

# How Big is the Sun?

## Is it bigger or smaller than the Earth?

It looks small because it is very far away. But it is much, much bigger.



Materials:

- 60 inches of string
- Chalk
- 120 pennies

What to do:

- Cut a string about 60 inches long and tie a piece of chalk to one end.
- Measure 41 inches from the chalk and make a mark on the string.
- In a large open area have a child hold the marked point on the ground and have another child walk around the first child drawing a circle. (The children have become a life size compass.)
- Have them mark the middle and draw a chalk line the length of the radius.

Explain that if the Earth were the size of a penny then the Sun would be the size of the circle they just drew.

Have each child hold a penny in their hand and place it next to the big circle to get the idea of the ratio.

Ask the children to guess how many pennies it would take to go across the middle of the chalk Sun.

Write their predictions down on a chart.

Have the children make a line of pennies across the middle of the circle using the radius line to help them keep in the diameter and not "wander" off.

Have the children count the pennies and record the number on the chart, comparing it to their predictions.

It should be about 109 pennies.

Explain that the one penny equals one Earth on this scale model.

**It will take 109 Earths to span the diameter of the Sun.**

You may need to review some math if the children are fuzzy about the difference between diameter and radius.



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Science & Technology Teacher Resource Center  
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### What's In This Issue?

Activity of the Month  
**How Big is the Sun?**

#### Upcoming Workshops

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

#### What's In Stock?

Free classroom materials for your classroom

#### Things To Know About

- Welch's Harvest Grant
- Toyota Tapestry Grants
- Waste Limitation Management and Recycling Design Challenge

#### Spider's Prey

Web Sites of the Month:

- The Space Place

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



Start the New Year right—come see the wonderful **free things** in stock that will help make 2010 a wonderful Science year. **Give us a call and then come collect the free goodies!**

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 **How Big is the Sun?**



Is it bigger or smaller than the Earth?  
It looks small because it is very far away.  
But it is much, much bigger.  
This activity will help to sharpen your students'

- Prediction skills
- Thinking

See the last page of this NEWSLETTER for attached activity.

## Ring in the New Year with a Science Workshop

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 all teachers — public and private!** 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 at our new location on El Cajon Blvd or they may be scheduled at a time or place more convenient to you!

**Call 619-847-5518 NOW!**



*Staff development should not be perceived as something we do unto the weaker teacher or reserve for inexperienced staff members. All staff members, including principals, consultants, and teacher mentors, should be able to announce, "This is my year to study -----." There needs to be a genuine feeling that no one has arrived. Everyone needs to be swept up by the deeply engrained value placed on adult learning.*

*Shelley Harwayne*

## Things To Know About!

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

Welch's Harvest Grant

Deadline: February 6, 2010

In partnership with Scholastic, Welch's will support school garden programs through Welch's Harvest Grants. Two schools in every state will be selected to receive a Welch's Harvest Grant. Winning schools will receive a customized indoor or outdoor garden package filled with a variety of tools, seeds, educational materials, and more.

For more information, and to apply, visit [www.kidsgardening.org](http://www.kidsgardening.org).

### Toyota Tapestry Grants

Deadline: Jan. 18, 2010

The Toyota Tapestry Grants program offers grants to K-12 science teachers for innovative projects that will enhance science education during the 2010-11 school year. The program will award 50 large grants and a minimum of 20 mini-grants, totaling \$550,000 in all, for projects in the categories of Physical Science Application, Environmental Science Education, and Integrating Literacy and Science.

For more information, and to apply, visit [www.nsta.org/pd/tapestry/](http://www.nsta.org/pd/tapestry/).

### Waste Limitation Management and Recycling Design Challenge

Deadline: Feb. 1, 2010

NASA is inviting students in grades 5-8 to participate in the Waste Limitation Management and Recycling Design Challenge. The challenge uses real-world scenarios that meet science and mathematics content standards. Students can participate in a formal, informal or home-school setting.

Teams of up to six students will design a water recycling system for the unique environment of the moon. Teams will then test their system on a simulated wastewater stream. The top three teams will receive awards. The first place team will receive an expense-paid trip to NASA's Kennedy Space Center in Florida.

For more information and contest rules, please visit <http://wlmr.nasa.gov/>.



## Spider's Prey

Web Sites of the Month — The Space Place

The Space Place is an extensive, content-rich Web site for upper elementary-age kids, their teachers, parents, and anyone else who likes a simple, readable, fun presentation of a wide range of space and Earth science and technology topics. Most of the site is great for kids to explore on their own, with interactive games, hands-on projects and fun facts. A Spanish version of most of the site is also available.

The Space Place: <http://spaceplace.nasa.gov>



## LET'S GET CHEMICAL

Q. What is Ba(na)2?  
A. A banana.

Q. What do you do when you find a dead chemist?  
A. Barium

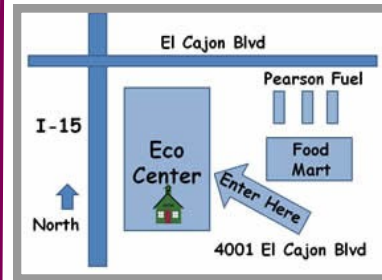
Q. What is the purpose of a Doctor?  
A. Helium

Q. What's the difference between chemistry and cooking?  
A. In chemistry you should never lick the spoon.

## Science & Technology Teacher Resource Center



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

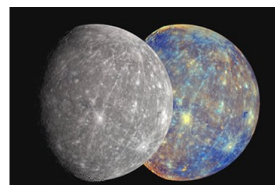


CALL 619-847-5518

for an appointment to view the Center.

We can also 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



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

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. This **3 hour** workshop will be held at the Resource Center from 5:30-8:30 pm on **March 25, 2010**.

## FREE Science Workshops



### 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 **February 18, 2010**.



### 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 **January 7, 2010**.



### 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 **January 21, 2010**.



### 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 **March 4, 2010**.

## 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 will be held at the Resource Center from 5:30-8:30 pm on **February 4, 2010**.

## FREE 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. This workshop will be held at the Resource Center from 9am — 3pm on **March 13, 2010**.



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 workshop will be held at the Resource Center from 9am — 3pm on **January 30, 2010**.



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 introduces them to how animal life fits into the environment. This workshop will be held at the Resource Center from 9am — 3pm on **February 27, 2010**.

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