CHAPTER 19
SPECIFIC HEAT LAB

Sample Data

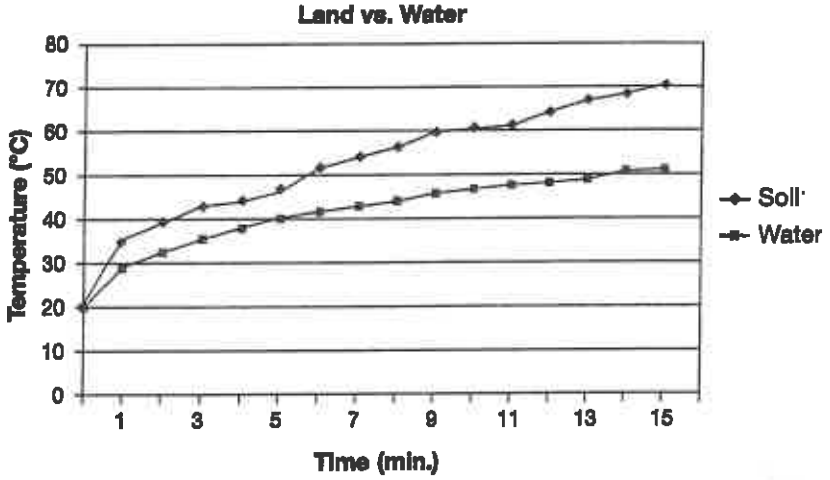
Mass of Water and Cup 99.2 g

Mass of Soil and Cup 99.2 g

Sample Data Table

Time (min.)	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Water Temperature (°C)	20.9	29.2	32.6	35.5	38.2	40.4	41.7	43.1	44.5	46.0	47.1	48.0	48.1	48.9	50.6	50.9
Soil Temperature (°C)	20.4	35.4	39.1	42.8	44.3	46.6	51.8	54.1	56.6	59.5	60.1	61.2	64.5	66.8	68.6	70.2

Sample Land versus Water Graph



Place an empty Petri dish on a balance and add dry soil until the combined mass (dish and soil) is equal to that of the Petri dish filled with water. Record the mass of the soil and Petri dish. *Note:* The Petri dish used for the soil should be identical to the one used for the water.

Using a support stand, set up a heat lamp as shown in Figure 1.

Place the two Petri dishes under the heat lamp on a white paper towel.

Place a thermometer under the surface of each substance in the Petri dishes (see Figure 1). *Note:* The bulb of the thermometer must be just under the surface of the substance. The exposed end of the thermometer may need to be propped up to prevent it from tipping out of the Petri dish.

Adjust the heat lamp so it is about 12 inches above the Petri dishes. Make sure the Petri dishes receive equal amounts of light.

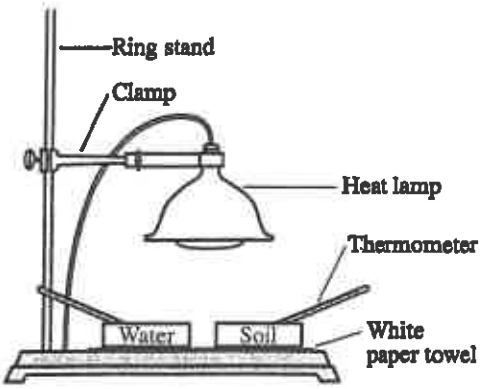


Figure 1.

Measure and record the initial temperature for each substance.

Turn on the heat lamp. Measure and record the temperature of each substance every minute for a total of 15 minutes.

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