



April 2009

### What's In This Issue?

Activity of the Month  
**3-D Structures**

#### Upcoming Workshops

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

#### What's In Stock?

Free classroom materials for your classroom—New goodies from Sea World have arrived!

#### Things To Know About

- Meteorology: An Educator's Resource for Inquiry-Based Learning
- Ceres and Pluto: Dwarf Planets as a New Way of Thinking about an Old Solar System Teacher Guide

#### Spider's Prey

Web Sites of the Month:

- FREE WEB TOOLS



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

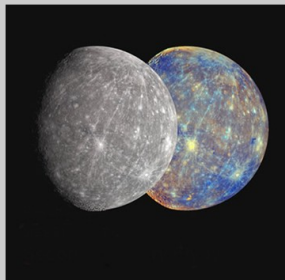


#### 3-D Structures

Shapes are all around us.  
Is one shape better for building than another?  
Have your students explore some practical geometry questions using gumdrops and toothpicks.

See the last page of this NEWSLETTER for attached activity.

### Big things are happening in Space Are you including them in your teaching??

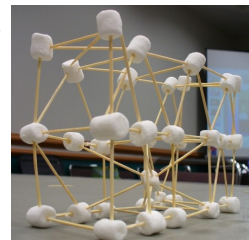


MESSENGER spacecraft will flyby Mercury on September 29, 2009. Join this exciting workshop to find ways to create this historical event into **A FIELD TRIP INTO SPACE for your classroom**. Learn how to incorporate NASA's MESSENGER program materials into your classroom's study of the Solar System during this hands-on, collaborative, interactive presentation. Learn the latest information about the flyby. 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. This **3 hour** workshop will be presented by NASA MESSENGER Educator Fellow, Sharon Freeburn, at the Resource Center from 5:30-8:30 pm on **June 15, 2009**.

### 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 **May 11, 2009**.



### Fundamentals of Inquiry is coming this Summer!

From the *Exploritorium* this **20 hour** hands-on workshop will examine different ways of teaching science by exploring the elements of inquiry.

Call **619-847-5518** to inquire about the above workshops.

## Things To Know About!

Science programs you don't want to miss.

### Meteorology: An Educator's Resource for Inquiry-Based Learning -Grades 5-9

Supplement your existing curricula with this guide. Many of the activities build upon each other, enhancing the understanding of meteorology by beginning with basic and essential parameters of weather and then moving through mind-engaging interactions with complex meteorological systems. Students will build and use weather instruments; then they will build a weather station. Students will collect weather information and combine it with existing information about cloud systems. They can then apply their knowledge to predict weather systems.

[http://www.nasa.gov/audience/foreducators/topnav/materials/listbytype/Meteorology\\_Guide.html](http://www.nasa.gov/audience/foreducators/topnav/materials/listbytype/Meteorology_Guide.html)

### Ceres and Pluto: Dwarf Planets as a New Way of Thinking about an Old Solar System Teacher Guide -- Grades 5-8

In 2006, the International Astronomical Union defined the terms "planet" and "dwarf planet." The IAU's decision created an opportunity for students to understand the solar system better by considering the definitions of planet, dwarf planet and asteroid. New discoveries in the solar system require a change in the language used to discuss it. This activity uses direct vocabulary instruction to help students learn these new definitions

[http://www.nasa.gov/audience/foreducators/topnav/materials/listbytype/Ceres\\_and\\_Pluto\\_Dwarf\\_Planets.html](http://www.nasa.gov/audience/foreducators/topnav/materials/listbytype/Ceres_and_Pluto_Dwarf_Planets.html)



## Spider's Prey

Web Sites of the Month

### 100 AWESOME, FREE WEB TOOLS FOR ELEMENTARY TEACHERS

<http://www.smartteaching.org/blog/2008/08/100-awesome-free-web-tools-for-elementary-teachers/>

Here is a listing of some of the best sites for elementary teachers and students online, plus a few tools to help you keep everything together.

*"The key to teaching science is establishing a set of procedures and steps for the students to follow for each activity.*

*The student's success is based on how well he or she followed the steps and produced the desired outcome.*

*—WRONG"*

*~ Steve Spangler*

## Science Fun

Doctor, doctor I haven't slept for days! - Why not? - Because I sleep at night!

The teacher is droning away in the classroom when he notices a student sleeping way up in the back row. The teacher shouts to the sleeping student's neighbor, "Hey wake that student up!" The neighbor yells back, "You put him to sleep, you wake him up!"

## 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](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?

**Sea World** has delivered some wonderful **posters and books!** Hurry to pick some up while they remain on our shelves!  
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.

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

## Are you keeping sharp in your science teaching?

MARK your calendar then JOIN us for  
WORKSHOPS to improve your SCIENCE TEACHING!  
Come today, use it tomorrow!

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 repertoire. 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 to schedule a time or  
to sign up for a workshop.



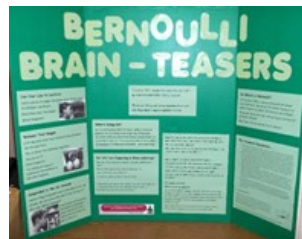
### Introduction to Internet Resource Materials

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 5-8 pm on April 20, 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 May 28, 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 April 30, 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 will be held at the Resource Center from 5:30-8:30 pm on June 25, 2009.

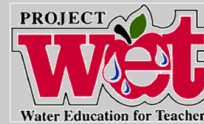
## Environmental Education Workshops

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 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.



### 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 a 6 hour workshop that will be held at the Resource Center from 9am-3pm on June 13, 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 April 18, 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 May 16, 2009.

# 3-D Structures

Shapes are all around us.

**Is one shape better for building than another?**

1. Today's building materials are toothpicks and gumdrops.  
Working with your partner how many different geometric shapes can you construct using these materials?

2. What kinds of shapes can't be made with these materials?  
Record your shapes in your journal.



3. Did you construct a cube? If not make one now.  
How stable is the cube? Can you think of a way to test its durability?

4. Did you make a prism? If not make one now.  
How stable is the prism? How can you test its stability?



5. Did you make a pyramid? If not make one now.  
How stable is the pyramid? Can you think of a way to test it?

6. Did you make a tetrahedron - a pyramid with a triangle base?  
If not make one now. How stable is it? Can you test its stability?

7. Did you make an octahedron - 2 pyramids stick together? If not make one now. How stable is it? How can you test it?

8. Place your information into a table or chart and study it.  
What do the shapes that are most stable have in common?  
How can you use this information to make a weaker structure stronger?

9. Using the above information create a dome shaped structure on a pentagon base. Can you build a dome shaped structure on an octagon shaped base?

10. Using everything that you have learned thus far create a written plan for a tower and then build it.

How large a base will you use?  
What shapes will you employ?  
How high can you construct it?



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