

Massive Rocks

Chapter 6

Metamorphic rocks are divided into two major groups. The first group of metamorphic rocks all form layers. Rocks that are made from clay, silt, or flat platy minerals create foliated rocks. Slate, schist and gneiss are examples of foliated rocks. Slates break in thin layers where mica grains are recrystallizing.

How massive metamorphic rocks break apart

Metamorphic rocks that do not break in layers and instead break unevenly are massive rocks. Massive rocks do not break in planes like foliated rocks, instead they break across the rock grains. The broken surface of massive rocks is rough and uneven instead of smooth like the surface of slate.



Quartzite



Marble

Five massive metamorphic rocks

- ◆ **Quartzite** is metamorphosed sandstone. The quartz mineral grains in sandstone are usually rounded due to abrasion. They are also very hard, number seven on Mohs hardness scale. When quartzite is broken it does not break in flat planes but across the mineral grains. The rocks break into sharp angular fragments.
- ◆ **Pink marble** forms when limestone is metamorphosed. It typically has a sugary texture and breaks unevenly across the mineral grains. No two marbles are alike because the veins in marble are from impurities.
- ◆ **Dolomitic marble** forms when dolomite limestone is metamorphosed. It typically has a sugary texture and breaks unevenly across the mineral grains.

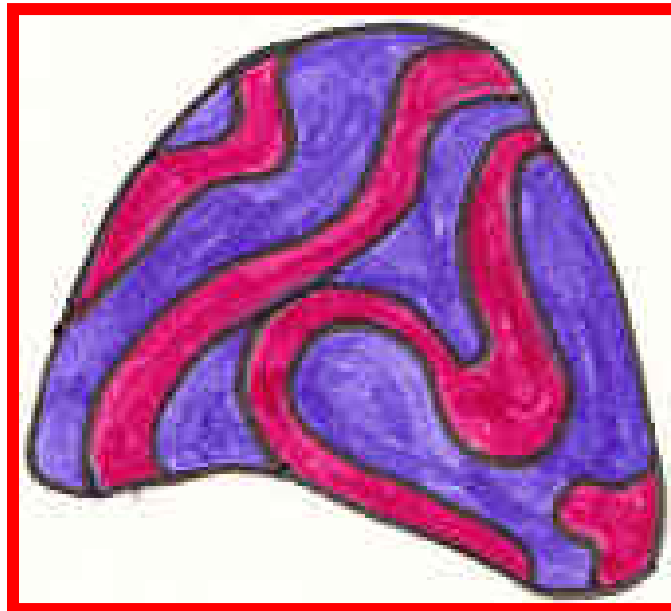
Paperweight Rocks

Activity 6

Introduction

Kneading flour, salt, and water causes the materials to bind together. The pressure you apply to the dough creates a change in texture. The longer you knead the dough the smoother it becomes. When the dough is baked the materials change without melting similar to what happens when rocks recrystallize without melting.

In this activity you will be creating some fun paperweights rocks out of dough.



Dough art paperweight

Materials

- ◆ Measuring Cup
- ◆ 1 cup plain flour
- ◆ 1/2 cup salt
- ◆ 1/2 cup cold water
- ◆ Garlic press (optional)
- ◆ Paints
- ◆ Baking tray

Directions

1. Preheat the oven to 120° C (225° F)
2. Mix the flour and salt in a bowl.

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