



October 2009

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.

### What's In This Issue?

#### Activity of the Month

### Impact Craters

#### Upcoming Workshops

- The "E" in STEM Education
- Introduction to Internet Resource Materials
- Family Math or Science Night
- Science Take-Home Bags
- Kid-Friendly Report Design & Science Journals
- Project Learning Tree
- Project WET
- Project WILD

#### What's In Stock?

Free classroom materials for your classroom.

#### Things To Know About

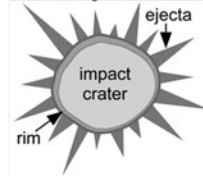
- The Moon: A Resource Guide

#### Spider's Prey

#### Web Sites of the Month:

- Clouds

### Activity of the Month—Impact Craters



There are a lot of pieces of rock floating around in space — do they ever hit anything?

See the last page of this NEWSLETTER for attached activity.

## We Moved!!



We are now co-located with the  
Eco Center at  
4001 El Cajon Blvd, San Diego.

The new location is  
easy to find!

We are right off  
Interstate 15 at  
El Cajon Blvd.

Call 619-847-5518



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



We provide FREE, Interactive,  
Hands-On, Collaborative  
Science Workshops!

We are HAPPY to come to your location to provide your faculty with any of our in-services.

The Science & Technology Teacher Resource Center offers FREE science workshops to teachers! Join us for a few hours and add some new ideas to your science toolbox. All workshops are offered at The Science & Technology Teacher Resource Center in Point Loma or they may be scheduled at a time or place more convenient to you.

Call 619-847-5518

## Do you teach the "E" in STEM Education?



Discover how to teach higher order thinking skills in an exciting, meaningful way by incorporating Engineering into your curriculum. Learn how easy it is to create design challenges that engage your students and require only simple materials. This **3 hour** workshop is available at the Resource Center from 5:30-8:30 pm on **October 29, 2009**.



Introduction to Internet Resource Materials

The internet is loaded with FREE supplementary science materials. Find out where they are located and how they will help you meet the California Science Standards in this hands-on workshop.

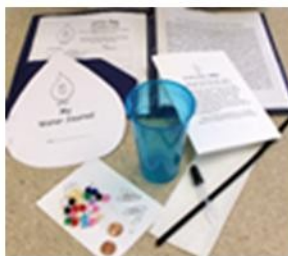
This **3 hour** workshop will be held at the Resource Center from 5:30-8:30 pm on **November 5, 2009**.



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 5:30-7:30 pm on **October 8, 2009**.



Science Take-Home Bags

How can a convention bag help you teach science?

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 **October 19, 2009**



Kid-Friendly Report Design & Science Journals

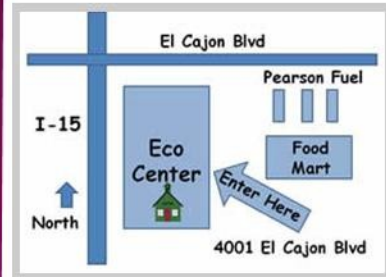
Looking for a more interesting way for your students to present science reports? Have you been wondering how to implement science journals into your curriculum? This workshop will introduce you to a fun, kid-friendly report design.

This **3 hour** workshop can be scheduled for your location.

## Science & Technology Teacher Resource Center



Co-located with the Eco Center at 4001 El Cajon Blvd, San Diego



CALL 619-847-5518

for an appointment to view the Center.

We can be reached at: [sfreeburn@sgeei.org](mailto:sfreeburn@sgeei.org)

Questions, comments, or to add or remove yourself from the mailing list email us at [sfreeburn@sgeei.org](mailto:sfreeburn@sgeei.org) or call **619-847-5518**



## What's In Stock?

Discover all of the wonderful FREE treasures available to take back to your classroom!

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.

