

# THE NEW WANDERINGS

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[Citizen Scientists League](#)

## **Wanderings:**

### [Arduino, Gyroscope and Processing](#)

This Instructable shows how to use an Arduino to read and plot the output from a XV81-000 gyro sensor.

### [Accelerometer & Gyro Tutorial](#)

This Instructable is a tutorial on the use of accelerometers and gyros.

### [Guide to Gyro and Accelerometer with Arduino Including Kalman Filtering](#)

This Guide was found on the [Arduino Forum](#).

### [The Curious Inventor Guides](#)

Here is a collection of Guides, on various topics, from *The Curious Inventor*.

### [Science for Citizens](#)

*Science for Citizens* allows the average person to discover, to take part in, and to contribute to science through recreational activities and research projects.

### [Brian Wesley Rich's Science Web Site](#)

Over the years, Brian has built up a collection of experiments that he has conducted with kids.

### [Professor Mark Csele's Homebuilt Laser Page](#)

Mark discusses the various designs of DIY lasers.

### [How to Build a Simple T.E.A. Laser](#)

Here is an Instructable showing a simple T.E.A. laser design.

### [Qualitative Analysis of a Jade-Like Rock from North-Western Washington](#)

This is a detailed step by step account of the analysis of an unknown mineral sample.

### [Make Your Own Plankton Sieves](#)

*The New England Coastal Wildlife Alliance* shows us how to make simple sieves.

### [Build a Large DIY Sundial](#)

This [Instructable](#) shows you how to draw a large sundial in your driveway.

### [Nestor's Micrometer](#)

In this [Instructable](#), Trevor Nestor shows us how to build a *Quantum Laser Micrometer*

### [Test for the Dominant Side of Your Brain/](#)

This is weird! It seems that I can change the rotation of the dancer at will! Give it a try and see if you can, also.

### [Determining Your Dominant Eye](#)

Here is a simple test that will determine your dominant eye.

### [The Museum of Retro Technology](#)

This site should give you many hours of interesting reading. Than, if you enjoyed the museum have a look at this collection of [Unusual Steam Locomotives](#).

### [The Roswell Incident](#)

No, it's not about "that incident"! It's about Robert Goddard, who was one of the fathers of modern rocketry.

### [STEREO](#)

This NASA system consists of two space-based observatories - one ahead of Earth in its orbit, the other trailing behind. With this new pair of viewpoints, scientists will be able to see the structure and evolution of solar storms as they blast from the Sun and move out through space.

### [Ninety-Five Percent Of Objects In Earth Orbit Are Human-Made.](#)

This NASA simulation gives us an idea of the amount of objects that are orbiting the Earth.

### [Footprints in the Sand](#)

Foot prints, that are thought to be around 6000 years old, have been discovered on the beach at Formby Point, UK.

### [Fish with Transparent Head Filmed](#)

Many strange creatures roam the deeps.

### [Wireless Data from Every Light Bulb](#)

Harald Haas asks “What if every light bulb in the world could also transmit data?” View this and other interesting presentations at [TED](#).

### [TED Conversations](#)

TED’s new feature enables us to share our ideas, ask questions or join in a debate with other people across the globe.

### [Rock Snot](#)

Rock Snot or didymosphenia geminata, a type of slimy, yellow-brown, freshwater algae is now considered a global invasive species,

### [Science 2.0](#)

Science 2.0 encompasses collaboration, communication, participation and publication among an audience that is interested in the sciences.

### [What's Wrong With The Second Law?](#)

Johannes Koelman, the Hammock Physicist, discusses The Second Law of Thermodynamics.

I am in the process of modifying a rifle sight and need to drill and tap a hole for a 7/32 - 40 machine screw. Since this is a non-standard size I had to revert to e-bay to find a tap. But what size drill should I use? Again I searched the Internet but could not find this screw size in any of the common Screw – Drill – Tap tables.

Further searching turned up this [Tap Drill Calculator for Inch Sizes](#) which gave me a drill size of 0.1944 inches. I then used the [Decimal Equivalents for Drill Sizes Table](#) and found that the closest drill size was a No. 10 (0.1935).

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## **The Kids Room:**

Are you thinking of going on to university next year? To help you in your selection of a school, the following two sources may be of interest:

[\*\*Quacquarelli Symonds World University Rankings\*\*](#)

[\*\*Times Higher Education's list\*\*](#)

### **The Eratosthenes Experiment**

This is a Worldwide Science and Math Experiment that enables the student to measure the circumference of the Earth on 23 September 2011.

### **Who Was Eratosthenes?**

Eratosthenes was the first person to calculate the circumference of the earth

### **The Goal of the Noon Day Project**

This is another version of the Eratosthenes Project.

### **What is Local Noon?**

Information about gnomons, sundials and related matters

### **The Center for Innovation in Engineering and Science Education**

The Center sponsors and designs interdisciplinary projects that teachers can use to enhance their curriculum.

### **Science Buddies**

Science Buddies offers free science fair project ideas, answers and tools for the serious student.

### **Use a Laser Pointer to Measure the Data Track Spacing on CDs and DVDs**

This is an example of the quality of the Science Buddies projects.

### **ScienceForums.Net!**

ScienceForums.Net! welcomes science discussion at all levels — from beginners to researchers, covering topics from biology to computer science.

### **Sciencetoys**

Simon Quellen Field shows you how to make toys at home with common household materials, often in only a few minutes, that demonstrate fascinating scientific principles.

### [Toying With Science](#)

*Toying with Science* is Simon Quellen Field's Blog containing a series of short essays on scientific topics.

### [Science Teacher Resources](#)

[CR Scientific](#) has a collection of simple experiments in chemistry, mineralogy, biochemistry, and microbiology

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## **Random Samples:**

### [Rao and His Hand Shadows](#)

I remember seeing this guy on the Ed Sullivan Show, years ago.

### [Shadows in Science & Art](#)

The CoolStuff Newsletter #23 from Arbor Scientific features the art of [Eric Grohe](#) and [Julian Beaver](#).

### [Cycle Karting](#)

CycleKarts are small, lightweight, nimble machines made by their drivers for the pursuit of motoring sport.

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## **Suppliers and Stuff:**

### [LaserGlow](#)

LaserGlow carries an extensive selection of various types of laser modules.

### [LaserDIY](#)

LaserDIY is a small but growing company dedicated to innovations in laser technology.

### [Edmund Optics Inc](#)

Here is a great source of components for your optical project.

### [Edmund Scientific](#)

Edmund Scientific has always carried a diverse array of interesting items.

### [Genetic Genealogy](#)

Through DNA analysis, Genetic Genealogy may be able to trace the path of your ancestors and find out who they were, where they lived and how they have migrated throughout the world.

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## **On The Lighter Side:**

### [The Elements](#)

Here is an amusing look at the Periodic Table by Tom Lehrer.

### [A Shadow in Flat Land](#)

A teacher uses a projector to create the illusion that his shadow isn't following him!

### [Another Rube Goldberg Contraption](#)

See what happens when geeks use science and enter the realm of Rube Goldberg.

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