

Grade 4 Science
Week of October 13 – October 16

Plant Senses

Plants respond to their environment in a variety of ways. Some common plant stimuli include light, gravity, water, movement of the sun, and touch.



Watch this Bill Nye video about plants: <https://youtu.be/22Z4kBZT3uA>

Light

Plants kept inside a room always grow in the direction of the window. This is due to something called **phototropism**. This is when a plant grows towards the sun as that is its source of energy.



Watch this video on Phototropism Explained: <https://youtu.be/HmHvWDeTt7Y>

Touch



Plants do not really like to be touched. Take a look at the Mimosa Pudica in the video: <https://youtu.be/LTKMCyC5dd0>

Plants use some defenses to help against predators or to keep us from touching them.

1. Thorns are on thistles
2. Prickles like on blackberries or roses
3. Spines are on cacti
4. Trichome has a poisonous fur under the leaf, like stinging nettle

Water

Plants have little pores (holes or openings) on the underside of their leaves, called stomata.

Plants will absorb **water** through their roots and release **water** as vapor into the air through these stomata.

Cool facts:

- 80-90% of a plant is water
- plants can live longer without food than water



Watch this video about how water affects plants: <https://youtu.be/jCZAzhng-w>

Gravity

A plants response to gravity is called gravitropism.



Watch this video about plants defying gravity: <https://youtu.be/57IXUG0CHSQ>

Different parts of the plant react differently:

- the roots grow down
- the stems grow up

Complete the following:

1. Plants respond to their environments in different ways, some stimuli they respond to include _____, _____, _____, _____, and _____.

2. Plants make their own food through a process called _____.

3. Plants tend to grow towards the sun this is because of a thing called _____.

4. Draw an arrow showing which way you think this plant would grow.



5. Plants do _____ like being touched.

6. What are three ways that plant try to prevent things from touching them:

a)

b)

c)

7. Plants have pores on the bottom of their leaves called _____.

8. Plants absorb water through their _____ and release it as water vapour through the stomata.

9. _____% of a plant is water.

10. A plants response to gravity is called _____.

11. Roots grow _____ and stems grow _____.