

Answer #139

The answer is (d): the water level in the flask will fall for a bit then rise, as seen in a sequence of close-up photographs of the thermometer and capillary tube taken over a time interval of about 40 minutes.



The density of water is a maximum at about 4°C , so as the water warms up its volume decreases to about 4°C and then begins to increase.

This important property of water makes possible a large number of physical phenomena that we all take for granted as we go about our lives on the earth. Two examples are: (1) ice cubes float and (2) lakes do not become icy down to their bottoms because the ice stays on top, so fish can live in the water below the ice over the winter.

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Volume of Water vs. temperature

taken at approximately three minute intervals

