

**NISWONGER SCHOOL  
SUCCESS SYMPOSIUM  
JUNE 23, 2011**

**TECHNOLOGY TIPS & TRICKS FOR TEACHERS**

**Presenters:**

**John Payne, Director of Technology –  
Kingsport City Schools**

**Beverly Miller, Chief Technology Officer –  
Greeneville City Schools**

# UTAH EDUCATION NETWORK

## STUDENT INTERACTIVES



UTAH EDUCATION NETWORK

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### K-2 Student Interactives



ABC's



Reading



Listening



Writing



Words



Art & Music



My World



Math



Brain Games



Health



Just for Fun



Tumbletown  
Tales

[3-6 Student Interactives](#) | [7-12 Student Interactives](#)

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Internet

100%

# PHOTO STORY 3

Photostory 3 is a free download from Microsoft.



Digital Storytelling  
Class projects

Individual student  
projects

Communication of  
content knowledge

Communication with  
community and  
parents

# **COOL FEATURES**

**Touch-up**

**Crop**

**Rotate pictures**

**Remove red-eye**

**Add special effects**

**Add soundtracks**

**Add narration**

**Create music**

**Use music from other  
sources**

# STEM RESOURCES.COM TENNESSEE



[HOME](#) | [STANDARDS](#) | [STEM EDUCATION APPS](#) | [STEM TEACHER RESOURCES](#) | [LOGIN](#)

## STEMresources.com - Tennessee



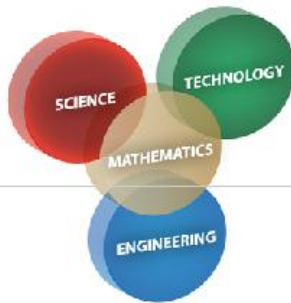
Standards



STEM Apps



Resources



"...the mission of improving K-12 STEM education for all students is not merely important, it is extraordinarily pressing, and the success or failure of that mission will have lasting consequences for America's economic and social well-being."

*National Governor's Association*

Welcome to the STEMresources.com  
CyberLearning Community!

Tennessee actively supports STEM Education. Understanding Science, Technology, Engineering, and Mathematics (STEM) topics is increasingly important to fully participate in society. STEM content comes alive when students consistently experience it during hands-on learning situations that seamlessly weave together the four sub-disciplines that comprise the STEM acronym.

STEM classrooms offer a curriculum that is integrated, emphasize questioning and inquiry, and give students frequent opportunities to apply engineering design and problem-solving. At STEMresources.com Tennessee teachers can gain quick and easy access to standards-based instructional tools, quality curriculum materials, and the latest Internet materials!

# ON-LINE BOOKMARKS

## I keep Bookmarks

- [www.ikeepbookmarks.com](http://www.ikeepbookmarks.com)

