



Science

Plants



WHAT DO PLANTS NEED TO STAY HEALTHY?



Meet Quizby!

Can you spot me in the
Lesson Presentation?

The questions that appear will help you to think about the key learning throughout the lesson.



Aim

- To describe what happens if plants don't get all the things they need.

Success Criteria

- I can say what a plant looks like if it has not had everything it needs.
- I can identify a healthy plant and an unhealthy plant.
- I can suggest what a plant needs to be healthy again.



Remember It

Let's look at our class plant and see how it is growing. We can measure its growth and draw or photograph it for our **Class Plant Diary** from Lesson 1!



Class Plant Diary

We have planted a _____ on _____.

We are going to observe and measure how the plant grows and either draw or photograph it each week.

Starting week: [] The plant is _____ tall	Week 1: [] The plant is _____ tall
Week 2: [] The plant is _____ tall	Week 3: [] The plant is _____ tall
Week 4: [] The plant is _____ tall	Week 5: [] The plant is _____ tall
Week 6: [] The plant is _____ tall	Week 7: [] The plant is _____ tall

Class Plant Diary

Week: [] [] The plant is _____ tall	Week: [] [] The plant is _____ tall
Week: [] [] The plant is _____ tall	Week: [] [] The plant is _____ tall
Week: [] [] The plant is _____ tall	Week: [] [] The plant is _____ tall
Week: [] [] The plant is _____ tall	Week: [] [] The plant is _____ tall



Remember It

Can you remember what you found out from our investigation?

Use your **observations** to complete this quiz.

1.

If a seed gets no water, it will:

germinate

not
germinate

2.

Without light, a plant will:

grow strong and healthy,
with green leaves and stem

grow tall and weak, with
yellow leaves and thin stem

not grow at all



Remember It

3.

All seeds need soil to germinate.

True

False

4.

Seeds must have light, water, soil and the right temperature to germinate.

True

False

Most seeds can **germinate** without light. Once they have started to grow, they need sunlight to **grow well** and will eventually die without it.



Are All Plants the Same?

Think about each of these questions, then discuss your answers with your partner.

Do you think all plants need the same temperature to grow?

Can you think of any examples of plants that grow in different temperatures?

Do all plants need the same amount of water?

Can you think of any plants that need more or less water than others?

Do all plants need soil to grow strong and healthy?

Can you think of any plants that don't need soil?

Do you think all plants need to same amount of sunlight?

Why or why not?



Are All Plants the Same?

Just like people, plants are all different and they all need different amounts of things.

Some plants live in water, but some only need a little bit of water. Some plants need lots and lots of sunlight, but some only need a little bit of sunlight.

Plants don't just need water, sunlight and the right temperature - they each need the right **amount** of water, sunlight and warmth for them.

What do you think would happen if we treated all plants the same?

Are All Plants the Same?

When plants get the right amount of the things they need, they look **healthy**.
These are **healthy** plants. What can you see?



Healthy plants look **strong**. Their leaves are usually green



When a plant loses its flowers, does this always mean it's unhealthy?

X

, brown or yellow. If they keep their colour.

Growing, Growing, Grown

Let's learn more about **what plants need to grow well** in the **Growing, Growing, Grown eBook**.



Let's read up to the end of page 22 together.

What Do Plants Need to Grow Well?

Look at these two plants.
Which one is **healthier**? How do you know?



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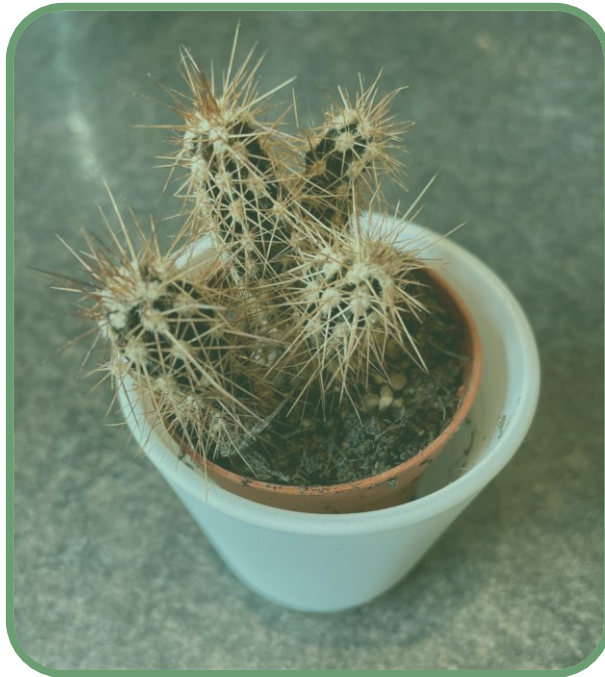
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What Do Plants Need to Grow Well?

