

YALS TEEN PROGRAMMING IDEAS

PROGRAM TITLE: Science Madness: Chocolate Rocks!

BRIEF PROGRAM DESCRIPTION: Students will learn about the 3 main types of rocks (Ingenious, Sedimentary, and Metamorphic) on the earth surface and learn how they are created using fun and MESSY science!

MATERIALS NEEDED: .

Several rock cycle graphics (Google has lots of great images!)

Three separate rock types (sedimentary, igneous, and metamorphic; these can be bought through Amazon.com as beginner rock collection sets). Cost: \$19.99

Candy Wafers (milk chocolate for the actual rock, other colors/flavors if you want to spruce it up!) Cost: 2.99/bag

Crushed Oreos & sprinkles (large and small sizes) for sediments Cost: 3.00 (Oreos), .99-1.39 (sprinkles)

Plastic baggies for metamorphic heat and pressure containment (AND handy rock carry out) Label the bags with students names before the rocks happen and be sure to keep extras on hand as the creation of sediments can get a little messy and puncture the bags Cost: .99 for 100

COST: \$40.00 (about \$3.00 per teen)

PROGRAM PROCEDURE:

Questions to Answer:

What's a rock? (have *at least* one example of each kind of rock)

What makes a rock a Rock?

How do we classify them?

What are the three Kinds of Rock? (Ingenious Sedimentary Metamorphic)

How is each one created?

What is the rock cycle? (graphics easily available online)

Chocolate Rocks Experiment

1. Pass out baggies for students to write their names on. Remember the hands off rule until ALL directions are given.
2. Give a small handful of chocolate "rocks" (chocolate wafers) to each teen (9-10 pcs.), place in baggie.
3. Have students choose a few "sediments" (Oreos & sprinkles) for their rock (remember you can always add more later!)
4. Instruct the teens to carefully break their chocolate into small chunks (inside the bag). Explain that their rock is now made up of sediments* flatten with the heel of the hand to create a sedimentary rock. Now comes the fun part!
5. With ALL of the ingredients in your bag instruct teens to remove the air from their baggies and precede to squish, squeeze and smooch the rocks into a rock shape using "high pressure (the squishing) and heat (body heat)" to create a metamorphic rock!

*Be sure to go over the effects of weathering and erosion as it pertains to the rock cycle and sedimentary rock :D.

Helpful Hint:

I tried to start with melted chocolate to create the illusion of lava into igneous rock, however, the chocolate remained hot for a VERY long time and did not harden enough to create the fun, hand shaped metamorphic rocks. I would suggest doing this as an instructor demonstration only using an ice bath to cool the chocolate. Then demonstrate the creation of sediments (breaking the now hard melted chocolate and adding new sediments) and the metamorphic melting and shaping (the squishing and squeezing) to be performed on their own rocks.

OUTSIDE PRESENTER CONTACT INFORMATION:

None

USEFUL PLANNING RESOURCES FOR LIBRARIANS:

Rocks by Sally M . Walker ISBN: 0-8225-5947-1

1000 Facts About the Earth by Moira Butterfield ISBN: 0-590-47445-6

Rocks & Fossils by Margaret Hynes

ISBN: 0-7534-5974-4

Interactives Rock Cycle—<http://www.learner.org/interactives/rockcycle/index.html>

RELATED MATERIALS FOR DISPLAY /RESOURCE LIST FOR TEENS:

Interactives Rock Cycle—<http://www.learner.org/interactives/rockcycle/index.html>

This site actually walks you through, using great animation; the life of a rock. Then at the end allows teens to test themselves on what they learned.

ADDITIONAL COMMENTS:

We ran the program for 60 minutes with 12 teens between the ages of 10 and 17.

CONTACT INFORMATION OF LIBRARIAN SUBMITTING PROGRAM:

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