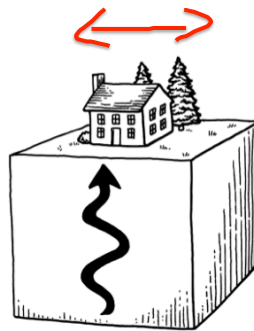


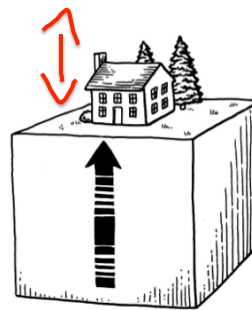
## H5 + H6 Answers

- Please update and/or revise your answers based on what we talk about in class!

### Diagram on H5



This is an S-wave. You can tell from the side to side movement of the wave as it travels perpendicularly to the earth's surface.



This is a P-wave. You can tell from the push/pull movement of the wave as it travels perpendicularly to the earth's surface.

## Question 2, H5

- An S-wave will be more damaging to a home. This is the result of how houses are built. Houses are built to withstand the forces of gravity. Thus, moving a house up and down (p-wave) would have relatively little effect to an s-wave, which will move the house side to side. Houses are not built to withstand side to side movement.

## Question 1a, H6

- A p-wave was created when we pulled the slinky back and pushed it forward.
- An s-wave was created when we moved the spring side to side (left/right).

## Question 1b, H6

- The purpose of using the floor tiles was to ensure we all moved the spring the same distance. This helps us keep the lab fair and controlled.

## Question 1c, H6

- Several things can explain the differences between groups' wave times:
  - Actual length of the spring
  - Actual distance moved
  - Force put into wave
  - How students worked the timer

## Question 2a, H6

- The P-wave moves faster.

## Question 2b, H6

- There are several possible reasons:
  - The waves travel at different speeds in different substances (think of running on pavement vs. sand).
  - The energy released by the earthquake.