Eye of the Storm

Purpose
To demonstrate the calmness in the eye of a hurricane.

Materials
Paper clip  Scissors  Duct tape
Two 2 L soda bottles  Tap water  Spoon
12-inch (30-cm) piece of sewing thread
Washer with the same circumference as the mouth of the bottles
Friend

Procedure
1. Tie one end of the thread to the paper clip. Set the threaded paper clip aside until you reach step 8.
2. Place the washer over the mouth of one of the bottles.
3. Cut off the bottom of the second bottle.
4. Place the second bottle upside down on top of the first bottle and secure the bottles together with tape.
5. Stand the bottles in a sink with the open end up.
6. Fill the top bottle with water.
7. Ask your friend to stir the water with the spoon in a circular direction a few times.
8. While the water is swirling, quickly suspend the paper clip in the funnel of air in the center of the swirling water, making every effort not to allow the clip to touch the water.
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Results
As long as it remains suspended in the funnel of air surrounded by the swirling water, the paper clip is unaffected by the water’s movement. If it touches the water, the paper clip swirls with it.

Why? A hurricane is a storm with winds of 74 miles (118 km) per hour or more rotating around a relatively calm center called the eye. The funnel of air in the center of the swirling water running down a drain, simulates the eye of a hurricane. The eye of a hurricane is about 20 miles (32 km) across in the middle of the storm, with few if any clouds. It is a long tube of calm all the way to the surface of the Earth, with high-speed winds spinning around it. Like the air in a hurricane’s eye, the air in the center of the swirling water in the bottle is calm, as indicated by the paper clip’s lack of movement.