

Miss Johnson's Plant Experiment



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.

* * * *

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.

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.

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

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

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.

Teacher Guide & Answers

Passage Reading Level: Lexile 700

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

Suggested answer: The plant on the windowsill gets water and a lot of light.

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

Suggested answer: The plant in the dark corner 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.

Suggested answer: Answers may vary, as long as they are supported by the passage. Students may respond that the plant will become healthy after it is moved to the windowsill and gets water. As evidence, they may point out that the other plant is thriving under such conditions. Conversely, students may respond that the plant in the dark corner is already in such bad shape (bent over; brown and yellow leaves) that moving it to the windowsill and watering it will not have much effect, as it may be too far gone to save.