Day 3: STORYLINE

#	Activity	Pathway	
1	Boss Model (from day 1)	Engage students with the BOSS model. (Why do buildings respond differently?)When buildings are built, planners need to think about the resonance and how to mitigate the effects of an earthquake. Lead students to: Why do earthquakes happen?	How we know Earth's structure: (Engage students with a real-world problem and then build background knowledge with Earth's structure and materials.)
2	What's Inside the Earth (from day 1) *(note: use poster and they can use phones)*	For background – earth's layers, tectonic plates, seismic waves	
3	Marble tongs (from day 2)	Rocks are elastic	Model Deformation and Stress (modelling elastic deformation and stored energy)
4	Earthquake machine (from day 1)	PE-KE, stress forces, static/sliding forces	
5	Foam fault demo (from day 1)	Creates different fault types	Visualize Fault behavior (fault motion and friction)
6	Asperities (from day 1)	Frictional forces overcome by pressure (increased pe) at different areas of fault	
7	Kinesthetic Model of Vectors with Velocity Viewer (from day 2)	Plate movement	Step into Real data (Connecting plate movement using GPS data)
8	Big & Mini Squeeze (from day 2)	Deformation happens close to source	Apply it to tectonic systems – (where deformation is concentrated)
9	IEB (from day 2)	Where is all of this deformation happening – earthquakes and volcanoes near boundaries	Explore datasets and patterns (Earthquake and volcano patterns)
10	Measuring a changing Volcano (from day 2)	Volcanic earthquakes –	Measure volcano deformation over time — knowing patterns can help mitigate hazard effects (earthquake swarms w high deformation = impending eruption)
11	EQLocate (from day 1)	Finding earthquake source	Locating earthquakes like a scientist using real data

Students engage in modeling, measuring and analyzing evidence.