



Radiation and Albedo Experiment

Student Page

Use the materials provided to test albedo of three different substances - water, sand, and soil. You will record temperatures for 10 minutes with the lamp on and 10 minutes with the lamp off, and then graph your results. Follow the directions below.

Directions:

1. Take a temperature reading before you turn on the lamp (Time = 0).
2. Turn the lamp on so that it shines on the containers of water, dark soil, and light sand.
3. Take a temperature reading in each container every minute for ten minutes. Record your data in the table.
4. Turn the lamp off.
5. Take another round of temperature readings every minute for ten minutes. Record your data.
6. Plot your data on graph paper for all three substances on a line graph with time on the x-axis and temperature on the y-axis. Don't forget to include units! Include a key to label each line (water, light sand, and dark soil).
7. Write a caption for your graph that describes how temperature changes in the three different substances over time.

Temperature readings

Light Bulb On (radiation simulating daylight hours)											
Time (Minutes)	0	1	2	3	4	5	6	7	8	9	10
Dark Soil (C)											
Light Sand (C)											
Water (C)											
Light Bulb Off (radiation simulating nighttime hours)											
Time (Minutes)	11	12	13	14	15	16	17	18	19	20	
Dark Soil (C)											
Light Sand (C)											
Water (C)											