Wave Tank Module #1 – Wave Parameters

Test their knowledge of wave parameters after having discussed them in class.

Which letter(s) represents the amplitude (a) ______
Which letter(s) represents the wave height (H) ______
Which letter(s) represents the wavelength (L) ______

Ask the students to go to the wave tank and describe the shape of the waves that they see.

Ask the student what they think will happen if you place a floating object in the tank

After doing this, you will see the object slowly migrate shoreward.

Ask the students why this might be happening?
Ask them to look again at the wave shape in the tank. Do the wave really look sinusoidal?

There is a net shoreward motion (actually even for sine waves, but no need to get into that) because the wave paths do not completely close.

If they did, the note in the bottle thrown off the ship would never make it to land.

Now,

Ask the students to go to the wave tank and devise a way to measure the amplitude and wave height of waves with the wave paddle speed dial at 30 and again at 60.

Ask the students to postulate why there is a difference

Ask the students to go to the wave tank and devise a way to measure the wavelength of waves with the dial at 30 and again at 60.

Ask the students to postulate why there is a difference