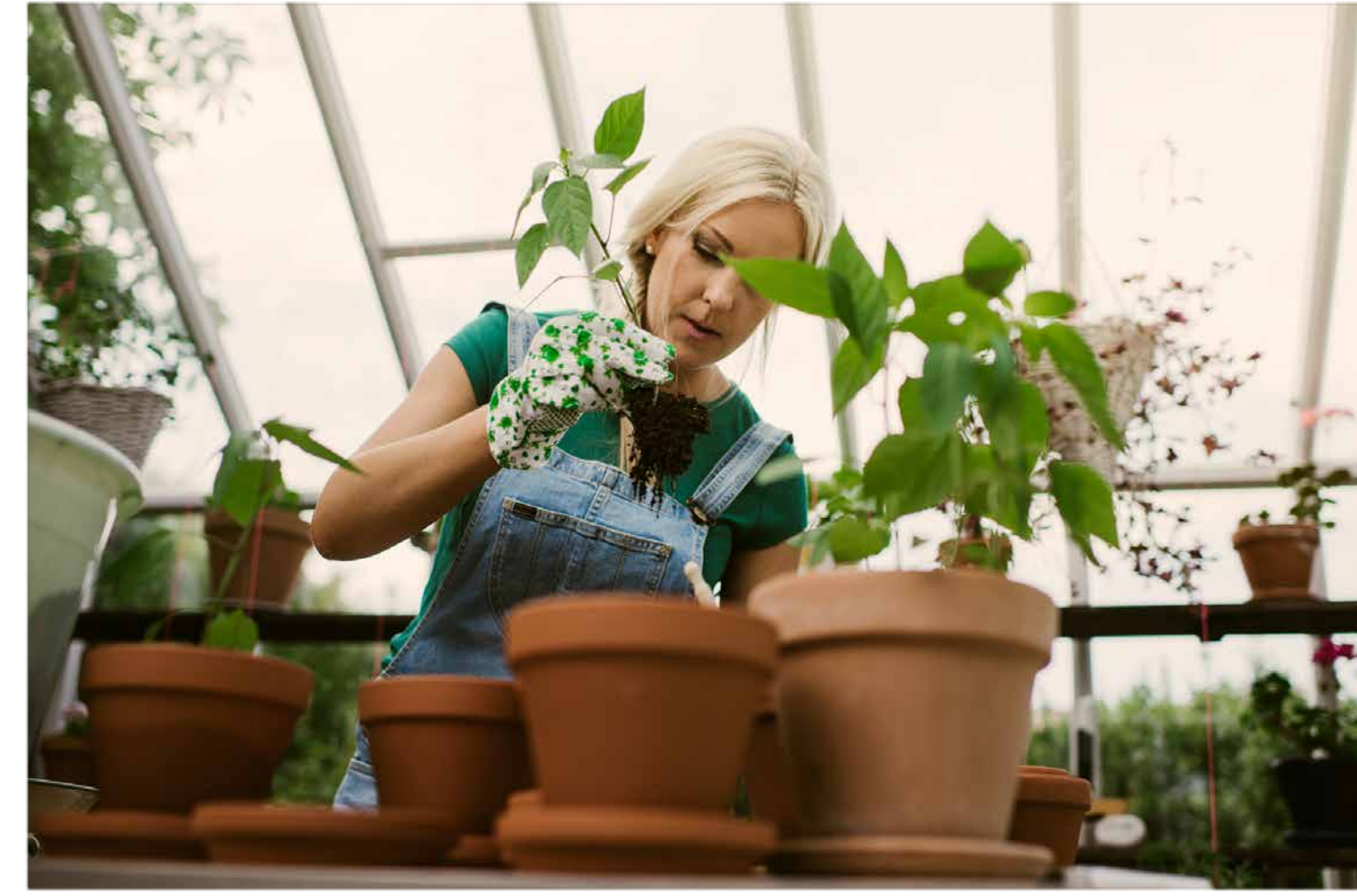


The temperature in this greenhouse has become too high, so the owner has opened the door and the windows in the roof.