## Porta Portal

- <http://www.portaportal.com/>

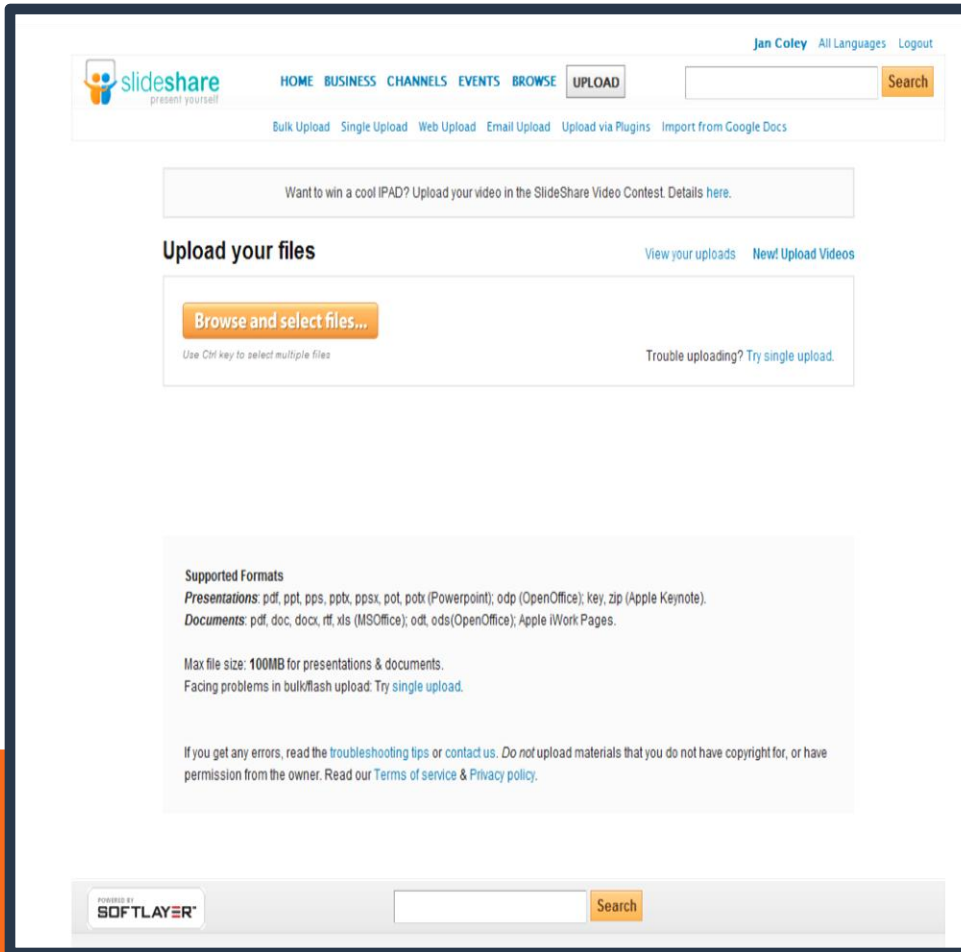
## Del.icio.us

- <http://del.icio.us/>



# SLIDESHARE

# WWW.SLIDESHARE.NET



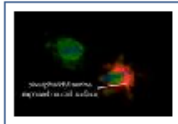
Allow the online sharing of PowerPoint presentations, Word documents, and PDF files.

The files may be shared either publicly or privately.

# BIO-ALIVE

Videos are on  
YouTube!

## Featured Videos



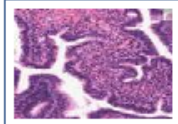
**Apoptosis in Fluorescence**  
Cell death in beautiful fluorescence



**Angiogenesis**  
A brief animation that describes tumor formation and the critical requirement of angiogenesis, or blood vessel formation, to the formation of tumors.



**Integrative Biology 131**  
General Human Anatomy. Fall 2005. Professor Marian Diamond. The functional anatomy of the human body as revealed by gross and microscopic examination.



**Shotgun Histology Series Part 1 By WashingtonDeceit:**  
These movies are dedicated to the greatest pathologist of all time---Martin A. Swerdlow, MD



**Protein Structure**  
A short video about protein primary, secondary, tertiary, and quaternary structure.



**3D Medical Animation: Antibody Immune Response**  
shows how antibodies stop harmful pathogens from attaching themselves to healthy cells in the blood stream.

## Video Lectures

[Anatomy](#)  
[Bioengineering](#)  
[Biology](#)  
[Cardiovascular](#)  
[Chemistry](#)  
[Genomics](#)  
[Immunology](#)  
[Molecular Biology](#)  
[Neuroscience](#)  
[Obesity](#)  
[Psychology](#)  
[Sex Determination](#)

[Behavior](#)  
[Biological Clocks](#)  
[Cancer](#)  
[Cell Biology](#)  
[Evolution](#)  
[Histology](#)  
[Infectious Diseases](#)  
[Nanotechnology](#)  
[Nutrition](#)  
[Physiology](#)  
[RNA](#)  
[Stem Cell](#)

## Video Seminars

[Biodefense](#)  
[Biology](#)  
[DNA Repair](#)  
[Genome](#)  
[Immunology](#)  
[Mass Spectrometry](#)  
[Medicine](#)  
[Nanotechnology](#)  
[Proteomics](#)  
[Stem Cell](#)

[Bioethics](#)  
[Demystifying Medicine](#)  
[Evolution](#)  
[Gerontology](#)  
[Infectious Disease](#)  
[Medicare/Medicaid](#)  
[Mitochondria](#)  
[Neuroscience](#)  
[Sleep Disorders](#)  
[TRACO](#)





