ACTIVITY AT HOME

PINK PALACE MUSEUM

Physics

WAVE MODEL

Build a model to experiment with energy and wave motion.

Materials

30 Skewers
60 Gummy candies
Duct tape
2 Anchors (tables, bookshelves, etc.)

Results

Tapping the skewer made a wave!

Why?

Because all skewers are linked together and mobile, adding energy by tapping one skewer transfers the energy along the length of the model as a wave. If enough energy is added, it travels to the anchor and bounces back through the wave model in the other direction. By watching the gummy candy, you can see the amplitude and wavelength.

Procedure

- Carefully place one gummy candy on each end of each skewer. Dip each end of the skewer into the water before adding the gummy candy to make the candy easier to puncture.
- When skewers are prepared, stretch a length of duct tape approximately 5 feet long (sticky side up) across a clean, flat surface. Use a little extra duct tape to anchor the ends of the duct tape so it stays flat and taut while you work on the next steps.
- Find the balance point near the center of the skewer by balancing it on one of your fingers. Hold the skewer at that point and place it perpendicularly across the duct tape, making sure to place the balance point in the center of the duct tape strip. Press the skewer to the duct tape
- Use a ruler to place each additional skewer 2 inches apart along the duct tape strip.
- When all skewers have been placed, carefully put another piece of duct tape sticky side to sticky side along the length of the wave model.
- Anchor one end of the model to one surface and the other to another so that the wave model is suspended between.
- Experiment with waves by tapping one skewer.

This activity was adapted from the website *Generation Genius*. www.generationgenius.com

To learn more about physics, check out the *Magic of Science* theater program at the Pink Palace Museum.