



March 2009

What's In This Issue?

Activity of the Month

Rock Cycle Fudge

Upcoming Workshops

- Project Learning Tree
- Project WET
- Project WILD
- Kid Friendly Report Design
- Introduction to Internet Resource Materials
- Family Math or Science Night
- Science Take-Home Bags
- Welcome to the Solar System

What's In Stock?

Free classroom materials for your classroom

Things To Know About

Science Festival
Forestry Institute for Teachers
Sun Earth Day
Help name ISS's next module

Spider's Prey

Web Sites of the Month:

- Science Experiments



Come and see our extensive collection of science and technology curriculum that you can download for FREE!

Great Information Jewels You Don't Want To Miss!

Treasures for Teachers TREASURE CHEST NEWSLETTER

Please **RECYCLE** this newsletter by passing it on to a friend.

Activity of the Month - Rock Cycle Fudge



This activity allows children to "participate" in the rock cycle. They begin the cycle with sediments that they weather into little pieces that form **sedimentary rock**. The "rock" changes when pressure and heat are applied and **metamorphic rock** is created! This "rock" is melted into magma and cooled to end the cycle as **igneous rock**.

See the last page of this NEWSLETTER for attached activity.

*Give a man a fish and you
feed him for a day.*

*Teach a man to fish and you
feed him for a lifetime.*



This Chinese proverb is at the heart of our educational philosophy. We are frequently asked if we can come to a school and do science activities with children. The answer is "No", but we are delighted to come to a school and give a workshop or series of in-services that will give the teachers the tools and skills they need to improve the science they provide to their students. If we come to a school and work with the students we provide a single experience. When the teachers attend a workshop and learn ways to improve how they teach science they reach this year's students and the students in future classes as well.

**Join us this Spring and learn to "fish" so you can
change your science teaching for a lifetime!**

The Science & Technology Teacher Resource Center offers **FREE** science workshops and in-services to teachers! Join us for a few hours and add some new ideas to your science repertoire.

Workshops and in-services are offered at our site or

they may be scheduled at a time or place more convenient to you.

Call **619-847-5518** to schedule a time or to sign up for a workshop.

We have received a generous grant that makes these workshops possible!

Environmental Education Workshops

These award winning programs provide more than just an introduction to environmental ed. They are balanced programs that **teach how to think, not what to think.** Each program is aligned to the California State Standards and teaches science concepts and skills in fun, collaborative ways.

Don't miss out on these wonderful FREE workshops!

SIGN UP TODAY! 619-847-5518



What do you do with a Tree Cookie? Discover activities to increase your students' awareness and knowledge of the environment, as well as their place within it.

Attendees will be provided a **FREE 470 page Environmental Education Activity Guide.**

This 6 hour workshop will be held at the Resource Center from 9am-3pm on **March 7, 2009.**

WET stands for Water Education for Teachers.

Join us for an introduction to how water impacts our lives. **Attendees of this 6 hour workshop will be provided with a FREE 500+ page curriculum & activity guide filled with games and activities to use with their classes.**

This workshop will be held at the Resource Center from 9am-3pm on **March 21, 2009.**

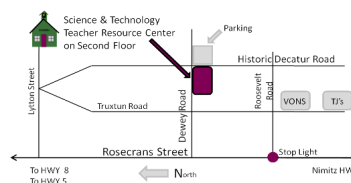


Will be scheduled later in the Spring.



Science & Technology Teacher Resource Center

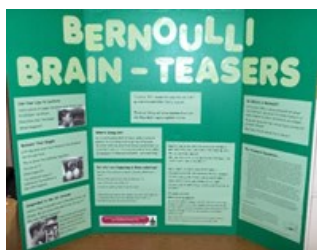
Located at NTC Promenade (former Naval Training Center) in Point Loma, just off Rosecrans Street
2825 Dewey Road # 205 San Diego, California 92106



CALL 619-847-5518 for an appointment to view the Center.

We can be reached at: sfreeburn@sgeei.org

More Workshops!



