



SCIENCE EXPERIMENT

Name: _____

Date: _____

Testing the Effect of Different Light Colors on Seed Germination



QUESTION

How do different light colors affect seed germination?



HYPOTHESIS

I think seeds will germinate best under _____ light because _____.



MATERIALS

- Seeds (radish seeds work well)
- 5 clear cups or small containers
- Paper towels or cotton rounds
- Water
- Red light source (red LED bulb or colored light)
- Blue light source (blue LED bulb or colored light)
- Green light source (green LED bulb or colored light)
- White light source (regular white LED)
- Dark (no light)
- Lamp clamps or boxes to block light from other areas



VARIABLES

- **Independent Variable:**
Color of light
- **Dependent Variable:**
Seed germination (number of seeds germinated)
- **Controlled Variables:**
Type of seed, number of seeds, amount of water, type of growing medium, temperature, time



KEEP IN MIND

Keep all other conditions the same for each cup.



PROCEDURE

1. Label 5 cups: Red, Blue, Green, White, Dark.
2. Place a paper towel or cotton round in each cup. Moisten with water (not soaking).
3. Place the same number of seeds in each cup (e.g., 10 seeds per cup).
4. Place each cup under its assigned light color:
 - Red cup under red light
 - Blue cup under blue light
 - Green cup under green light
 - White cup under white light
 - Dark cup in a completely dark place (inside a box or cupboard)
5. Keep all cups in the same room at the same temperature.
6. Check the seeds once a day at the same time. Add a few drops of water if needed to keep moist.
7. Record the number of seeds germinated in each cup for 7 days.
(A seed is germinated when the root or shoot is visible.)



DATA TABLE

Day	Number of Seeds Germinated				
	Red Light	Blue Light	Green Light	White Light	Dark (No Light)
1					
2					
3					
4					
5					
6					
7					



ANALYSIS

1. Which light color had the most seeds germinate?

2. Which light color had the least seeds germinate?

3. How did light color affect seed germination?

4. What did you learn from this experiment?



TIP: Be patient and consistent! Seed germination can take several days.

