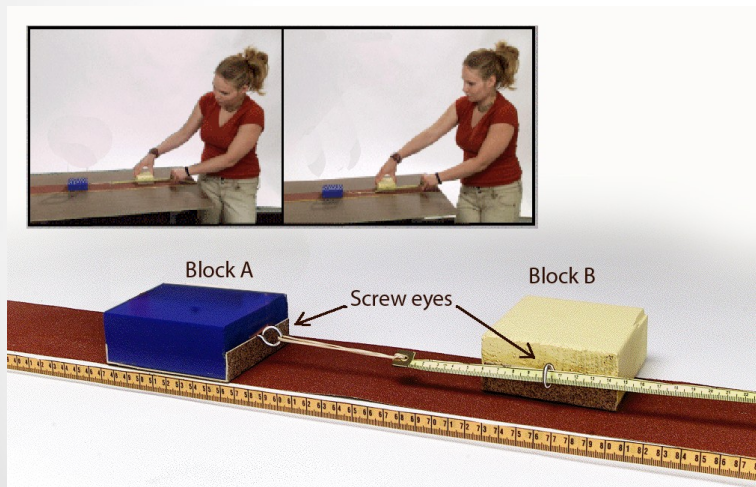


# Earthquake Machine Lite—Activity 1/2

## Defining An Earthquake



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Students will be able to:

- Summarize earthquake processes in a short paragraph
- Demonstrate the causes of earthquakes, noting the flow of energy through the system, by using the earthquake machine model
- Describe the role models play in the process of scientific inquiry



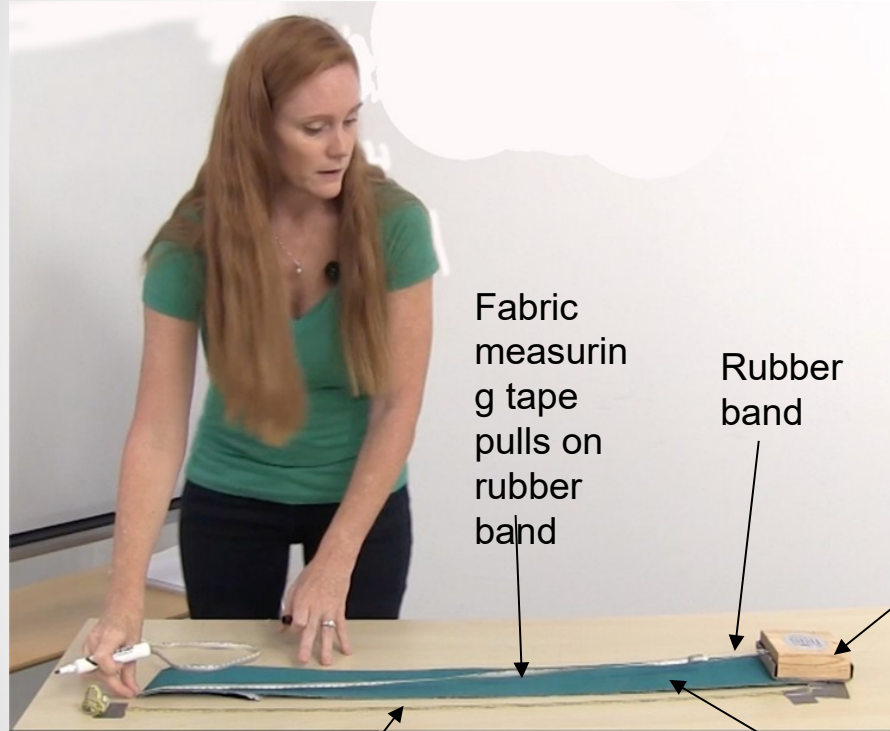
***What is an Earthquake?***

Only one idea per sticky note...

