St. Juliana Falconieri, 6th graders
May 7, 2013
36 students + 6 chaperones
10AM - noon
Teacher Heather Kiefer; Parent coordinator Hash Hanz
Renata Cummins, Marion Thomas

Renata, "Continental Drift - putting Pangaea back together"

What I did:
First I showed a movie that explains how fossils form, and explained that fossils are only found in sedimentary rocks. I showed two types of rocks, a sandstone with wave ripples and a pahoehoe lava, and the students figured out which one was a sedimentary rock. Then I asked for their ideas about what we can use fossils for. To practice using fossils to date rocks, I passed out boxes of fossils from the Caltech fossil collection, and the students identified the fossils. Some students finished early, so I said they could look at the rocks I had in the front of the room. After everyone finished, I passed out sheets of paper with fossils on them, representing rocks, and the students tried to put the 'rocks' in order from oldest to youngest, based on the age ranges of the fossils. Next the students used fossil evidence to fit together paper cutouts of the continents into Pangaea. When everyone finished the puzzle, I showed movies of the continent motions over the last 250 Ma, India smashing into Asia, and future motion on the San Andreas Fault. Last, I explained Darwin's dilemma over the sudden appearance of fossils in the Cambrian, and how it was solved by finding microfossils in the Precambrian.

What worked well:
I was glad I talked about how fossils form and what type of rocks have fossils, because these students had not learned the three types of rocks. I brought a big crystal of halite for the students to look at, and they really liked guessing what it is. They also liked the mystery fossil (aspidella - Ediacaran biota). They were really excited to volunteer to hold the papers and put them in order from oldest to youngest. They also liked the movie of India smashing into Asia.

Advice for next time:
Having rocks at the front of the room to entertain the students who finished early was a good idea. Next time I would add some more self-explanatory rocks (like easily-identifiable fossils, and some crystals) so that I could keep answering questions for the students who took longer to finish the activity. The students said they had already done a Pangaea puzzle before, so I skipped over identifying the continents, but that was a mistake, because some students were unclear which continent was which. Finally, next time I would fix the text in my "Homersapien" cartoon of evolution to be correct species names (the students didn't understand it was a joke).