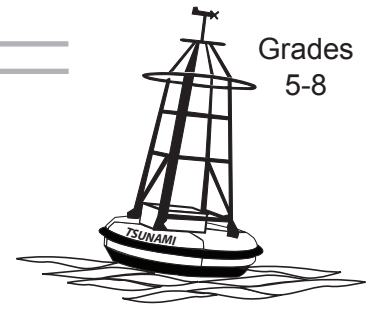


# Subduction Zone Tsunamis

## Visual Aid

Grades  
5-8

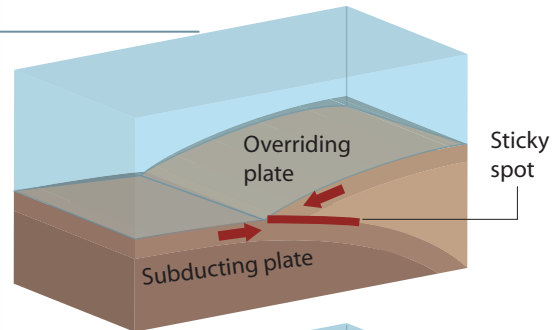


### How earthquakes start tsunamis

#### 1 Sticky plates

The Earth's outer shell is made up of many shifting pieces, called tectonic plates.

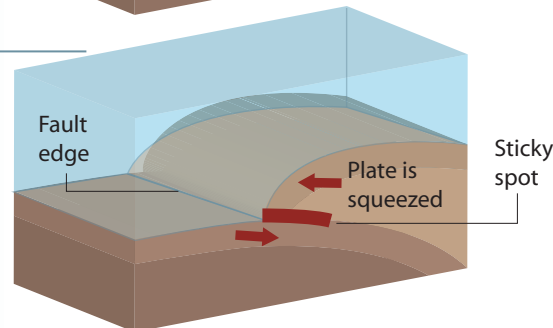
Sometimes, as one tectonic plate pushes or "subducts" under another, there may be an area where they stick together



#### 2 The big squeeze

Because it is stuck to the subducting plate, the overriding plate is squeezed.

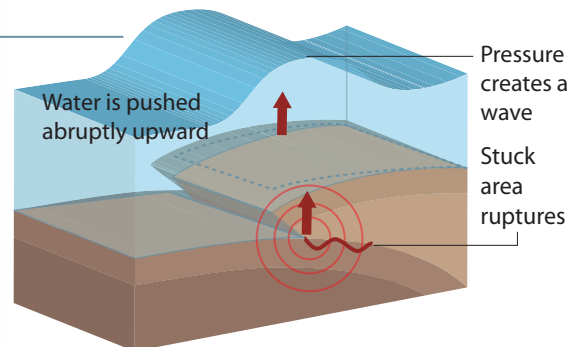
Stress builds along the fault over decades or centuries.



#### 3 Sudden rupture

An earthquake occurs when the leading edge of the plate ruptures, releasing pressure as it springs upward.

The sea floor and water above it are pushed abruptly up, starting a tsunami.



#### 4 Spreading waves

More waves are generated by the initial movement. They spread out in all directions, racing across the ocean.

As they approach shore, the shallow bottom makes them compress and grow in height, creating a destructive tsunami effect.

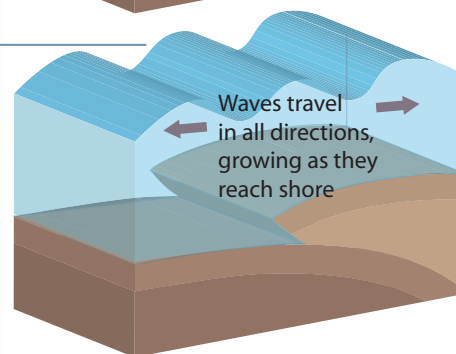


image courtesy Oceans-Institute