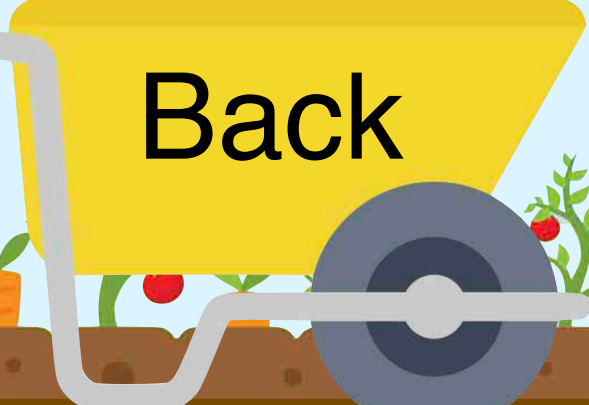
Back

Next

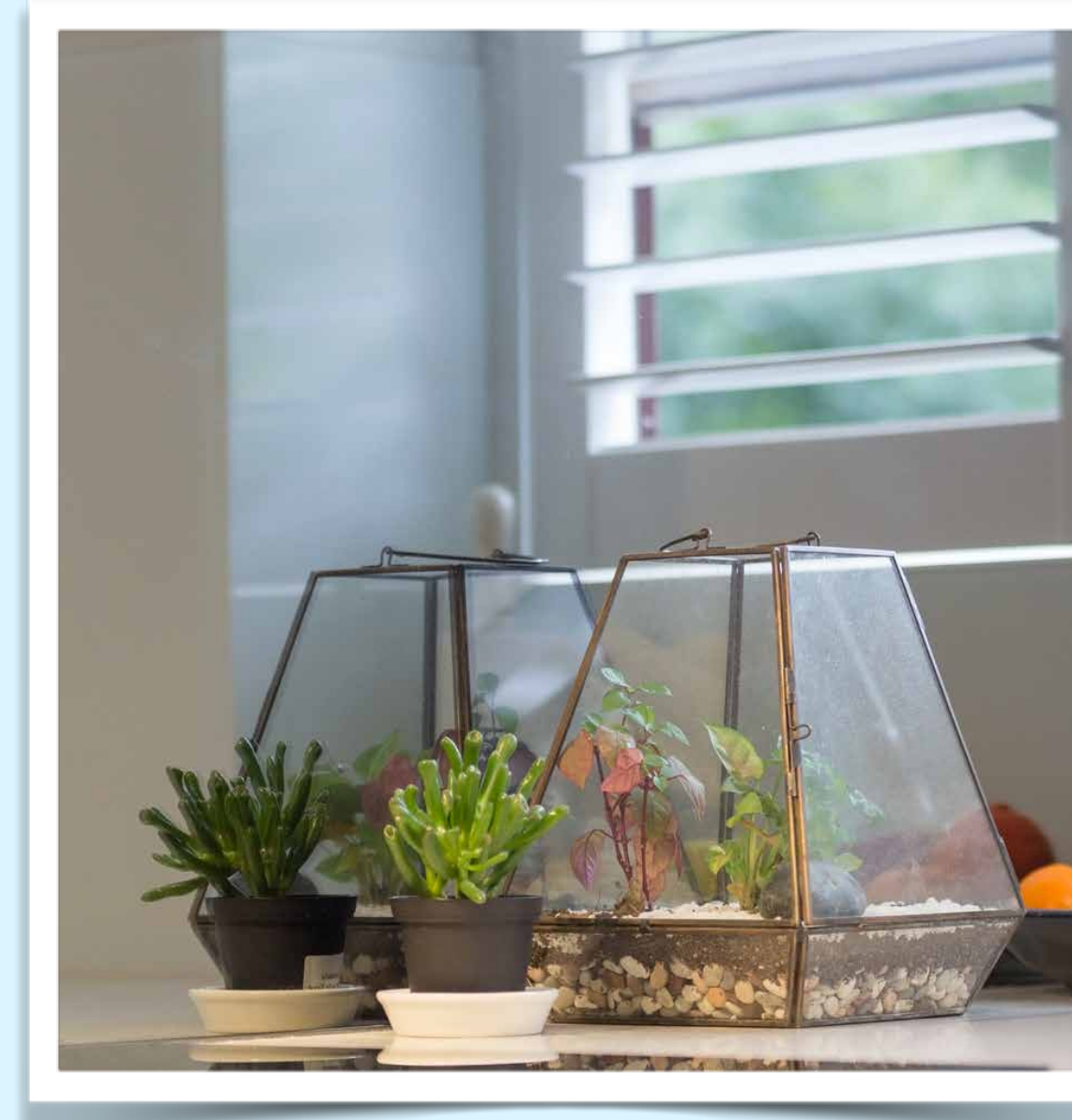
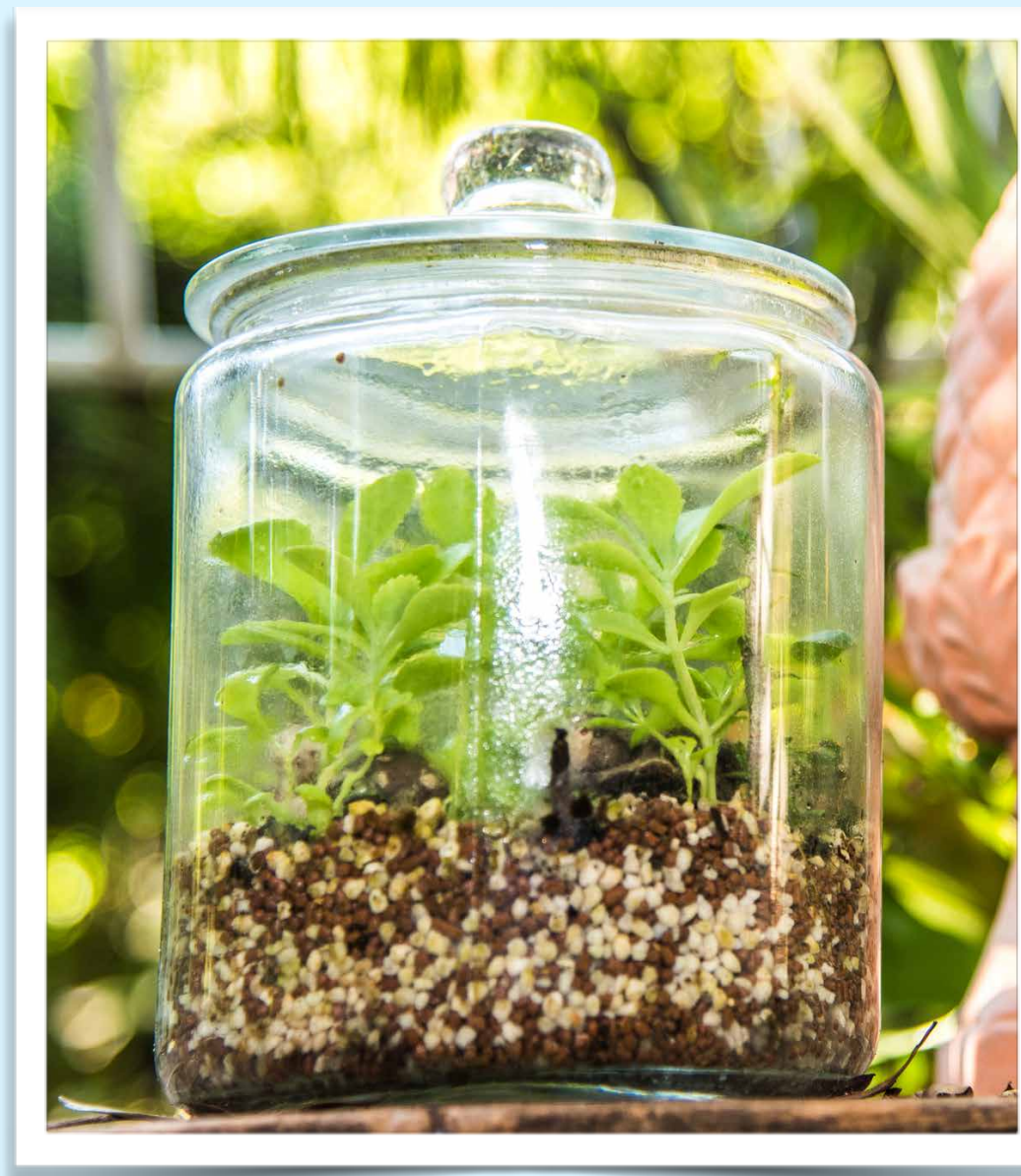
Many people like to grow their own flowers, fruit and vegetables. If they have enough space, they may have a greenhouse in their garden.



