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Geology

* The larger the fault, the larger the earthquake
* Extrapolation
  + Take known information and data and stretch it out into unknown territory
* The closer you are to the fault, the more the ground shakes
* Intensity
  + The severity of the ground motion
  + Measured by the amount of damage
    - Not repeatable
    - qualitative
* Magnitude
  + The amount of shaking
  + Richter Scale
    - Quantitative
* Convention
  + People agree on how to do something
* **Two main ideas of seismology** 
  + **The closer you are the harder the ground shakes**
  + **There are lots of small earthquakes, and few big earthquakes**
    - **Richter and Gutenberg helped with this**
* EQ Magnitudes
  + The size of earthquakes are very different from each other
  + Richter Scale
    - Measured exponentially
      * 10^3 is 100 times bigger than 10^2
    - Helps measure all earthquakes small and big
  + 100 Wells NV magnitude 6 to be the same as a 8 magnitude in china
* Moment Magnitude Scale
  + Model, not a convention like the Richter scale
    - Fault length
    - fault width
    - fault displacement
    - rock strength or energy needed to break the rock
* Recurrence Interval
  + Three Methods
    - Direct
      * Direct data that has been recorded
    - Paleoseismology
      * Get datable sediment from ancient erosion that happened from ancient earthquakes
    - Richter Gutenberg Method