

# [Affect of color on plant growth](https://assignbuster.com/affect-of-color-on-plant-growth/)

Growth of Plant under Different Colored Light Problem: Does the color of light affect the plant growth? Hypothesis: Red color will have the most impact on the plant growth, meanwhile; black will have the least impact on the plant growth Variables: - Dependent Variable is the color of light - Independent Variable is the type of plant used Materials/Apparatus: - Plants (of the same type) - Water - Ruler - Colored Construction Paper - Colored Transparent Print Paper - Lamp with Incandescent bulb - Tape - Foil Plates Procedure/Method: 1. Make sure the plants are watered and put in the sunlight (all the plants must be put together) 2. Measure the height of plant in centimeters. 3. Cover the foil plant with one of the colors (ex. Red, Green, Blue, Black,) with the colored construction paper 4. Tape the colored transparent printer paper to the lamp were it lights from 5. Put the plant in the colored foil plate 6. Put the colored light on the plant 7. Leave the plant under that colored light for a certain period of time (make sure that the period of time is always the same for all the other colors as well) Data Collection and Processing: Trial One= (Height of Plant before Affect of Light was 23. 2 cm) Color of Light Height of Plant Before Colored Light Height of Plant After Colored Light Difference in Height Black 23. 2 cm ± 0. 5 23. 9 cm ± 0. 5 0. 7mm ± 0. 1 Green 23. 9 cm ± 0. 5 25. 1 cm ± 0. 5 1. 2cm ± 0. 1 Blue 29. 3 cm ± 0. 5 30. 3 cm ± 0. 5 1. 0cm ± 0. 1 Red 25. 1 cm ± 0. 5 29. 3 cm ± 0. 5 4. 2cm ± 0. 1 Normal Conditions 30. 3cm ± 0. 5 34. 3cm ± 0. 5 4. 0cm ± 0. 1 Trial Two= (Height of Plant before Affect of Light was 21. 3 cm) Color of Light Height of Plant Before Colored Light Height of Plant After Colored Light Difference in Height Black 21. 3cm ± 0. 5 21. 9 cm ± 0. 5 0. 6mm ± 0. 1 Green 21. 9 cm ± 0. 5 23. 5 cm ± 0. 5 1. 6cm ± 0. 1 Blue 23. 5 cm ± 0. 5 24. 4 cm ± 0. 5 0. 9mm ± 0. 1 Red 24. 4 cm ± 0. 5 28. 8 cm ± 0. 5 4. 4cm ± 0. 1 Normal Conditions 28. 8cm ± 0. 5 32. 6cm ± 0. 5 3. 8cm ± 0. 1 Trial Three= (Height of Plant before Affect of Light was 22. 4 cm) Color of Light Height of Plant Before Colored Light Height of Plant After Colored Light Difference in Height Black 22. 4 cm ± 0. 5 23. 2 cm ± 0. 5 0. 8mm ± 0. 1 Green 23. 2 cm ± 0. 5 24. 6 cm ± 0. 5 1. 4cm ± 0. 1 Blue 24. 6 cm ± 0. 5 25. 7cm ± 0. 5 1. 1cm ± 0. 1 Red 25. 7 cm ± 0. 5 30. 6 cm ± 0. 5 4. 9cm ± 0. 1 Normal Conditions 30. 6cm ± 0. 5 34. 7cm ± 0. 5 4. 1cm ± 0. 1 Calculations= Trial One= (Height of Plant before Affect of Light was 23. 2 cm) Color of Light Percent Error of Height of Plant Height Before Colored Light Percent Error of Height of Plant Height After Colored Light Percentage Error Difference in Height Black 0. 5/23. 2X100= 2. 2% 0. 5/23. 9X100= 2. 1% 0. 1/0. 7x100= 14. 3% Green 0. 5/23. 9X100= 2. 1% 0. 5/25. 1X100= 2. 0% 0. 1/1. 2x100= 8. 3% Blue 0. 5/29. 3X100= 1. 7% 0. 5/30. 0X100= 1. 7% 0. 1/1. 0x100= 10. 0% Red 0. 5/25. 1X100= 2. 0% 0. 5/29. 3X100= 1. 7% 0. 1/4. 2x100= 2. 4% Normal Conditions 0. 5/30. 0X100= 1. 7% 0. 5/34. 3x100= 1. 5% 0. 1/4. 0x100= 2. 5% Trial Two= (Height of Plant before Affect of Light was 21. 3 cm) Color of Light Percent Error of Height of Plant Height Before Colored Light Percent Error of Height of Plant Height After Colored Light Percentage Error Difference in Height Black 0. 5/21. 3x100= 2. 3% 0. 5/21. 9x100= 2. 2% 0. 1/0. 6x100= 16. 6% Green 0. 5/21. 9x100= 2. 2% 0. 5/23. 5x100= 2. 1% 0. 1/1. 6x100= 6. 3% Blue 0. 5/23. 5x100= 2. 1% 0. 5/24. 4x100= 2. 0% 0. 1/0. 9x100= 11. 1% Red 0. 5/24. 4x100= 2. 0% 0. 5/28. 8x100= 1. 7% 0. 1/4. 4x100= 2. 3% Normal Conditions 0. 5/28. 8x100= 1. 7% 0. 5/32. 6x100= 1. 5% 0. 1/3. 8x100= 2. 6% Trial Three= (Height of Plant before Affect of Light was 22. 4 cm) Color of Light Percent Error of Height of Plant Height Before Colored Light Percent Error of Height of Plant Height After Colored Light Percentage Error Difference in Height Black 0. 5/22. 4x100= 2. 2% 0. 5/23. 2x100= 2. 2% 0. 1/0. 8x100= 12. 5% Green 0. 5/23. 2x100= 2. 2% 0. 5/24. 6x100= 2. 0% 0. 1/1. 4x100= 7. 1% Blue 0. 5/24. 6x100= 2. 0% 0. 5/25. 7x100= 1. 9% 0. 1/1. 1x100= 9. 1% Red 0. 5/25. 7x100= 1. 9% 0. 5/30. 6x100= 1. 6% 0. 1/4. 9x100= 2. 0% Normal Conditions 0. 5/30. 6x100= 1. 6% 0. 5/34. 7x100= 1. 4% 0. 1/4. 1x100= 2. 4% Data Processing: Citations: http://www. cheapvegetablegardener. com/2008/12/effects-of-colors-on-plant-growth. html http://www. associatedcontent. com/article/350805/how\_colored\_light\_affects\_plant\_growth. html http://www. gardenguides. com/74951-colored-light-affect-plant-growth. html