

Pipe Freeze Showdown: Which Plumbing Material Wins the Winter War?

Winter can turn plumbing into a battlefield, with frozen pipes bursting and joints failing under pressure. In this study, 18 teams of student researchers will face off in a school lab to test three common plumbing materials, copper, PVC, and PEX studying their joining techniques; soldering, solvent welding, and crimping against freezing conditions.

Over two weeks, we will subject a series of pipe assemblies into brutal freeze to thaw cycles, mimicking harsh winter weather, to see which ones crack, leak, or stand strong. By analyzing failure rates and durability, we aim to uncover the ultimate cold weather champion and share practical insights for homeowners and plumbers. Get ready our pipes are about to feel the chill!