

Analyzing Data for Dr. Angus

Name _____

Tree growers in California want to improve the growth of coastal sequoia trees. They are trying to decide what conditions are best for growing sequoia trees in the greenhouse.

To help the growers make their decision, Dr. Wendy Angus grew coastal sequoia seedlings under two different conditions. She is testing two different types of light: white light and far-red light. White light is like bright sunlight. Far-red light simulates shade in the greenhouse. She would like to know which type of light helps the seedlings grow tall more quickly.

Dr. Angus grew ten plants in each type of light. On day 22, one of the lab assistants knocked over the seedlings grown in the shade, and all the seedlings fell out of their pots. So she measured the trees grown in the shade only on day 7, day 14, and day 21. She measured the trees grown in the sunlight on day 7, day 14, day 21, and day 28. Despite the accident in the lab, Dr. Angus would still like to use the data she has collected.

Original Data Set

Sunlight (Tree height in centimeters)				
Tree	Day 7	Day 14	Day 21	Day 28
1	1.7	1.8	1.9	2.0
2	1.6	1.7	1.9	2.3
3	1.5	1.6	1.8	2.1
4	1.2	1.3	1.5	1.8
5	0.9	1.6	1.6	1.9
6	0.9	1.6	1.8	1.9
7	1.4	1.5	1.7	2.0
8	1.2	1.6	1.8	2.2
9	1.0	1.4	1.5	1.9
10	1.4	1.5	1.8	2.3

Shade (Tree height in centimeters)			
Tree	Day 7	Day 14	Day 21
1	1.5	1.7	1.8
2	1.6	2.0	2.1
3	1.8	2.0	2.3
4	1.6	1.8	1.8
5	1.6	2.0	2.1
6	1.1	2.3	2.3
7	1.0	1.5	2.3
8	1.5	1.9	2.1
9	1.2	1.5	1.9
10	1.4	1.6	2.0

Your Letter

After analyzing the data above, write a letter explaining to Dr. Angus how to decide which type of light is better for helping coastal sequoia seedlings grow. Describe the method you used to analyze the data so that she can use it for other data sets in similar conditions.