Family Math or Science Night

Create excitement and get parents involved with your school. Attend this workshop to find out **HOW** to organize this event at your school. We will discuss **WHAT** to include and **WHERE** to get ideas to make the event a success.

This 2 hour workshop will be held at the Resource Center from 5:30-8:30 pm on **March 12, 2009.**



Science Take-Home Bags

What can you do with a convention bag? Attend this workshop and find out!! We will provide the bags and ideas. You will provide some imagination!! This 2 hour workshop will be held at the Resource Center from 5:30-7:30 pm on **March 19, 2009.**

Introduction to Internet Resource Materials & Kid-Friendly Report Design

Will be scheduled later in the Spring.

MESSINGER Welcome to the Solar System

Learn how to incorporate NASA's MESSENGER program materials into your classroom's study of the Solar System during this hands-on, collaborative, interactive presentation. Make a scale model of the Solar System. Make a model showing how craters are made. Try an activity to share with your students that shows how the sun emits UV light and what simple things will protect them from the UV light.

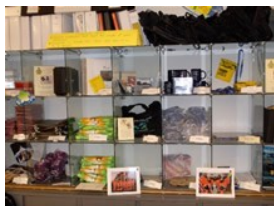
NASA MESSENGER Educator Fellow, Sharon Freeburn, is available to present this

FREE 3 hour workshop to your faculty. Call 619-847-5518 to book an in-service today!

Drop by to discover all of the wonderful FREE treasures available to take back to your classroom!

San Diego Science Festival is HERE!

The Festival runs from February 28 to April 4, offering over 500 FREE events for the public geared toward sparking an interest in Science. The grand finale will be an all-day EXPO in Balboa Park on Saturday, April 4th, 2009 --- over 500 fun, hands-on interactive activities for all ages. There will be stuff for the mildly curious to the science professional. Balboa Park will be transformed into a series of pavilions: YOUR BODY, YOUR ARTS, YOUR SPORTS, YOUR HERROS, YOUR PLANET and YOUR FUTURE. You can learn about fun topics like the science of the magic of Harry Potter, the mathematics of juggling, the physics of skateboarding, the science of chocolate, the physics of golf, trends in Global Warming, renewable energy sources of the future Plus the some of the major museums will be open to the public for free. (This is a completely non-profit, non-commercial initiative.) You can find out all the details at: <http://www.sdsciencefestival.org>



What's In Stock?

We have **tote bags** from conventions that were held in San Diego. Tote bags are a wonderful way to store science units. Drop by and pick some up to help organize your science materials.

Science is FUN

Children's Science Exam Answers

These are real answers given by children.

Q: Name the four seasons.

A: Salt, pepper, mustard and vinegar.

Q: How is dew formed?

A: The sun shines down on the leaves and makes them perspire.

Q: How can you delay milk turning sour?

A: Keep it in the cow.

Q: What is the fibula?

A: A small lie.

*"When you get a result
that you expect,
you have another result,
but when you get a result
that you don't expect,
you have a discovery."*

~Frank Westheimer (1912-2007)
Professor of Chemistry at Harvard

Things To Know About!

Science programs you don't want to miss.

Forestry Institute for Teachers

"Come learn about California's Forests. As a teacher you can use the forest as the basis for integrated education in many subject areas, including environmental science, physical science, social science, math, biology, forestry, and history FIT provides K-12 educators with an increased understanding and appreciation of California's forest ecosystems and the complex issues involved in managing the natural resources found in public and private forests. You will receive an introduction to forest science concepts through presentations by practicing natural resource professionals. You will also learn about environmental education concepts and curriculum materials through information and experiences presented by natural resource and educational specialists."

For more information about this program go to: www.forestryinstitute.org/

2009 Sun Earth Day: Our Sun, Yours to Discover (March 20)

NASA's Sun Earth Day Team is working to create yet another special event for "Sun Earth Day, Our Sun, Yours to Discover." Sun-Earth Day is officially March 20, but plans are for a series of events leading up to that date and resources that can be used year-round. Stay tuned to <http://sunearthday.nasa.gov> for the latest information on these and other upcoming events and resources for formal and informal science education.

