

CER Prompts

Sample Experiment: The Effect of Water Temperature on Diffusion

I. Claim

"When water temperature increases/decreases, the rate of diffusion increases/decreases."

II. Evidence

"According to my observations, in hot water, it took X seconds for the dye to diffuse; in warm water, it took Y seconds; and, in cold water, it took Z seconds."

III. Reasoning

"One explanation for this result is..."

Sample

"When water temperature increases, the rate of diffusion increases.

According to my observations, in hot water, it took 8 seconds for the dye to diffuse; in warm water, it took 90s; and, in cold water, it was not able to diffuse completely.

One explanation for this result is due to kinetic molecular theory. Since warmer particles move faster than colder ones, when dye is added to hot water, the water particles will move faster and spread the dye faster."