Challenge Project
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Abstract:

Understanding plate tectonics can prove to be very difficult for many students who are only using static diagrams. Adding motion to plate tectonic models can help students understand the true workings of plate boundaries. Using the Interactive Physics program my classes were able to create a number of different plate tectonic boundary models. All of the classes had just concluded instruction about plate boundaries and plate tectonics. They also were given a brief introduction to the Interactive Physics program. They had approximately fifty minutes to explore the program and create any type of plate boundary of their choosing. The students were excited to be using the software and enjoyed constructing the models. As the students finished the models they completed a short worksheet with questions about the models they constructed. The models the students were functional and inquisitive. The students also gained knew knowledge about plate tectonics, by viewing the models they created with the program.

Justification of Software:

Interactive Physics works well for this type of exercise because it does not require a large amount of instruction for the students to be able to use. I t also works well for creating these types of plate boundaries. The students can also demonstrate how friction will affect plate boundaries. The Interactive Physics allowed the students to change the parameters around an object like density and mass very easily. Students were able to make connections between the models they created and real life plate boundaries.

Log:

This project took place during one lab period, which is roughly fifty minutes. During the first forty minutes the students reviewed the plate boundaries and the plate tectonics unit of the earth science curriculum. During this time the students also were given a short tutorial on the Interactive Physics program. The second fifty minutes the students were allowed to work independently in the computer lab constructing their individual plate boundary model.