Have you ever been inside a greenhouse?



If people do not have enough space for a full-sized greenhouse, they can use smaller versions for a few plants.



Have you ever seen a mini greenhouse similar to these?

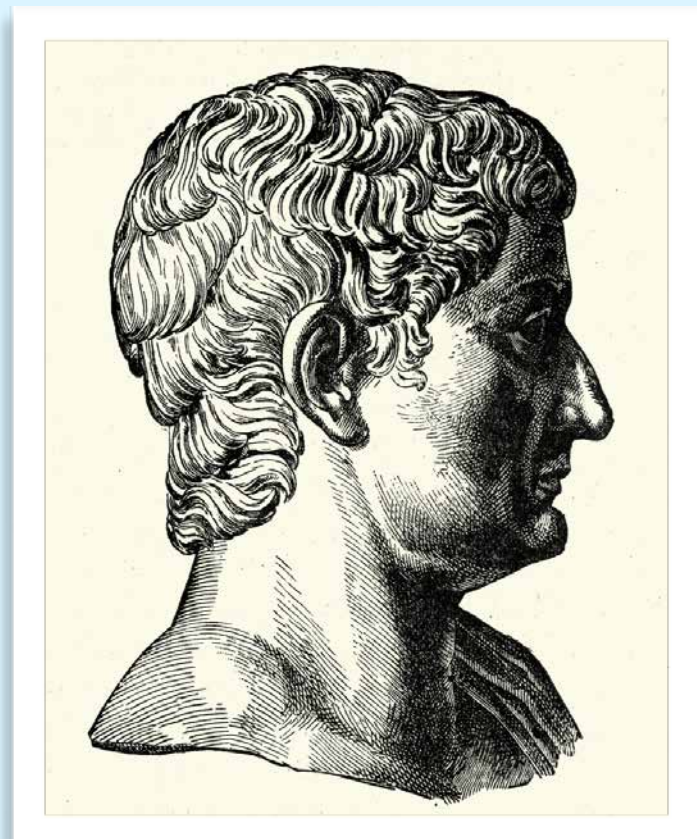


They can even be kept indoors, as long as they are placed in an area which receives plenty of sunlight.

Back

Next

Greenhouses, or methods of keeping plants warm in order to help them to grow, have been around for centuries!



The Roman emperor, Tiberius, liked to eat a vegetable similar to a cucumber every day. So that it was available for the emperor's table every day of the year, the vegetable was planted in carts which were put in the sun in the day time, and then wheeled inside to keep them warm at night. The cucumbers were stored under frames which were covered with thin sheets of selenite (a type of mineral that can be clear in colour).

Discuss with a partner the similarities and differences this method has with a modern-day greenhouse.



Back

Next

Greenhouses became popular in the Victorian era, where designers competed to build the most elaborate structures.



The Palm House in Sefton Park,
Liverpool

Palm houses are specialised greenhouses for growing tropical plants.



Kibble Palace in the Botanic
Gardens, Glasgow

Back

Next



How important do you think the invention of the greenhouse has been for the world, and why?

Think, pair, then share your ideas.

Back

Next

Today, one use of greenhouses is in the mass production of plants as food. They are grown to sell on to supermarkets, which then sell them on to consumers (us!).



Back

Next

In modern greenhouses, due to technological advances, many factors can be automatically controlled, such as the temperature, and the amount of light, shade and water the plants receive. This allows much greater control over the growing process.

The invention of the greenhouse has made it possible for some plants to be grown more quickly and all year round, so there is a **constant supply** of fruit and vegetables. It is now possible to grow fruit and vegetables throughout the year in areas of the world where it was previously very difficult.



A semi-automatic robot spraying plants

Back

Next

Worldwide, it is estimated that there are around 9,000,000 acres of greenhouses (this is equivalent to 6,000,000 football pitches!).

What **impact** do you think the invention of greenhouses has had on the world?



What might the world be like if greenhouses had **never** been invented?

Think, pair, then share your ideas.

Back

Next



Now it's time to see how much you know about greenhouses!

Back

Next

‘A greenhouse made from glass is a strong, stable structure.’

Do you agree or disagree with this statement?

Think, pair, then share your ideas.



Back