

Step 1

Snack Tectonics

Set up:

Frosting
Asthenosphere

Spread frosting into
about a 4 in. square
that is ~0.5 cm. thick

Wax paper
(To contain mess!)

Fruit roll up pieces=
Oceanic crust plates



Graham crackers=
plates of continental crust



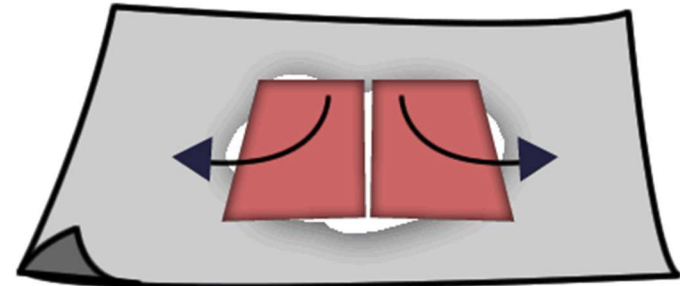
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Step 2

Snack Tectonics 2

Divergent plate boundary

1. Place the two plates of oceanic crust (fruit roll up pieces) side by side lightly on the frosting asthenosphere.
2. Press down slowly on the oceanic plates (because they are dense and will sink a bit into the asthenosphere) as you slowly push them apart about half a cm.



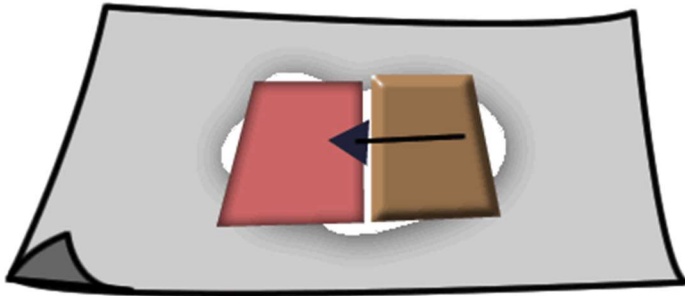
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Step 3

Snack Tectonics 3

Continental-oceanic collision

1. Remove one of the fruit roll ups from the frosting.
2. Place one graham cracker lightly onto the frosting asthenosphere next to the remaining fruit roll up. Continental crust is less dense than oceanic crust. It floats high on the asthenosphere so don't push it down.
3. Gently push the continent (graham cracker) towards the ocean plate (fruit roll up) until the two overlap and the graham cracker is on top. The oceanic plate has been subducted!



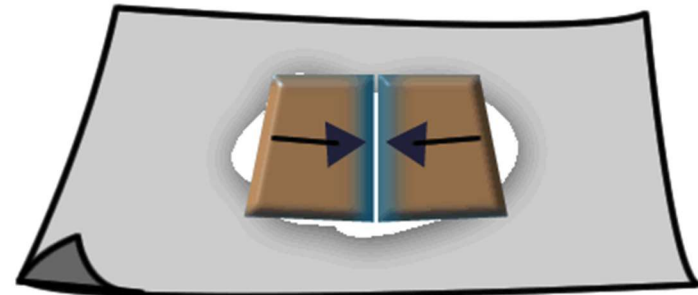
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Step 4

Snack Tectonics 4

Continent-continent collision

1. Remove both the cracker and fruit roll up from the frosting asthenosphere.
2. Place one edge of both crackers into the glass of water for just a few seconds.
3. Place the crackers onto the frosting with wet edges next to each other.
4. Slowly push the graham crackers towards each other.



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Step 5

Snack Tectonics 5

Transform plate boundaries

1. Pick the two crackers up off the frosting and turn them around so that two dry edges are next to each other.
 2. Push one cracker past the other to simulate a transform plate boundary like the San Andreas fault!
- Final step: Eat all remaining model materials (except, of course, wax paper and plastic utensils!)

