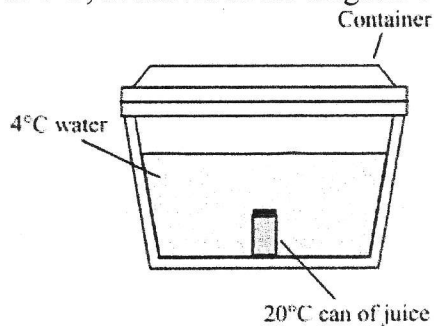


## OPEN RESPONSE #1, Heat and Heat Transfer

A can of juice at  $20^{\circ}\text{C}$  is completely submerged in a closed, insulated container filled with water at  $4^{\circ}\text{C}$ , as shown in the diagram below.



- Describe what happens to the temperature of the can of juice **and** the temperature of the water in the container within the first few minutes after the can is submerged. Explain your answer.
- After four hours, will the can and the water have the same temperature or different temperatures? Explain your answer.
- Estimate the numerical value(s) of the final temperatures of the can of juice and the water after four hours. Explain your answer.