Checking the Water Level After Floating Ice Melts

Scoring guide · one credit per question · review written work against each rubric

Checking the Water Level After Floating Ice Melts

Question 1

Choice (2)

Only the submerged part displaces water. Its volume is the measured 10.0 mL.

Question 2

Melting gives 10.0 g of liquid water. At 1.00 g/mL that is 10.0 mL, equal to the volume previously displaced.

Question 3

The part above the surface did not displace water. The 10.0 mL of melt replaces the 10.0 mL that the floating ice displaced, so the level stays the same in the model.

Question 4

The open arrangement in ice leaves more space between the water molecules. The liquid takes up less space with the same number and mass of molecules.