Porta.Ink

# PORTA



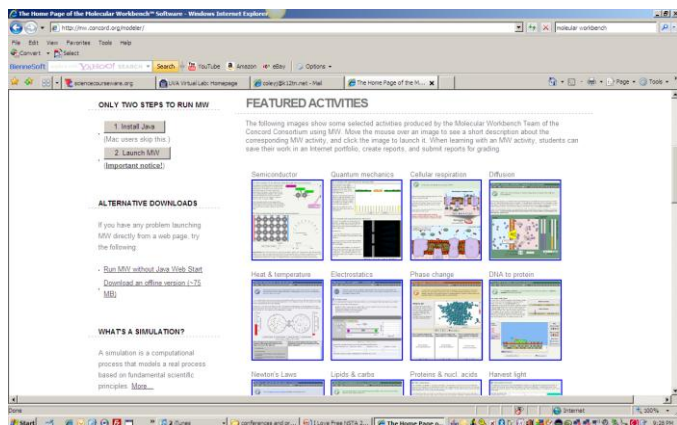
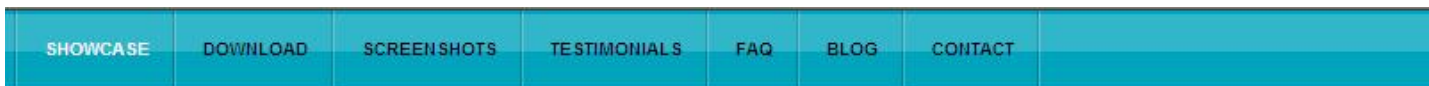
Porta is an open source, hassle-free photo album generator for web pages.

It is fast and easy to use.

It maybe downloaded from

<http://stegmann.dk/mikkel/porta/>

# MOLECULAR WORKBENCH



and learning activities produced using the Molecular Workbench™ are calculations based on scientific principles. We hope you enjoy them and



Click a word in the above image to enter a subject.

Google™ Custom Search

Search the Museum

There are **hundreds** of premade models that are not exhibited here but can be found in the Library of Models within the Molecular Workbench™ software.

<http://workbench.concord.org/>

# VISUWORD

[HTTP://MPCOLLAB.ORG/MPBETA1/NODE/1720](http://mpcollab.org/mpbeta1/node/1720)