## Create a consensus definition

- Must account for everyone's ideas in the group
- First participant reads a note and places it on the table
- If others have a similar idea, their note is read and grouped with the original
- Continue to call and sort ideas, creating new groups as necessary, until all sticky notes are posted
- The position of notes may be revised as the process evolves

Record your group's single definition on your student worksheet



**Model A:** In this simpler model, the edge of the sandpaper near her right hand is the line across which the constant velocity is measured (i.e., centimeters are recorded as they pass that point) .

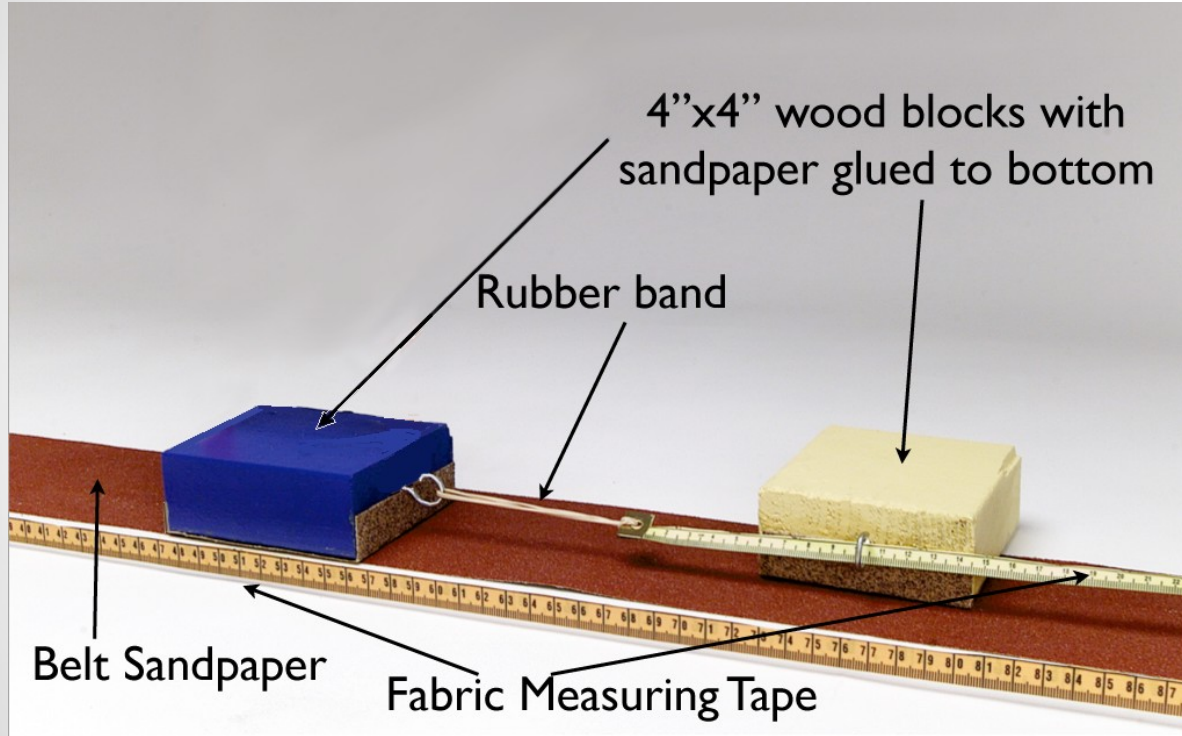
Fabric measuring tape pulls on rubber band

