

Name: _____

Block: _____

Date: _____

Tropism (Plant Growth)

What is tropism?

Tropisms - Plant growth in response to a _____.

- There are many types of tropisms :
 - Phototropism
 - Geotropism
 - Thigmotropism

What is the difference between positive & negative tropism?

Difference between positive and negative tropism:

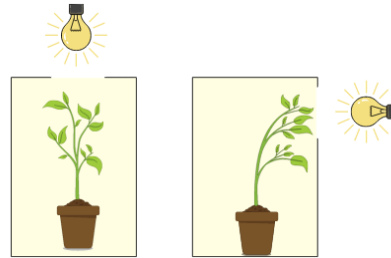
- **Positive tropism** = If a plant moves _____.
- **Negative tropism** = If a plant moves _____.

What is phototropism?

Types of tropisms:

Phototropism is the growth response of a plant in response to _____.

- Ex. Stems growing _____ the window to get to the light



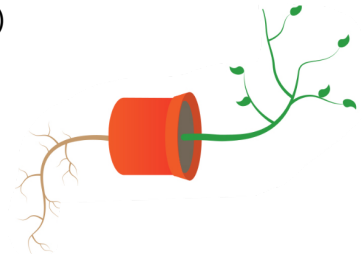
How do stems and roots respond to light?

- **Stems** grow _____ light (positive)
- **Roots** grow _____ from light (negative)

How is geotropism difference than phototropism?

Geotropism is the growth of a plant in response to _____.

- **Roots** grow _____ gravity (positive)
- **Stems** grow _____ gravity (negative)



What are the advantages of roots and stems growing with particular tropisms?

Advantages of a stem growing:

Towards light:

- To trap more light for _____

Away from gravity:

- Stem of germinating seed grows _____ of soil
- More chances for _____ and _____.

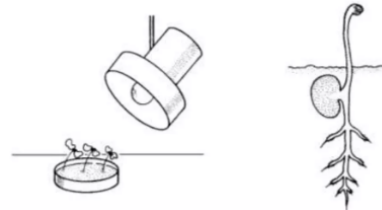
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Complete the table by putting (+) if it grows towards the stimulus and (-) if it grows away.

Stimulus		
	Light	Gravity
Shoot		
Root		



What is thigmotropism?

Thigmotropism - growth in response to _____ (e.g. vines).

- Eg. Vines growing on a wall or fence

Can you think of a plant that primarily responds to touch?

- _____.

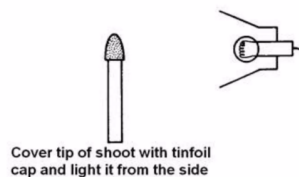
Answer the following by circling the correct answers:

Practice:

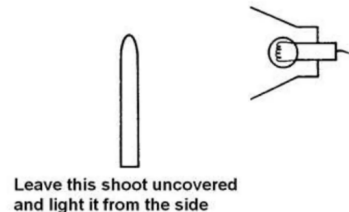
Study the diagrams. What would you expect to happen and why.

The shoot with the covered tip grows (*straight up / towards light*) because it (*can sense light / cannot sense light*).

The shoot with the exposed tip grows (*straight up / towards light*) because it (*can sense light / cannot sense light*).



Cover tip of shoot with tinfoil cap and light it from the side



Leave this shoot uncovered and light it from the side

Summary:

Tropisms is a plants growth in response to _____. There are many types of tropisms including _____, _____ and _____.

- Stems are _____ geotropic & _____ phototropic.
- Roots are _____ geotropic & _____ phototropic.

