SCIENCE

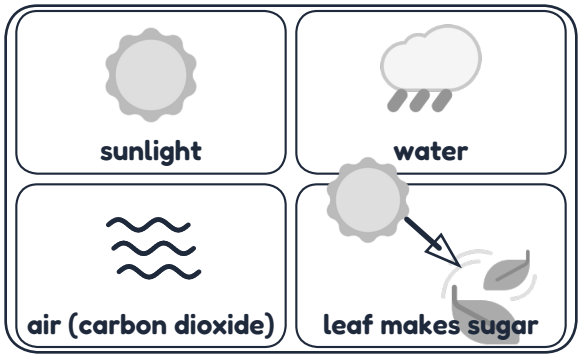
How plants make food

Name _____ Date _____

I can explain what plants need to make food and what they give off.

1 How it works

Plants make their own food. In their leaves, they use the energy of sunlight to turn water and carbon dioxide, a gas from the air, into sugar. This is called photosynthesis. The plant uses the sugar to live and grow, and it gives off oxygen, the gas that people and animals breathe.



2 Does it go in or come out? Circle one.

sunlight	goes in	comes out
water from the roots	goes in	comes out
carbon dioxide from the air	goes in	comes out
sugar, the plant's food	goes in	comes out
oxygen for us to breathe	goes in	comes out

How did I do? ☆ ☆ ☆

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A plant's kitchen

Name _____ Date _____

I can tell which plant will grow better and why.

1 Fill in the blanks

Use the words in the box.

oxygen | leaves | water | air

1. Plants make food in their _____.
2. Roots take in _____.
3. Leaves take in carbon dioxide from the _____.
4. Plants give off _____ for us.

2 Which plant will grow better? Circle it.

1.	a plant in a dark closet	a plant by a sunny window
2.	a plant watered every week	a plant with no water
3.	a seedling under a box	a seedling in the sun
4.	a leafy plant in open air	a plant in a sealed jar for months

How did I do? ☆ ☆ ☆

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Think like a scientist

Name _____ Date _____

I can explain where a plant gets the things it needs to make food.

1 Think about it

1. Why are most leaves wide and flat? _____
2. Why does a plant in the dark turn pale? _____
3. How do people depend on plants? _____
4. Do plants get food from soil? _____

2 True or false? Circle it.

1. Plants eat soil to grow.	true	false
2. Plants make their own food.	true	false
3. A plant can make food in the dark.	true	false
4. Plants give off oxygen.	true	false
5. Leaves use sunlight to make food.	true	false

3 Draw a plant making food. Use arrows to show sunlight, water, air, sugar and oxygen.

How did I do? ☆ ☆ ☆

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Try it: leaf bubbles

Name _____ Date _____

I can see a leaf giving off gas in the sunlight.

1 You need

- 2 clear cups of water
- 2 fresh green leaves
- a sunny window
- a dark cupboard
- a magnifying glass

2 What to do

1. Put one leaf in each cup. Push it under the water.
2. Put one cup by a sunny window and one in a dark cupboard.
3. Wait 1 hour, then look closely at each leaf.
4. Count the tiny bubbles on each leaf.

3 I predict

Which leaf will have more bubbles?

_____

_____

4 What I see

Cup	Bubbles on the leaf	Many or few?
sunny		
dark		

How did I do? ☆ ☆ ☆

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FOR TEACHERS AND PARENTS

Answer key: how plants make food

1 Page 1

In or out: 1) sunlight: goes in; 2) water from the roots: goes in; 3) carbon dioxide from the air: goes in; 4) sugar, the plant's food: comes out; 5) oxygen for us to breathe: comes out.

2 Page 2

Blanks: 1) leaves; 2) water; 3) air; 4) oxygen.

Grows better: 1) a plant by a sunny window; 2) a plant watered every week; 3) a seedling in the sun; 4) a leafy plant in open air.

3 Page 3

Think: 1) To catch lots of sunlight; 2) It cannot make food without light; 3) For food and oxygen; 4) No, they make it from sunlight, water and air.

True or false: 1) false; 2) true; 3) false; 4) true; 5) true.

Drawing: sunlight and carbon dioxide arrows go into the leaves, water goes up from the roots, and oxygen comes out of the leaves.

4 Page 4: Try it!

The leaf in the sunny cup grows many tiny bubbles on its surface, and the leaf in the dark cupboard has few or none. In the light, the leaf is making food and giving off oxygen gas, which forms many of the bubbles. In the dark, it cannot make food, so it gives off very little.

5 Teaching tip

Many children think plants get their food from soil. Ask: if soil were food, would the pot get emptier as the plant grows? It barely changes, because most of a plant is built from air and water.

Safety: carry the cups carefully and wipe up spills.

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