Rubber band

4" x 4" wood blocks with sandpaper glued to bottom

Fabric measuring tape on table

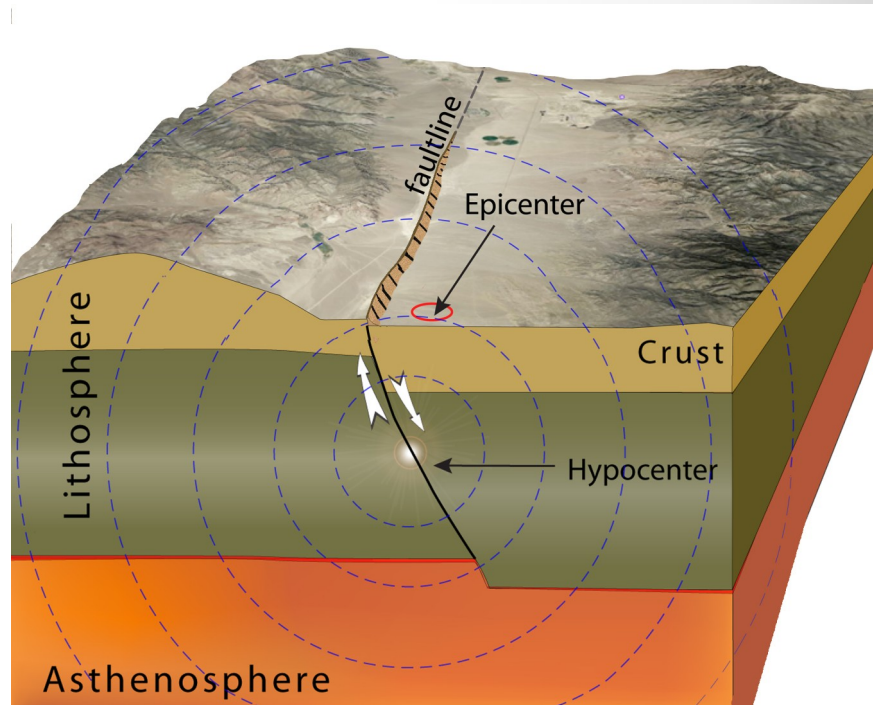
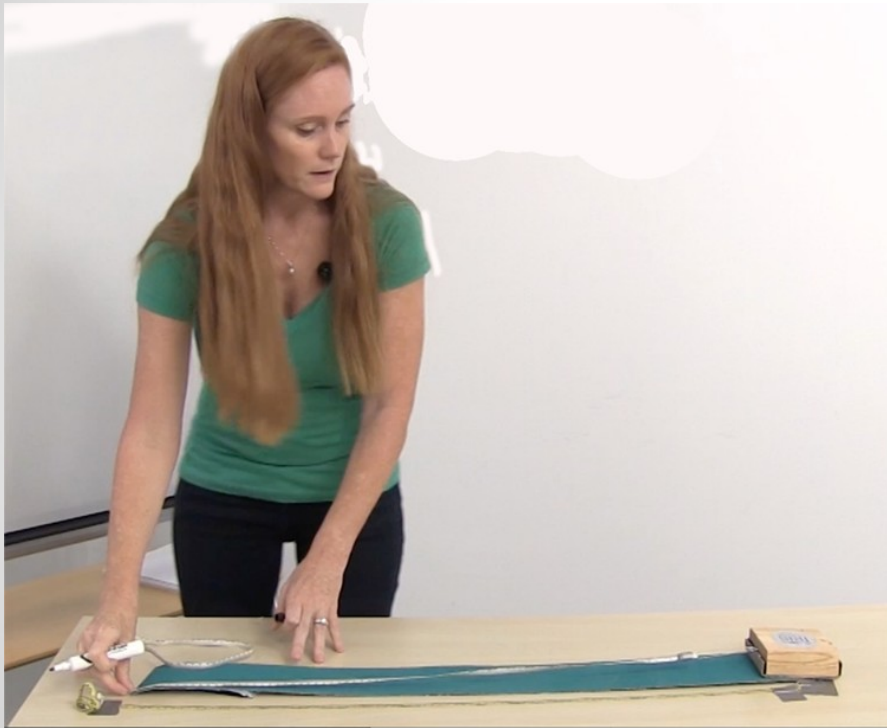
Belt sandpaper



