Miss Johnson's Plant Experiment

by ReadWorks

Miss Johnson, a second grade teacher, reached deep into her canvas bag and pulled out two plants. She placed the plants on a table at the front of the room. She asked her class to gather around the table to look at the plants and describe what they saw.

"They look the same," Helena said.

"The leaves are green," Aaron added.

"They're standing straight up," Lee noted.

Miss Johnson asked them to touch the soil and tell her about it.

"The soil is moist, and it's dark brown," Mia observed.

"The soil is getting stuck under my fingernails," Teresa said.

Miss Johnson placed one plant in a sunny spot on the windowsill and the other on the floor in a dark corner of the classroom. She asked for four volunteers. Each volunteer was

responsible for watering the plant on the windowsill once a week. Miss Johnson promised her class the plants would be part of an important lesson the following month.

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Four weeks later, Miss Johnson brought the plants back to the table and invited the class to describe them again.

"They don't look like each other anymore!" Helena said excitedly.

"One plant is green and has some new bright green leaves, and the other plant has more yellow and brown leaves than green leaves," Nina explained.

"One plant is standing straight up, and the other one is bent over," Lenny added.

Miss Johnson then asked the students to touch the soil and tell her about it.

"It's moist and dark brown around this plant," Grace said.

"It's very dry and light brown around this plant," Max described.

Miss Johnson explained, "Plants are alive. They respond to where they live. What are the differences between where I put the plants and how we cared for them?"

"You put one in a dark corner and the other one on the windowsill where there's a lot of light," Ellie replied.

"We watered the plant on the windowsill, but we didn't water the plant in the corner of the room," Aaron said.

"That's right. Which plant is growing and healthy?" Miss Johnson asked. Several students replied that the plant on the windowsill they watered was the one which was growing and healthy.

"You're right!" Miss Johnson exclaimed, proud of her students. Then she continued, "I wanted you to see for yourselves that plants depend on light and water to grow and to be healthy. Did you know that plants breathe? They have little openings on their leaves that look like tiny mouths, but they are too small to see without a microscope. When we breathe, we breathe in oxygen. Plants breathe in carbon dioxide.

"Plants take in carbon dioxide from the air and use it to build their leaves, stems and roots. Plants also take in water. This is why we need to water plants-so they will grow. They use

their roots to suck water up into their bodies, and the little openings on their leaves to breathe in carbon dioxide.

"Once they have water and carbon dioxide, plants need light. Leaves are made up of a bunch of tiny cells. Inside the cells are very little things called chloroplasts. Chloroplasts are what make leaves green, and they are also what turn the carbon dioxide, water, and light into sugar and oxygen. The sugar is food for the plants. The plants release the oxygen into the air, which humans and many animals breathe in."

"What do plants need to grow and be healthy?" Miss Johnson asked her class.

"They need light and water!" the class replied.

"Let's place both plants on the windowsill where they will get lots of light and grow. Who would like to volunteer to water the plants?"

All of Miss Johnson's students raised their hands.

Miss Johnson's Plant Experiment

by ReadWorks

Miss Johnson was a teacher. One day in class she took two plants out of her bag. She put the plants on a table in the room. She asked her students to come to the table and look at the plants. Then she asked them to describe what they saw.

"The plants look the same," Helena said.

"The leaves are green," Aaron said.

"They're standing straight up," Lee said.

Miss Johnson asked them to touch the soil and tell her about it.

"The soil is a little bit wet, and it's dark brown," Mia said.

"The soil is getting stuck under my fingernails," Teresa said.

Miss Johnson put one plant near a window where there was a lot of light from the sun. She put the other plant on the floor in a dark corner of the room. She asked for four students to

help take care of the plants. Each student was in charge of giving water to the plant by the window once a week. Miss Johnson told her class the plants would be part of an important lesson.

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Four weeks went by. Miss Johnson put the plants back on the table and asked the class to describe them again.

"They don't look like each other anymore!" Helena shouted.

"One plant is green and has some new bright green leaves. The other plant has more yellow and brown leaves than green leaves," Nina said.