Yes. Plants need the **right amount** of water, but not too much.

A plant that is overwatered may have limp, droopy leaves that start to turn a lighter shade of green or even yellow.

This can sometimes make it tricky to tell if a plant needs more water or less water!

An overwatered plant's leaves may also curl inwards and the soil may look very soggy and wet.



Healthy or Not?

Here are some different plants.

With a partner, look at each one and decide if it is **healthy** or not.

If it's not healthy, discuss what you think it might need to be healthy again.

1.



2.



3.



Can you think of another way that a plant could look if it's unhealthy?

x

Healthy or Not?

Complete the **Healthy or Not? Activity Sheet**.

Healthy or Not?
To know what happens if plants don't get all the things they need.

Sort these plants into the 'Healthy' and 'Not Healthy' groups on the next page.

Not Healthy

Healthy or Not?
To know what happens if plants don't get all the things they need.

Label these plants with either 'healthy' or 'unhealthy'.

Word Bank

- healthy
- unhealthy
- leaves
- wilted
- drooped
- colour
- tall
- strong
- weak
- water
- light
- temperature

Healthy or Not?

Choose **three** plants from the pictures that you think are unhealthy. For each plant, explain why you think this and what you think it needs to be healthy again.

- _____
- _____
- _____

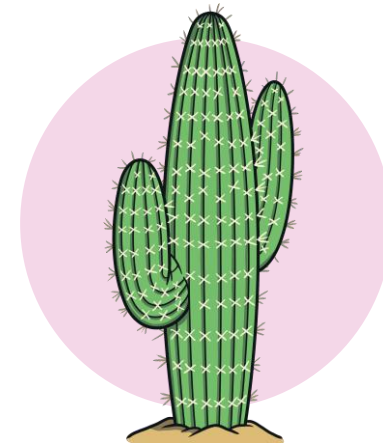
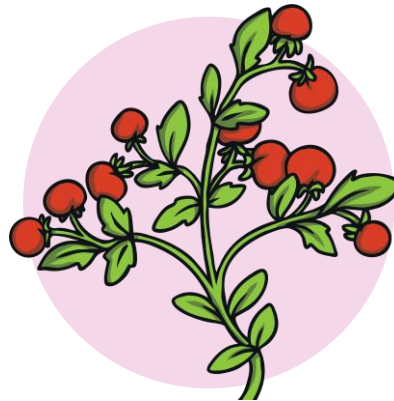
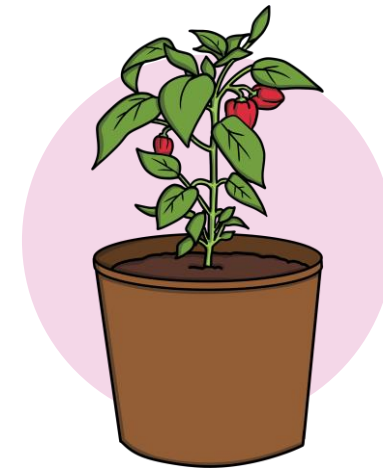
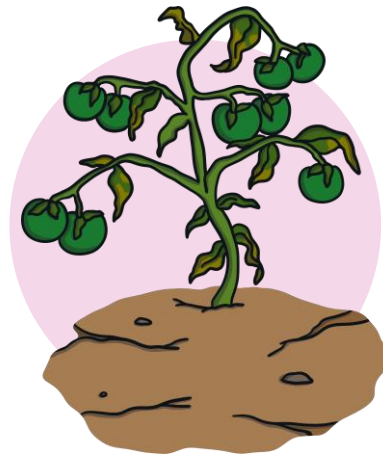
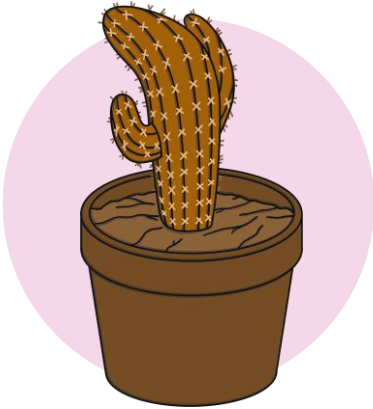
Word Bank

- healthy
- unhealthy
- leaves
- wilted
- drooped
- colour
- tall
- strong
- weak
- water



Help the Plants

Which plants do you think look **healthy**? How do you know?
Which plants do you think look **unhealthy**? How do you know?



Aim



- To describe what happens if plants don't get all the things they need.

