

Activity sheet

Slinky waves

Name: _____

Class: _____

Using a slinky, you can see both transverse and longitudinal waves.

Materials

- slinky (able to be stretched to 4 m)
- masking tape
- digital video camera

Part A Transverse wave

Method

- 1 With a partner, stretch the slinky until it reaches about 4 m.
- 2 Place a piece of masking tape at about the middle of the slinky.
- 3 Practise producing pulses along the slinky by shaking it sideways on the floor. Each partner should send single pulses along the spring.

Results

- 1 Draw a diagram or take a video of what the pulse looks like.
- 2 In which direction does the piece of masking tape move as the pulse travels down the slinky?
- 3 What is the direction of the pulse as the pulse travels down the slinky?

Method

- 1 Take hold of several coils down the slinky. Pull and release them to produce a longitudinal wave.

2 Put a piece of masking tape near the centre of the stretched coils.

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1 Draw a diagram or take a video of what the pulse looks like.

1 Draw a diagram or take a video of what the pulse looks like.

2 In what direction does the pulse move as the pulse travels down the slinky?

3 In which direction does the piece of masking tape move as the pulse travels down the slinky?

4 Which way do you vibrate a slinky to produce a longitudinal wave?