NASA is asking the public to **help name the International Space Station's next module** - a control tower for robotics in space and the world's ultimate observation deck. Individuals can vote for the module's name online, choosing one of four NASA suggestions -- Earthrise, Legacy, Serenity or Venture -- or writing in a name. Submissions will be accepted Feb. 19 through March 20. The name should reflect the spirit of exploration and cooperation embodied by the space station and follow in the tradition set by Node 1, named "Unity," and Node 2, named "Harmony." For more information, to submit a name and to view pictures of the node and cupola, visit: www.nasa.gov/namenode3



Spider's Prey

Web Sites of the Month—Science Experiments

www.stevespanglerscience.com/experiments/

"How do you know which science projects are best. How do you tell the difference between a clever science activity and a real science project? Steve Spangler and teachers from the Hands-on Science Institute share some simple ways you can turn an ordinary science activity into a science project filled with wonder, discovery and exploration."

Click on the "Customer BUZZ—Science Fair Success" link to watch a video clip of Steve talking about Science projects. Then click on the categories : Scientific Method and Teacher Tips. Don't forget to check out the library of science experiments!



Rock Cycle Fudge

This activity allows children to "participate" in the rock cycle. They begin the cycle with sediments that they weather into little pieces that form sedimentary rock. The "rock" changes when pressure and heat are applied and metamorphic rock is created! This "rock" is melted into magma and cooled to end the cycle as igneous rock.

Assemble the following materials:

Large, microwavable bowl
Measuring cups
Measuring spoons
Microwave oven
Wax paper
Wooden spoon

And the following "sediments":

1/3 cup silt - evaporated milk
1 cup quartz crystals - sugar
1 tablespoon organic sediment - margarine
1 cup limestone pieces - mini marshmallows
1/2 cup sandstone pieces - nuts
1 cup basalt pieces - semi sweet chocolate chips
1 teaspoon crude oil - vanilla extract

Assign students the following roles:

Crust - The outer layer of the earth. The crust is broken into plates.
Heat - Teamed with pressure it changes sedimentary and igneous rocks into metamorphic rock.
Ocean - The site of the layering of sediments.
Plate tectonics - The movement of the crust's plates.
Pressure - Teamed with heat it changes sedimentary and igneous rocks into metamorphic rock.
Time - Is needed for geological processes.
Uplift - The forces from within the earth that push rock up to form mountains.
Weathering - The breaking down of rocks into smaller sizes - Usually a function of wind and water.

Have children follow these directions:

1. Wash hands.
2. **Ocean**, **uplift**, and **time** will measure and add the following sediments to the bowl one layer at a time: Organic sediments, quartz crystals, and silt. The sediments are laid down on the ocean floor to form sedimentary rock.
3. **Weathering** will break the sandstone pieces into smaller pieces just like weathering does to real rocks.
4. **Plate tectonics** and **crust** will mix the sediments in the bowl with the spoon. When the crust's plates are a part of convergence, pieces of the plates get mixed up.
5. **Heat** will place the bowl in the microwave for 45 seconds, and then **pressure** will stir it. Repeat twice. (microwave ovens vary in strength so times may need adjusting) When heat and pressure are added metamorphic rock is formed.
6. **Heat**, **weathering**, **ocean**, and **pressure** will measure and add the basalt, sandstone, limestone, and crude oil into the bowl.
7. **Time** and **crust** stir the sediments as they undergo metamorphosis. The limestone and basalt will melt back into magma to form igneous rock.
8. **Plate tectonics** will hold the bowl as **uplift** scrapes the magma onto the earth's surface (wax paper) with a spoon.
9. **Crust** will add another sheet of earth's surface over the cooling igneous rock and place it in the cooling area.
10. **Ocean** and **crust** supervise the cleanup of the area.

After the rock fudge has cooled. and while they are sampling the fudge, discuss how the making of the fudge modeled the rock cycle - enjoy!



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