

MU-BLOOME Project

Plant Biology Outreach Activities

**Supported by the American Society of Plant
Biology and the Drinko Academy.**

CLUE!

A Plant “Who Done It”

Mystery

**What made these
plants sick?**

Can you figure it out?



It's cold tonight!



Who: **Captain Bluet**

Where: In the garden

What happened: Even just 2 cold nights can affect the growth of a plant. For example, the tomato plant on the left had 2 cold treatments. This caused the plant to wilt then grow more slowly. The plant will probably get better when it is warmer, but too many cold nights and it might not produce many tomatoes.



**Sometimes
plant can
get too
much light!**



Who: **Mrs. Rose**

Where: In the greenhouse

What happened: Too much high light can damage the leaves. This is called photodamage. When plants get too much light they make pigments which give them a different color. This aloe plant is a brownish color instead of green color.



Plants need minerals too!



Who: **Miss Violet**

Where: In the library

What happened: Indoor and garden plants can suffer from lack of minerals in the soil. That is why they need good compost or fertilizer to grow strong. In this plant, lack of potassium, caused the tips of the leaves to die back.



Deer like to eat their vegetables!



Who: **Mrs. Olive**

Where: In the orchard

What happened: These leaves may look like a hungry caterpillar at them, but deer like to browse and taste lots of plants when they visit a garden. This wounds the leaves and the plant cells around the wound die. But, this prevents the wound from spreading – sort of like a scar when you have a cut.



**Salt is not good
For plants!**



Who: **Mr. Lemon**

Where: Path to the gazebo

What happened: The groundskeeper mistook a can of salt used to melt snow in the winter as a can of fertilizer.



I need water!



Who: Dr. Peach

Where: Kitchen

What happened: Forgetting to water a plants reduces the water in the cells and causes to be flaccid and the plant wilts.

Hint Cards

Captain Bluet is an active gardener known for his homegrown tomatoes.

Captain Bluet eagerly planted out some of his tomatoes in early April, even though the weather forecast was for cold nights.

Chilling affects cell membranes and also prevents the flow of water and nutrients to the leaves. A plant may look wilted even after one cold night.

Dr. Peach brought a nice plant for the kitchen table, and put it in a pan of water.

Mrs. Rose the cook is often too busy to water plants. But, she thought it was nice that Dr. Peach brought her a plant.

Forgetting to water a plants reduces the water in the cells and causes to be flaccid and the plant wilts.

Mr. Lemon mistook a can of salt used to melt snow in the winter as a can of fertilizer.

High salt conditions actually cause the plants to lose water. The plants may look like they are not receiving enough water and wilt.

High salt acts like a drought conditions and also reduces leaf growth.

Mrs. Rose thinks her plant isn't getting enough light so moved it to the greenhouse.

High light can reduce photosynthesis, and lower chlorophyll content. As a result, the plants look less green.

The greenhouse put up shading cloth to prevent high light conditions in the greenhouse, but Mrs. Rose put her plant on a bench without shading.

Mrs. Olive often takes walks in the orchard. But, sometimes she leaves the gate open.

Wounding plants cause them to produce chemical signals, which make the leaves more resistant to attack.

The mansion has a small orchard that is surrounded by gates to keep out animals that like to eat the leaves.

Miss Violet is in charge of taking care of the plants in the household.

Miss Violet remembers to water the plants, but seldom remembers to fertilize them.

Indoor plants often suffer from mineral deficiency. For example, lack of potassium, causes the tips of the leaves to die back.

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