## Things To Know About!

### Science programs you don't want to miss.

*Astronomical Society of the Pacific* presents:

#### The Moon: A Resource Guide

This guide -- for educators, amateur astronomers, and everyone who would like to know more about the Earth's only natural satellite -- covers our scientific understanding of the Moon as a world, the appearance of the Moon in our skies, and tips for observing the Moon through binoculars or small telescopes. We also cover the Moon in popular culture and historical events, but only briefly. The listings are by no means complete, but suggest some of the more useful resources that may be useful for beginners. Download your copy at

<http://www.astrosociety.org/education/family/resources/moonguide.html> :



*'Twenty years from now you will be more disappointed by the thing that you didn't do than by the ones you did. So throw off the bowlines. Sail away from the safe harbour. Catch the trade winds in your sails.*

*Explore... Dream... Discover... '*

*- Mark Twain*

What game do aliens play to while away the hours in deep space?  
Moonopoly!

Why do aliens never starve in space?  
Because they always know where to find a Mars, a Galaxy and a Milky Way!

What is the quickest way to get an alien baby to sleep?  
Rocket!



## Spider's Prey

### Web Sites of the Month — CLOUDS

<http://asd-www.larc.nasa.gov/SCOOOL/tutorial/clouds/cloudtypes.swf>

NASA has created this on line tutorial with instructions on how to identify various cloud formations.

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 Science Standards and teaches science concepts and skills in fun, collaborative ways. **Attendees to each workshop will be provided a FREE 450+ page Environmental Education Guide of games & activities to enhance your teaching of water, wildlife, or the environment.**

## Environmental Education Workshops



### 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. Project Learning Tree is as **6 hour** workshop that will be held at the Resource Center from 9am—3pm on **October 3, 2009**



### WET stands for Water Education for Teachers.

Join us for an introduction to how water impacts our lives. Learn how to teach water related concepts through hands on games and activities. This **6 hour** Project WET workshop will be held at the Resource Center from 9am—3pm on **October 17, 2009.**



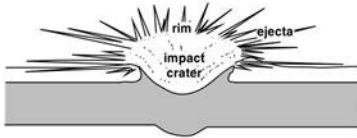
### How much wildlife is in your school yard?

This **6 hour** Project WILD Workshop provides you with games and activities to use with your students that introduce them to how animal life fits into the environment. This workshop will be held at the Resource Center from 9am—3pm on **November 14, 2009.**

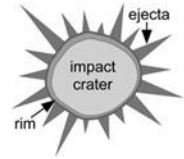
Call **619-847-5518** to schedule a time or to sign up for a **FREE** workshop.

## There are a lot of pieces of rock floating around in space — do they ever hit anything?

Impact craters are formed when pieces of asteroids or comets strike the surface of a planetary body. Craters are found on all the terrestrial planets, on the Earth's Moon, and on most satellites of planets.



What you do in this activity is different than real cratering events in some ways. When a crater is formed on a planetary surface, the energy of the impactor can break apart—even vaporize—the impactor.



### Materials

- Newspaper
- Pie pan for each group
- Flour
- Cocoa
- Fork
- Meter sticks
- TIDE detergent
- Marbles of various sizes
- Black light

### Directions

1. Cover your area of the floor with newspaper.
2. Fill a pie pan with a thick layer of flour. Smooth out the flour so that it is as flat as possible.
3. Cover the top of the flour with a light dusting of detergent then an additional layer of cocoa. Use a fork to smooth the surface.
4. Place the pie pan on the floor or on the ground.
5. Measure 30 cm above the pan.
6. Drop one of your impactors into the pan from the 30 cm height.
7. Remove the impactor, and repeat step 6 with a different size impactor, creating a second impact site in the pan so that it is not too close to the first impact.
8. Remove the impactor, and draw a picture. Measure the size of your impact craters and record their diameters.
9. Smooth the flour, sift on new layers of detergent and cocoa, and repeat steps 6-7 for impacts from heights of 20 cm and 10 cm.
10. Shine the black light on the surface and observe.

### Questions about the experiment

1. How did the appearance of the surface of the flour change after it had been hit by the impactor?
2. What does the cocoa reveal about how impacts change the surface?
3. How does the size of the impactor affect the crater?
4. How does the height from which the impactor is released affect the crater?

This activity is from: Voyage: A Journey Through Our Solar System Grades 5-8, Lesson 10: Impact Craters: A Look at the Past



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