Success Criteria

- I can say what a plant looks like if it has not had everything it needs.
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Plants: What Do Plants Need to Stay Healthy? Part 2

Aim Find out and describe how plants need water, light and a suitable temperature to grow and stay healthy. Using their observations and ideas to suggest answers to questions. To describe what happens if plants don't get all the things they need.		Lesson Duration All timings are approximate. 
Success Criteria I can say what a plant looks like if it has not had everything it needs. I can identify a healthy plant and an unhealthy plant. I can suggest what a plant needs to be healthy again.	Key Vocabulary Water, sunlight, temperature, grow, healthy, unhealthy, strong, weak, droop, wilt.	
Standard School Equipment None	Preparation Lesson Pack Differentiated Healthy or Not? Activity Sheet - one per child	

Prior Learning: In the previous lesson, children observed how the plants in their investigation had grown. They created a list of what they think plants need to grow well, based on their observations.

Learning Sequence

	Remember It: As a class, look at the class plant and record its growth on the Class Plant Diary . Use the Lesson Presentation to recap the children's findings about what plants need to grow well.	
	Are All Plants the Same? Show the children the questions on the Lesson Presentation about whether plants all need the same amounts of things to grow. Allow them a few minutes to discuss their ideas within their talk partners, then share and note these down for use later in the lesson. Look at the photos of the healthy plants and discuss how we can tell that a plant is healthy. Can the children explain their ideas about what different plants need?	
	Growing, Growing, Grown: Read pages 21-22 of the eBook together to learn more about what happens if plants don't get the things they need.	
	What Do Plants Need to Grow Well? Use the Lesson Presentation to explore what happens if plants don't get what they need by comparing photographs of healthy and unhealthy plants. Encourage children to explain how they know which plant is healthier to their partner and explain what happened to each plant. Can the children explain what happens to a plant that does not receive one of the things it needs?	
	Healthy or Not? Children use the Healthy or Not? Activity Sheet to sort plants into healthy and unhealthy plants. They then try to identify what an unhealthy plant might need. Can the children identify a healthy plant and an unhealthy plant? Can they suggest what an unhealthy plant might need?	
	<div style="display: flex; justify-content: space-between;"> <div style="width: 30%;">  Children cut out and sort the pictures of plants and stick each one in either the 'healthy' or 'unhealthy' group. </div> <div style="width: 30%;">  Children write 'healthy' or 'unhealthy' next to each plant, then choose one unhealthy plant and explain how they know it is unhealthy and what they think it might need, using the word bank to help. </div> <div style="width: 30%;">  Children write 'healthy' or 'unhealthy' next to each plant, then choose three unhealthy plants and explain how they know each is unhealthy and what it might need. As a challenge, they can explain whether or not plants all need the same amounts of the same things. </div> </div>	
	Help the Plants: Look at the plants on the Lesson Presentation together and discuss the ideas that children had during their independent activity. Focus on the clues that show what each plant might need, such as soil that looks too dry or too wet and the shape and colour of the plant's leaves. Can children suggest what a plant needs to be healthy again?	

Explore it

Design it: Children can use their knowledge of what plants need to stay healthy to design a poster or fact sheet explaining how to care for a plant.

Investigate it: Children could investigate how a fully-grown plant reacts when it does not receive one of the things it needs. Children could take photographs to record their observations. They could then find out whether the plant can be restored to health or not, by giving it what they think it needs.

Reason it

Children discuss **Reasoning Card 5 What Do Plants Need to Grow Well Part 2**. Children sort and discuss the healthy and unhealthy plants, explaining what they think has happened to each.

Assessment

Scientific Knowledge	
Working Towards the Expected Level With support, children begin to explain that plants need water, light and a suitable temperature to grow and stay healthy. They begin to identify what happens if a plant does not get everything it needs.	Children:
Working At the Expected Level Children explain that plants need water, light and a suitable temperature to grow and stay healthy. They can begin to explain what happens if a plant does not get everything it needs.	Children:
Working At Greater Depth Children explain that plants need water, light and a suitable temperature to grow and stay healthy. They can explain what happens if a plant does not get everything it needs.	Children:
Working Scientifically	
Working Towards the Expected Level With support, children can notice links between cause and effect.	Children:
Working At the Expected Level Children can notice links between cause and effect and begin to explain what is happening with support.	Children:
Working At Greater Depth Children can notice links between cause and effect and explain what is happening.	Children:

Aim: To describe what happens if plants don't get all the things they need.				Date:					
				Delivered By:			Support:		
Success Criteria	Me	Friend	Teacher	T	PPA	S	I	AL	GP
I can say what a plant looks like if it has not had everything it needs.				Notes/Evidence					
I can identify a healthy plant and an unhealthy plant.									
I can suggest what a plant needs to be healthy again.									
Next Steps									
<ul style="list-style-type: none"> _____ _____ 									

T	Teacher	I	Independent
PPA	Planning, Preparation and Assessment	AL	Adult Led
S	Supply	GP	Guided Practice

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