Rock Cycle Modelling with Chocolate

Instructions:

1. Carefully shave a piece of each type of chocolate onto a tinfoil square using the butter knife. Take care to use the knife safely to avoid hurting yourself or someone else.
2. After making a small pile of shavings of each type of chocolate, fold the tinfoil into a packet. Take turns in your pair to hit the packet with your fist. This action represents compaction and cementation of sediment.
3. Open the packet and record what you see on the worksheet. This represents sedimentary rock.
4. Refold the packet and take turns holding the packet in your hands and pressing firmly for 20-30 seconds. This represents sedimentary rock being heated and put under pressure by the earth.
5. Reopen the packet and record what you see on the worksheet. This represents metamorphic rock.
6. Refold the packet again. Carefully place the packet into a beaker of hot water and start the stopwatch. This represents rocks underground being melted into molten rock (magma).
7. After one minute, remove the packet from the hot water using tongs. Wrap the packet in a tea towel or paper towels and take turns applying pressure on the warm packet. Allow the packet to cool. This represents magma cooling.
8. Reopen the packet and record what you see on the worksheet. This represents igneous rock.

Extension:

Once you have recorded what you saw at each stage in the process, you can crumble up your igneous rock and start the rock cycle again.

You will need:

- butter knife
- white, milk and dark chocolate
- 10cm x 10cm square of tinfoil
- stopwatch
- access to hot water (kettle)
- beaker
- tongs
- tea towel or paper towels