

## Lesson 2. Do Plants Have Brains?

By now, you've probably made the connection that living organisms move. However, all living organisms do not use the same means to move. For example, a person is able to run because their brain is sending different signals throughout their body. So...what about plants? First, we know that they can move. A good example of this phenomenon is the Venus flytrap. It is known for trapping unsuspecting insects and eventually digesting them. This is a movement that takes place quickly and right before our eyes. A lesser-known fact about the Venus flytrap is that it also has the ability to count. Opening and closing the flytrap takes a great amount of the plant's energy, so this only occurs a small number of times in its lifetime. Because of this, the plant wants to make absolutely sure that there is an insect to capture when it closes. When something lands inside of the flytrap and brushes against its tiny hairs, it begins a twenty-second countdown. If the plant detects another movement within the next twenty seconds, it will close and begin the digestion process. All of this movement and activity takes place without a brain. How is this possible? As it turns out, plants use their nervous system to send signals throughout their body. In the case of the Venus flytrap, a surge of energy is sent from the hairs to the other parts of the plant to tell it that prey has been detected. After this surge of energy, the plant begins the countdown. While the plant does not count in the same manner a human would, it does keep track of the time that passes between the first sensation it detects and those that follow. This ensures that the plant does not waste any of the energy needed to close, digest the trapped prey, and open up again.

### Respond to Reading

#### Directions

Respond to the questions below. Underline and identify specific lines from the passage that support your claim.

How do Venus flytraps use and conserve energy?

What are some examples of the Venus flytrap movement?