"One plant is standing straight up, and the other one is bent over," Lenny said.

Miss Johnson then asked the students to feel the soil and tell her about it.

"It's a little wet and dark brown around this plant," Grace said.

"It's very dry and light brown around this plant," Max said.

Miss Johnson told the class, "Plants are alive. They respond to where they live. They may grow differently in different places. How are the places where I put the plants different?

"You put one in a dark corner and the other one near a window where there's a lot of light," Ellie responded.

"That's right. What was the difference in how we took care of the plants?" Miss Johnson asked.

"We watered the plant near the window, but we didn't water the plant in the corner of the room," Aaron said.

"That's right. Which plant is growing and healthy?" Miss Johnson asked. Many students responded that the plant near the window that had been watered was the growing and healthy one.

"You're right!" Miss Johnson said. "I wanted you to see for yourselves that plants depend on light and water to grow and to be healthy. That means they need light and water to grow and be healthy. They also breathe. But they do not breathe the same way we do. When we breathe, we breathe in oxygen. Plants breathe in carbon dioxide. Plants take this gas from the

air and use it to grow their leaves, stems, and roots. They take this gas in through little openings on their leaves. The openings look like tiny mouths, but they are too small for people to see on their own. People need to use a microscope to see the openings."

"Plants also take in water," Miss Johnson went on. "If we want a plant to grow, we need to make sure it gets water. Plants use their roots to pull water inside of themselves."

"Once they have water and carbon dioxide, plants need light. Light is needed for something that happens in the cells of plants. Cells are what all living things are made of. They are very, very small. The cells in the plant leaves take light, carbon dioxide, and water and mix them together. When those things are mixed together, they turn into sugar and oxygen. The sugar is food for the plants. The plants let out oxygen into the air. Humans and many animals then breathe in that oxygen."

"What do plants need to grow and be healthy?" Miss Johnson asked her class.

"They need light and water!" the class responded.

"Let's put both plants near the window. There they will get lots of light and grow. Who would like to water the plants?"

All of Miss Johnson's students put up their hands.

Name: _____ **Date:** _____

1. What does Miss Johnson ask her class to look at and describe?

A. two plants

B. three plants

C. four plants

D. five plants

2. What is compared and contrasted with the plant on the windowsill?

A. the plant on Miss Johnson's desk

B. the plant in a dark corner

C. another plant on the windowsill

D. a plant that one of Miss Johnson's students has at home

3. Plants need light and water to be healthy.

What evidence from the story supports this statement?

A. Miss Johnson asks for four volunteers to water the plant on the windowsill.

B. When Miss Johnson takes two plants out of her canvas bag, they both have green leaves.

C. When Miss Johnson takes two plants out of her canvas bag, they are both standing straight up.

D. The plant on the windowsill that Miss Johnson's students watered is healthy.

4. What happens to the plant in the dark corner?

A. The plant in the dark corner grows poorly and does not stay healthy.

B. The plant in the dark corner stands straight up and has only green leaves.

C. The plant in the dark corner grows bright green and red leaves.

D. The plant in the dark corner is watered once a week by Miss Johnson's students.

5. What is this passage mainly about?

A. different types of trees and where they grow

B. what plants need to grow and be healthy

C. what second graders do for fun after school

D. what working in a science lab is like

6. Read the following sentences: "Miss Johnson then asked the students to touch the **soil** and tell her about it.

Grace: It's moist and dark brown around this plant.

Max: It's very dry and light brown around this plant."

What is the meaning of the word "**soil**" above?

A. tree
B. flower
C. dirt
D. water

7. Choose the answer that best completes the sentence below.

The plant on the windowsill has bright green leaves; _____, the plant in the dark corner has brown and yellow leaves.

A. in contrast
B. in conclusion
C. in particular
D. as a result

8. Which plant gets water and a lot of light?

9. Which plant does not get water and a lot of light?

10. What will probably happen to the plant in the dark corner after it is moved to the windowsill and gets water? Support your answer with evidence from the passage.