

5<sup>th</sup> Grade GATE (Gifted And Talented Education) Class Visit  
Earthquakes and Tsunamis in Sumatra  
Hamilton Elementary School  
May 15, 2009  
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A short summary of my outreach visit.

Visit of one hour at the Hamilton School to meet 10 5th grade kids from the GATE (Gifted and Talented Education) Club.

- I started by introducing myself (french post-doc), why I am here, what made me study earthquakes and tsunami, and how I got to my current position (curriculum from kindergarten to PhD)
- To initiate the scientific conversation I asked the kids what :
  - they think an earthquake is,
  - how we can measure it
- To illustrate there answers and to be more precise, I showed a few slides about plate tectonics, images of faults, GPS, satellites, seismometers
- To give a practical illustration of how earthquakes work and why they are difficult to predict I showed them the "earthquake machine". I asked the kids to describe the machine, help me to use it. I told them that each click of the crank represent about 5 years, so we can compare the different times and distances of each earthquake (irregular meaning difficult to predict). I explained that we study this type of simple model to try to understand how earthquake work.
- I ask them what are the different types of motion on a fault using two painted wood blocks, and explained that a trust fault under the water usually generates a tsunami,
- I have one sketchy animation of a tsunami, and one real simulation (my scientific work) I made of the Sumatra tsunami of 2004. I will have real pictures of a real tsunami, and pictures of me measuring it on the field.