

## Section 1

### Understanding Life Systems

#### EXPLORATION 2

## Moving Plants

Discover how plants move in order to meet their needs.

Like all living things, plants adapt to their environment to get the things they need to survive. But unlike humans and animals, plants cannot move from place to place to meet their needs, such as sunlight, to make food and thrive. If plants do not have enough sunlight, do you think they will just wait until more sunlight comes? Or will they take action to get sunlight?



## Section 1

### Understanding Life Systems

# EXPLORATION 2

## Moving Plants

In this experiment, you will discover what plants do to obtain the light they need.

**Level of  
Difficulty:**

**moderate**

**Time  
Needed:**

**2 – 3 weeks**

### Hypothesis:

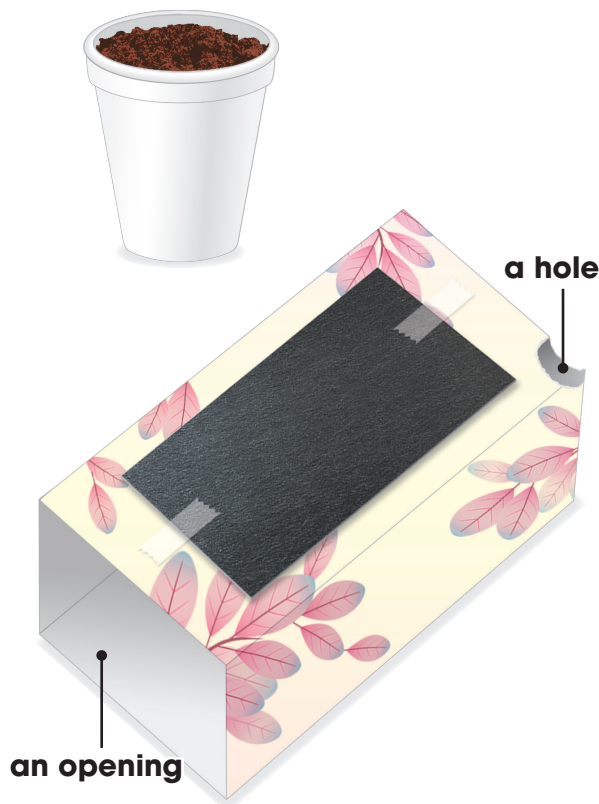
**Circle the word(s) to show your hypothesis.**

Plants **move / do not move** to reach for the sunlight they need.

### Materials:

- a bean
- a tissue box
- tape
- a plastic cup
- soil
- black construction paper

### Steps:



1. Fill the cup with soil and plant the bean in it.
2. Place the cup near a sunlit window and water the bean regularly. Let it sprout and grow some leaves before doing the next step.
3. Cover the opening of the tissue box with the black construction paper.
4. Open and cut away the flaps on one end of the tissue box.
5. Cut one of the corners on the other end of the new opening to create a small hole.

## Section 1

### Understanding Life Systems

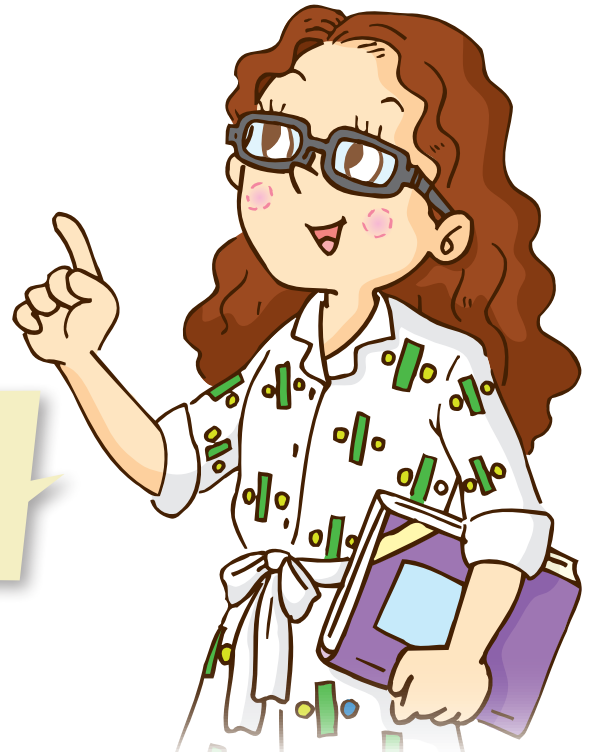
#### EXPLORATION 2

## Moving Plants



6. Place the box over the plant.
7. Each morning, without moving the plant, remove the box. Water the plant and take a picture of it.
8. Place the box over the plant again with the hole in another direction.  
(Optional: Add a marking to the cup to ensure that the position of the plant does not change.)

*Compare the photos of the plant. Has its position stayed the same or changed throughout the experiment?*



### Conclusion:

**Circle the correct words after conducting the experiment.**

The photos **showed / did not show** that the position of the plant changed.

My hypothesis was **correct / incorrect** .

## Section 1

### Understanding Life Systems

# EXPLORATION 2

## Moving Plants

### Explanation:

#### Photos of the Plant in Four Days



You should have noticed that each day as your plant grew, it bent toward the direction of the small hole at the top of the tissue box.

Plants, unlike humans, are unable to move freely to get what they need. To overcome this limitation, plants are able to sense where light comes from and bend themselves toward it. This is why your plant was bending in a different direction each time you lifted the box to check on it.