Connecting With Your Child

Wavelength and Amplitude at Home

This activity will help you explore the different properties of waves with your child.

The only materials you will need are a jump rope, a water hose, and a third material that is similar in length to the previous two, such as a computer cable, extension cord, phone cord, or Slinky.

Procedure:

1. Start by holding one end of each material. Either tape one end to the wall or have a second person hold the end.
2. Move the rope or material up and down to create waves.
3. Move closer together and farther away and repeat step 2. Make sure to look and compare the wavelength, amplitude, crest, and trough of each wave.
4. Record your findings and observations.

Think about the different materials you used in the demonstration to discuss wave properties.

Here are some questions to discuss with your child:

1. Does the material the waves travel through affect the wavelength?
2. What is the difference between amplitude and wavelength?
3. Describe how crest and trough are used to explain amplitude.
4. Does the amplitude change when the wavelength is changed?
5. What do you have to do to change the frequency of a wave?