



Science Virtual Learning

LEP Science

Plant Tropisms

May 22, 2020



LEP Science
Lesson: May 22, 2020

Objective/Learning Target: I can recognize and explain different Tropisms that happen in plants.

Did you know that just like in humans, plants have hormones?

And, just like in humans, these hormones work in ways to help the plant maintain homeostasis.

Watch this quick video on [plant hormones](#). As you watch, take notes as to what each of the following plant hormones do.

Auxin

Gibberellins

Cytokinin

Ethylene

Abscisic Acid

Here is a chart that will help you to see what each hormone does.



	Germination	Growth to Maturity	Flowering	Fruit Development	Abscission	Seed Dormancy
Gibberellin	✓	✓	✓	✓	✗	✗
Auxin	✗	✓	✓	✓	✗	✗
Cytokinins	✗	✓	✓	✓	✗	✗
Ethylene	✗	✗	✓	✓	✓	✗
Abscisic Acid	✗	✗	✗	✗	✓	✓



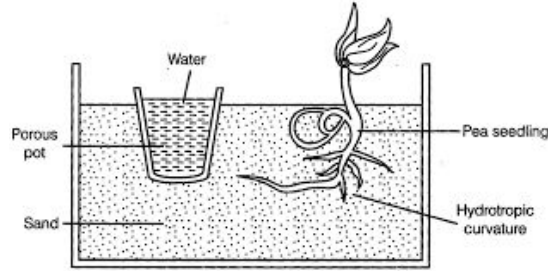
As mentioned in the video, many of the hormones cause a plant to “move” or have what is called a “tropism”.

We are going to look at a few common plant tropisms.

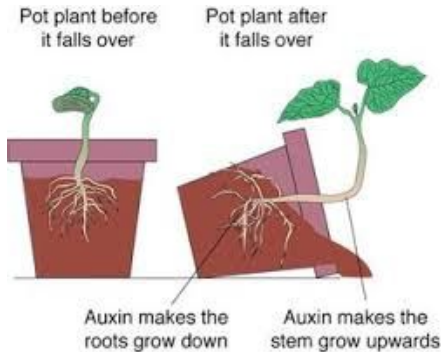
First, watch this [video](#) all the way through.

When done, take out a sheet of paper and watch this [video](#) while taking guided notes.

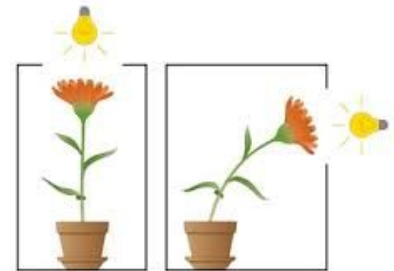
Hydrotropism is a response to water.



Geotropism is a response to gravity.



Phototropism is a response to light.



One tropism not covered in the video that is very interesting is Thigmotropism - a response to touch or pressure.

The tropism can be positive, like in the Venus Flytrap or the Tendrils of a plant wrapping around or attaching to a surface.



You can also have negative tropism in which the plant moves away, like the leave of a mimosa tree.



before and.....after touching



Let's practice what you have learned. Answer the questions that follow.

What tropism is being demonstrated in the illustration to the right?

- a. Phototropism
- b. Geotropism
- c. Hydrotropism
- d. Thigmotropism

Bonus: Is the tropism positive or negative?



What tropism is being demonstrated in the illustration to the right?

- a. Phototropism
- b. Geotropism**
- c. Hydrotropism
- d. Thigmotropism

Bonus: Is the tropism positive or negative? **Negative for the shoot.**



What tropism is being demonstrated in the illustration to the right?

- a. Phototropism
- b. Geotropism
- c. Hydrotropism
- d. Thigmotropism

Bonus: Is the tropism positive or negative?



What tropism is being demonstrated in the illustration to the right?

- a. **Phototropism**
- b. Geotropism
- c. Hydrotropism
- d. Thigmotropism

Bonus: Is the tropism positive or negative? **Positive, it goes toward the light.**



What tropism is being demonstrated in the illustration to the right?

- a. Phototropism
- b. Geotropism
- c. Hydrotropism
- d. Thigmotropism

Bonus: Is the tropism positive or negative?



What tropism is being demonstrated in the illustration to the right?

- a. Phototropism
- b. Geotropism
- c. Hydrotropism
- d. Thigmotropism**

Bonus: Is the tropism positive or negative?

Negative, the leaf will withdraw from touch



What tropism is being demonstrated in the illustration to the right?

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- b. Geotropism
- c. Hydrotropism
- d. Thigmotropism

Bonus: Is the tropism positive or negative?



What tropism is being demonstrated in the illustration to the right?

- a. Phototropism
- b. Geotropism
- c. Hydrotropism**
- d. Thigmotropism

Bonus: Is the tropism positive or negative? **Positive as it goes toward the water**





Here are some additional resources and practice.

[Practice quiz](#)

[ProProfs Practice quiz](#)

[Some reading with pictures about tropisms](#)

Watch this [video](#) for more visuals and information about tropisms