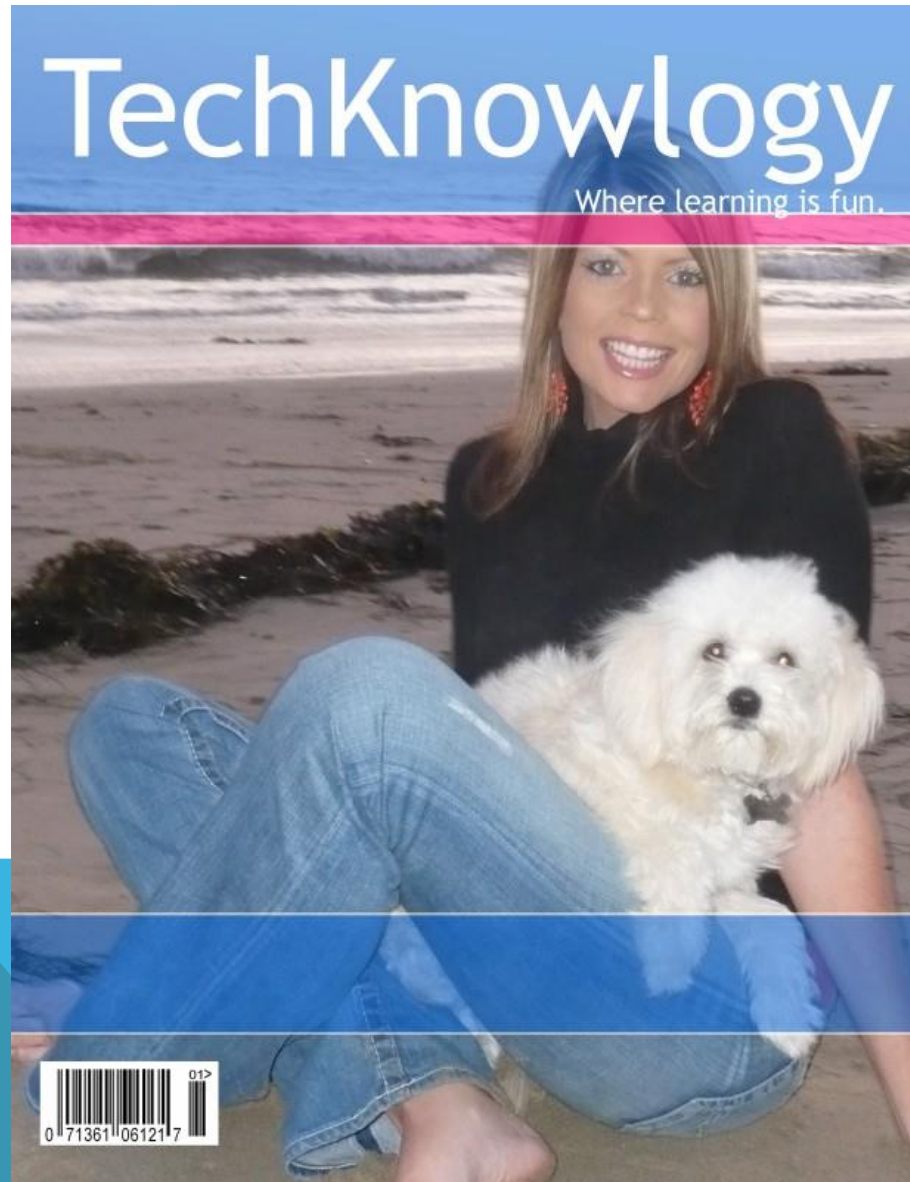
The screenshot shows the VISUWORDS online graphical dictionary interface. At the top left, there is a decorative graphic with the words 'believe', 'think', 'consider', and 'cogitate'. The top right features the logo 'VISUWORDS™ online graphical dictionary' and a search bar with 'Random' and 'or Enter:' buttons. The main area displays a word network centered on the word 'sun'. Various related terms are connected to 'sun' by different line styles and colors, representing different semantic relationships. A legend at the bottom explains these relationships.

<ul style="list-style-type: none"> <li>is a kind of</li> <li>is an instance of</li> </ul>	<ul style="list-style-type: none"> <li>is similar to</li> <li>pertains to</li> <li>participle</li> <li>attribute</li> </ul>	<ul style="list-style-type: none"> <li>entails</li> <li>also see</li> <li>causes</li> </ul>	<ul style="list-style-type: none"> <li>topic domain</li> <li>region domain</li> <li>usage domain</li> </ul>
<ul style="list-style-type: none"> <li>is a member of</li> <li>is a part of</li> </ul>	<ul style="list-style-type: none"> <li>meronym</li> </ul>		

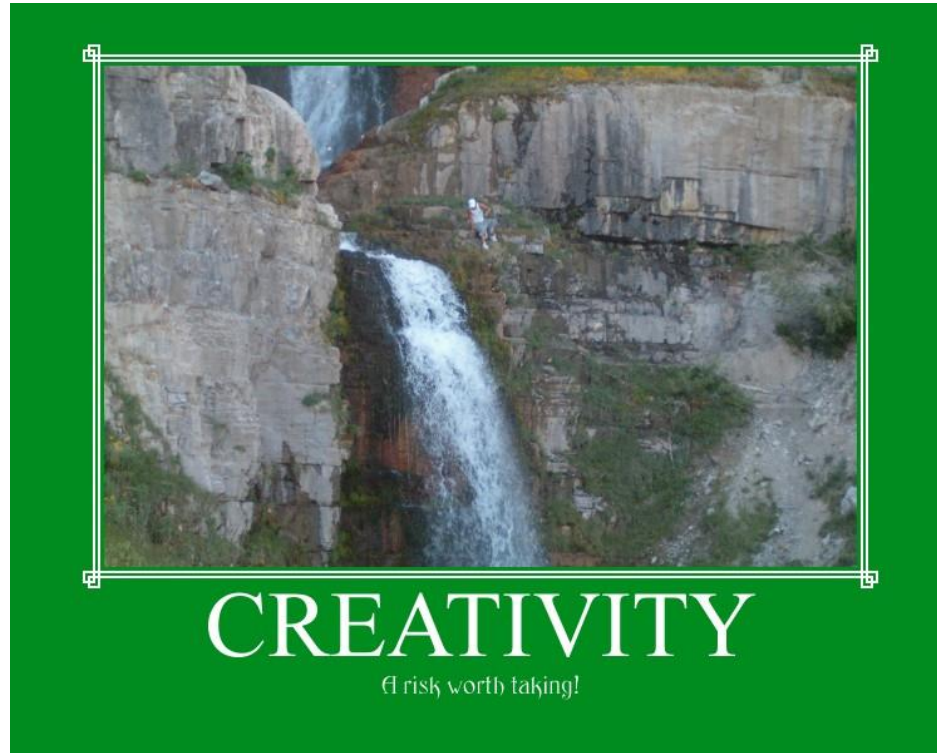
Online graphical dictionary that provides meanings and word relationships.