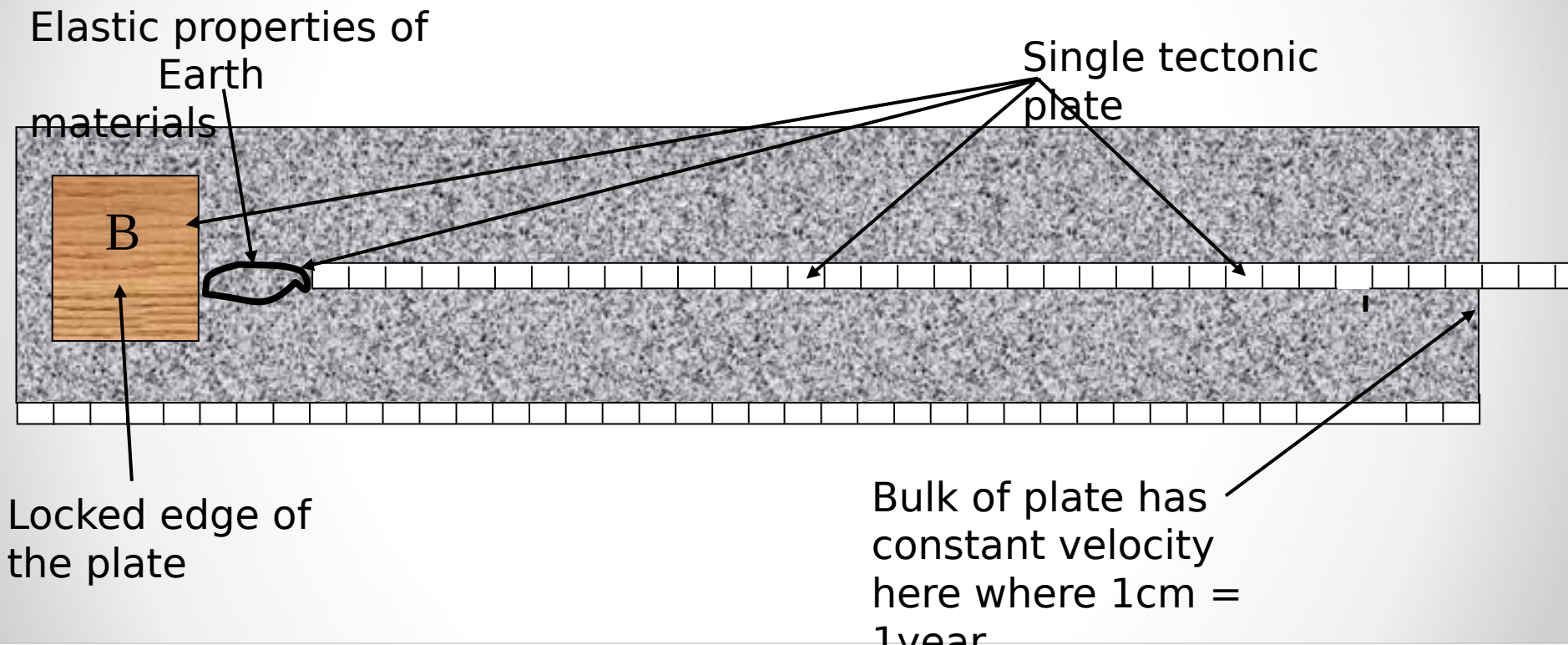
**Model B:** In this model, the the screw eye in the yellow block is the line across which the constant velocity is measured (i.e., centimeters are recorded as they pass through the eye) .

- Pick up materials for the model
- Assemble your model
- Explore the behavior of the model
- Answer questions #2 through #7 on your student worksheet





## Earthquake Machine Properties



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- Complete questions #8 and #9 on your worksheet

How could you modify the model so that it no longer stored energy?

Based on this (and assuming superhuman powers, perhaps) what would you change about Earth to prevent all future earthquakes?

Energy in the model comes from you.

*Where might this same energy come from  
in the Earth system?*

Think—Pair—Share