

SEDIMENTARY CRACKLES

SAFETY: Always ask for assistance from an adult when working with sharp tools or instruments.

Geology is a lot easier to digest when chocolate is involved.

YOU WILL NEED

- one cup of icing sugar
- one cup of coconut
- four cups of Rice Bubbles
- 250 g of copha
- three heaped tbsps of cocoa
- stove
- patty pans
- sauce pan
- wooden spoon
- mixing bowl
- sifter

WHAT TO DO

1. Sift together the icing sugar and cocoa and then add the coconut.
2. Melt copha in a saucepan and when just melted add the dry ingredients and mix together.
3. Spoon into patty pans and refrigerate.



WHAT'S HAPPENING

You have just made a model of sandstone, which is a sedimentary rock.

Sandstone forms in places where there was once a large amount of sand such as a river, lake, sea or desert. Little by little the layers of sand build on top of each other. This puts pressure on the lower layers. The weight of all of the layers pushes down on the lower layers. The rock is stuck together with the minerals that fall between the grains of sand. The most common materials that stick the grains of sand together are silica and calcium carbonate. This takes millions of years to happen. During that time, the ocean, lake, or other body of water dries up. This makes the sedimentary layer that used to be under water, become a surface layer.

In your model of sedimentary rock the Rice Bubbles are the grains of sand, the chocolate mixture is the minerals that stick the grains of sand together and the coconut is the little bits and pieces of animal and plant matter that can get caught in the sedimentary rock.

Sandstone and other sedimentary rock forms in layers over tens of millions of years. In the picture to the right, you can notice distinct layers as the rock changes over time, with the oldest rock at the bottom and the newest at the top. There are many causes for these changes over the years including volcanic eruption, shifting of the earth's tectonic plates or environmental changes meaning a different substrate is deposited into the area (i.e. desert sand instead of river silt).



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