

Standing waves

A wave approaches then reflects off a surface. Oddly, the reflected wave appears to be twice as high. Then it seems to stop moving horizontally but oscillates up and down. What's going on?

Constructive and destructive interference between the original (incident) and new (reflected) waves is creating what looks like a new wave (the resultant) that appears to be standing still.

In this activity you see a standing wave formed and reflected. Once the resultant wave fills the area, you turn the wave on and off. You also observe the formation of nodes and antinodes (loops) in the resultant wave.

You see that a standing wave resembles the waves you see in a small swimming pool about 30 seconds after someone makes a big splash. The waves appear to be moving up and down only, not moving forward or backward.