

Anticipated Responses to Swirling Vortices Lab

When students use their hurricane models, they should notice that the water closer to the eye of the vortex swirls faster than the water farther away. The beads and cubes get thrown around more violently just outside the eye of the vortex. When the beads are caught on the outside layers they travel more slowly. The center of the vortex in the model represents the eye of a hurricane. The model is like a hurricane in that it has distinct parts such as the eye and the eyewall. The model is also like a hurricane in that it can form a vortex. The model is unlike a hurricane because it is in a closed system so air cannot escape from or enter into the vortex. The model is unable to recreate the thunderstorms and tornadoes that are associated with a hurricane. The model can represent cyclonic storms in the northern or southern hemisphere since it can rotate the vortex both counter clockwise and clockwise.