

# Types of Waves

## Engage

### What To Do:

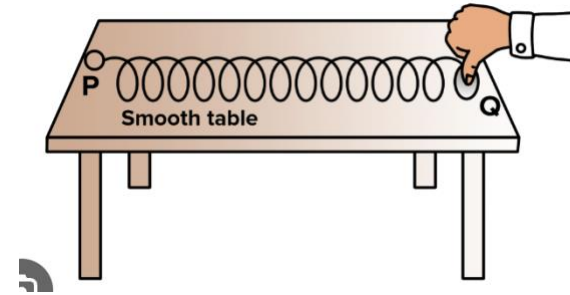
1. Watch the video “Slow Motion: throwing a Rock in Water” at [https://www.youtube.com/watch?v=RRPP73QM\\_4k](https://www.youtube.com/watch?v=RRPP73QM_4k)
2. In the space below describe what you see happening in the water.
3. What do you notice about your observations?
4. What do you wonder about your observations?
5. Watch the video “Rice in Speaker” at <https://www.youtube.com/watch?v=VCiEtA9YG3o>
6. In the space below describe what you see happening to the rice.
7. What do you notice about your observations?
8. What do you wonder about your observations?

## Explore

**Materials:** Slinky

### What To Do:

1. Two students should stretch the Slinky along the table.



2. One student will shake their end of the slinky from side to side.
3. Draw what you observe as the Slinky moves.
4. Set the Slinky up as you did in Step 1 above.
5. This time one student will push the Slinky toward the other student but not let go of it.
6. Watch the Slinky closely and draw what you observe below.

*Do Not Glue until your teacher tells you to.*

*Explain*

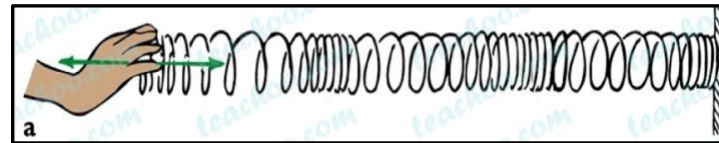
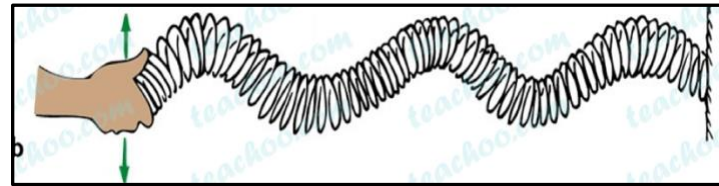


# WAVES

## TRANSVERSE WAVES

## LONGITUDINAL WAVES

**What to Do:** Cut out and glue the pictures below on to the back of the flap of the previous page.



Elaborate

**What To Do:**

1. Go to PhET Interactive simulations – Waves-Intro at <https://phet.colorado.edu/en/simulations/waves-intro>
2. Click on the play arrow and select Water.
3. Make sure you are on Top View and click on the green button on the faucet and watch what happens. Click the green button to stop the drops.

What does what you are observing remind you of from the first part of the lesson?

4. Change to the Side View and click the green button again.

What does what you are observing remind you of from the activity with the Slinky?

5. Chose Sound at the bottom of the page. Change to Particles in the grey box to the right and click the green button.

What does what you are observing remind you of from the first part of the lesson?

What does what you are observing remind you of from the activity with the Slinky?

6. What type of wave is a water wave? \_\_\_\_\_

7. What type of wave is a sound wave? \_\_\_\_\_

Evaluate

Name \_\_\_\_\_ period \_\_\_\_\_

**EXIT TICKET**

Types of Waves

Draw a line from the word to the definition.

1. Traverse Wave

a. Transfers energy through vibrations from one place to another.

2. Wave

b. A type of wave that transfers energy squeezing and releasing.

3. Longitudinal Wave

c. A type of wave that transfers energy by moving up and down or side to side.

**Fill in the blanks with the words from the Word Bank.**

**Word Bank**

Energy      wave      transverse      sound  
Longitudinal      squeezes      ocean

\_\_\_\_\_ is transferred by waves. Two types of waves are \_\_\_\_\_ and \_\_\_\_\_.

A transverse wave moves up and down or side to side. A longitudinal wave \_\_\_\_\_ and releases as it moves. Longitudinal waves happen when

\_\_\_\_\_ is produced. Transverse waves happen in the \_\_\_\_\_.