Name: _____ Date: _____

The Sensitive Plant That Folds Its Leaves

Circle group

Touch a leaf of the mimosa pudica. It is often called the sensitive plant. Something odd happens. In a second or two, the small leaflets snap shut in pairs. The whole leaf may droop down. After a few minutes, the plant slowly opens up again.

How can a plant move so fast? It has no muscles. It uses water pressure. At the base of each leaflet is a small joint. Its cells are full of water. When the leaf is touched, a signal runs along it. The cells in the joint let water flow out fast. They go limp, and the leaflet folds.

Scientists are not sure why the plant does this. They have some ideas. A folded, drooping leaf looks smaller and less tasty to a hungry insect or animal. The quick move might startle small bugs and shake them off. In a heavy rain, closing up may protect the delicate leaves.

The plant also folds its leaves at night. That is a daily rhythm, not a reaction to touch. Some tests show that a mimosa can stop reacting to a harmless drop that falls again and again. It is as if it learned that nothing bad will follow. That is why it is a favorite in classrooms and labs.

Questions

1. What happens soon after a sensitive plant's leaf is touched?

_____

_____

2. How does the plant move without muscles?

_____

_____

3. What happens to the cells in the joint when the leaf is touched?

_____

_____

4. What is one idea about why the plant folds its leaves?

_____

_____

5. Why does the writer say scientists are not sure about the reason?

_____

_____

6. What might it mean that the plant stops reacting to a harmless drop that falls again and again?

_____

_____

Words to know

leaflets: the small parts that make up one whole leaf
pressure: a pushing force against a surface
limp: soft and without stiffness
delicate: easily damaged because it is thin and fragile

Talk together (every group has these)

1. Find one fact that every group read. How did your sheet say it?
2. What did your sheet tell you that you think another group's did not? Ask them.
3. What is one question about this topic that none of the sheets answered?

Name: _____ Date: _____

The Sensitive Plant That Folds Its Leaves

Triangle group

Touch the leaf of a mimosa pudica, often called the sensitive plant, and something odd happens. Within a second or two, the small leaflets snap shut in pairs, and the whole leaf may droop downward. After several minutes, the plant slowly opens up again as if nothing had happened.

How can a plant move so fast? It does not have muscles. Instead, the plant uses water pressure. At the base of each leaflet is a small joint filled with cells packed with water. When the leaf is touched, a signal passes along it, and the cells in the joint quickly let water flow out. The cells go limp, and the leaflet folds.

Scientists are not completely sure why the plant does this, but there are some ideas. A folded, drooping leaf looks smaller and less appetizing to a hungry insect or grazing animal. The sudden motion might also startle small bugs and shake them off. In a heavy downpour, closing up may protect the delicate leaves from damage.

The plant also folds its leaves at night, which is a regular daily rhythm unrelated to touch. Some experiments have shown that a mimosa can even stop reacting to a harmless drop that falls again and again, as though it has learned that nothing bad will follow. Because of this, it is a favorite plant in classrooms and science labs.

Questions

1. What happens soon after a sensitive plant's leaf is touched?

_____

_____

2. How does the plant move without muscles?

_____

_____

3. What happens to the cells in the joint when the leaf is touched?

_____

_____

4. What is one idea about why the plant folds its leaves?

_____

_____

5. Why does the writer say scientists are not completely sure about the reason?

_____

_____

6. What might it mean that the plant stops reacting to a harmless drop that falls again and again?

_____

_____

Words to know

leaflets: the small parts that make up one whole leaf
pressure: a pushing force against a surface
limp: soft and without stiffness
appetizing: looking tasty and making you want to eat
delicate: easily damaged because it is thin and fragile

Talk together (every group has these)

1. Find one fact that every group read. How did your sheet say it?
2. What did your sheet tell you that you think another group's did not? Ask them.
3. What is one question about this topic that none of the sheets answered?

Name: _____ Date: _____

The Sensitive Plant That Folds Its Leaves

Square group

Brush a finger against a leaf of the mimosa pudica, commonly called the sensitive plant, and something peculiar occurs. Within a second or two, the small leaflets snap shut in pairs, and the entire leaf may droop downward. After several minutes, the plant gradually reopens as though nothing had happened.

How is it possible for a plant to move so swiftly? It possesses no muscles. Instead, it relies on water pressure. At the base of each leaflet sits a small joint containing cells packed with water. When the leaf is touched, a signal travels along it, and the cells in the joint rapidly release water. The cells become limp, and the leaflet folds.

Scientists are not entirely certain why the plant behaves this way, but several ideas have been proposed. A folded, drooping leaf looks smaller and less appetizing to a hungry insect or a grazing animal. The sudden motion might also startle small bugs and shake them loose. During a heavy downpour, closing up may protect the delicate leaves from damage.

The plant also folds its leaves at night, which is a regular daily rhythm unrelated to touch. Certain experiments have revealed that a mimosa can even cease reacting to a harmless drop that falls repeatedly, as though it has learned that nothing harmful will follow. For this reason, it is a favorite plant in classrooms and science laboratories.

Questions

1. What happens shortly after a sensitive plant's leaf is touched?

_____

_____

2. How does the plant move without possessing muscles?

_____

_____

3. What happens to the cells in the joint when the leaf is touched?

_____

_____

4. What is one proposed idea about why the plant folds its leaves?

_____

_____

5. Why does the writer say scientists are not entirely certain about the reason?

_____

_____

6. What might it suggest that the plant ceases to react to a harmless drop that falls repeatedly?

_____

_____

Words to know

leaflets: the small parts that make up one whole leaf
pressure: a pushing force against a surface
limp: soft and without stiffness
appetizing: looking tasty and making you want to eat
delicate: easily damaged because it is thin and fragile

Talk together (every group has these)

1. Find one fact that every group read. How did your sheet say it?
2. What did your sheet tell you that you think another group's did not? Ask them.
3. What is one question about this topic that none of the sheets answered?

For the teacher: The Sensitive Plant That Folds Its Leaves

Each student sheet carries a shape, not a level. The same topic and facts, written three ways.

Circle: The Sensitive Plant That Folds Its Leaves

Easier · 211 words · Flesch-Kincaid grade 2.9

1. The leaflets snap shut in pairs and the leaf may droop.
2. It uses water pressure in cells at the base of each leaflet.
3. Water flows out fast and the cells go limp.
4. It looks less tasty to animals, it may startle bugs, or it may protect leaves in heavy rain.
5. The reasons are only ideas, and none has been proved.
6. The plant may get used to something that does no harm, as if it had learned.

Triangle: The Sensitive Plant That Folds Its Leaves

This passage · 228 words · Flesch-Kincaid grade 6.3

1. The leaflets snap shut in pairs and the leaf may droop.
2. It uses water pressure in cells at the base of each leaflet.
3. Water flows out quickly and the cells go limp.
4. It looks less appetizing to animals, it may startle bugs, or it may protect leaves in heavy rain.
5. The reasons given are only ideas, and none has been proved for certain.
6. The plant may adjust to something that does no harm, as if it had learned.

Square: The Sensitive Plant That Folds Its Leaves

Harder · 230 words · Flesch-Kincaid grade 8

1. The leaflets snap shut in pairs and the leaf may droop downward.
2. It relies on water pressure in cells at the base of each leaflet.
3. They rapidly release water and become limp.
4. It looks less appetizing to animals, it may startle bugs, or it may protect leaves in a downpour.
5. The explanations are only proposed ideas, and none has been proved conclusively.
6. The plant may adjust to something that does no harm, as though it had learned.