VISUWORDS™  
SDK v2.0

# MAGAZINE COVER: BE A SUPERSTAR



# MOTIVATOR: CREATE YOUR OWN MOTIVATIONAL POSTERS!



# ENGRADE – ONLINE GRADEBOOK

engrade Signup [Login](#)

## Engrade is the #1 Online Gradebook

- **2,584,741** members
- *Unbelievably user friendly*
- *Completely free forever*

**Sign Up** ALWAYS FREE!

engrade Classes [Apps](#) [Messages](#) [Account](#) [Mr. Teacher](#)

Class Apps Classes > US History > Gradebook

[+ New Assignment](#) [Assignment List](#)

**Gradebook**

Student	Grade	Register on Engrade	Cell Quiz	Founding Fathers Quiz	Civil War Midterm
John Adams	A 99.9%	3	4	50	180
Thomas Jefferson	A 94.9%	8	2	50	190
Abraham Lincoln	C 77%	8	5	50	140
Franklin Roosevelt	A 91.9%	10	3	40	E
George Washington	B 83.6%	10	4	49	150
Average	87.7%	7.8/10	3.6/4	47.8/50	165/200



**Gradebook**  
Create your custom grading scale then easily enter student scores just like a spread sheet.



**Messaging**  
Safely and privately message students and parents in a SPAM-free environment.



**Homework Calendar**  
Effortlessly post assignments, events, reminders, and lessons online.



**Quizzes**  
Save hours of time by giving students online quizzes that are automatically graded in your gradebook.



**Discussions**  
Engage students in online discussions. Quickly answer homework questions.



**Wikis**  
Build online class wikis with students and colleagues



**Flashcards**  
Make studying a breeze with online flashcards for students.



**Attendance**  
Easily track daily attendance just like a spread sheet.



**24/7 Student Access**  
Students and parents can log in 24/7 to see



**24/7 Admin Reports**  
Admin can instantly see student grades and



**Private and Secure**  
Engrade keeps all of your class information



**Completely Free**  
Engrade is 100%, truly, always free. Seriously.



# DROPBOX



Dropbox uses cloud computing to enable users to store and share files and folders.

# THINKFINITY.ORG



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At Home & Afterschool

Professional Development

Get Connected

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Learning happens all year!

Summer Learning  
Keep kids engaged and learning all summer long

SEARCH MORE ▶

Enhance Learning  
with FREE lesson plans  
& educational resources

What are you looking for?



State Standards Search ▶

Flag Day

Summer Learning

ISTE 2011

Online Safety



CONTENT PARTNERS

DISCUSSION



PARTNERSHIP FOR  
21ST CENTURY SKILLS



AFFILIATES

Verizon Foundation is proud to be affiliated with leading educational organizations and strategic partners in education.

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# FAVORITES FROM THINKFINITY

Comic Creator <http://www.readwritethink.org/files/resources/interactives/comic/>

Perfect Pitch <http://www.artsedge.kennedy-center.org/perfectpitch/>

Marble Mania

<http://www.sciencenetlinks.com/interactives/marble/marblemania.html>

Touch of Class <http://www.sciencenetlinks.com/interactives/class.html>

Lemelson Center <Http://www.sciencenetlinks.com/interactives/class.html>

Power Up <http://www.sciencenetlinks.com/interactives/powerup.html>

Dynamic Paper <http://illuminations.nctm.org/ActivityDetail.aspx?ID=205>

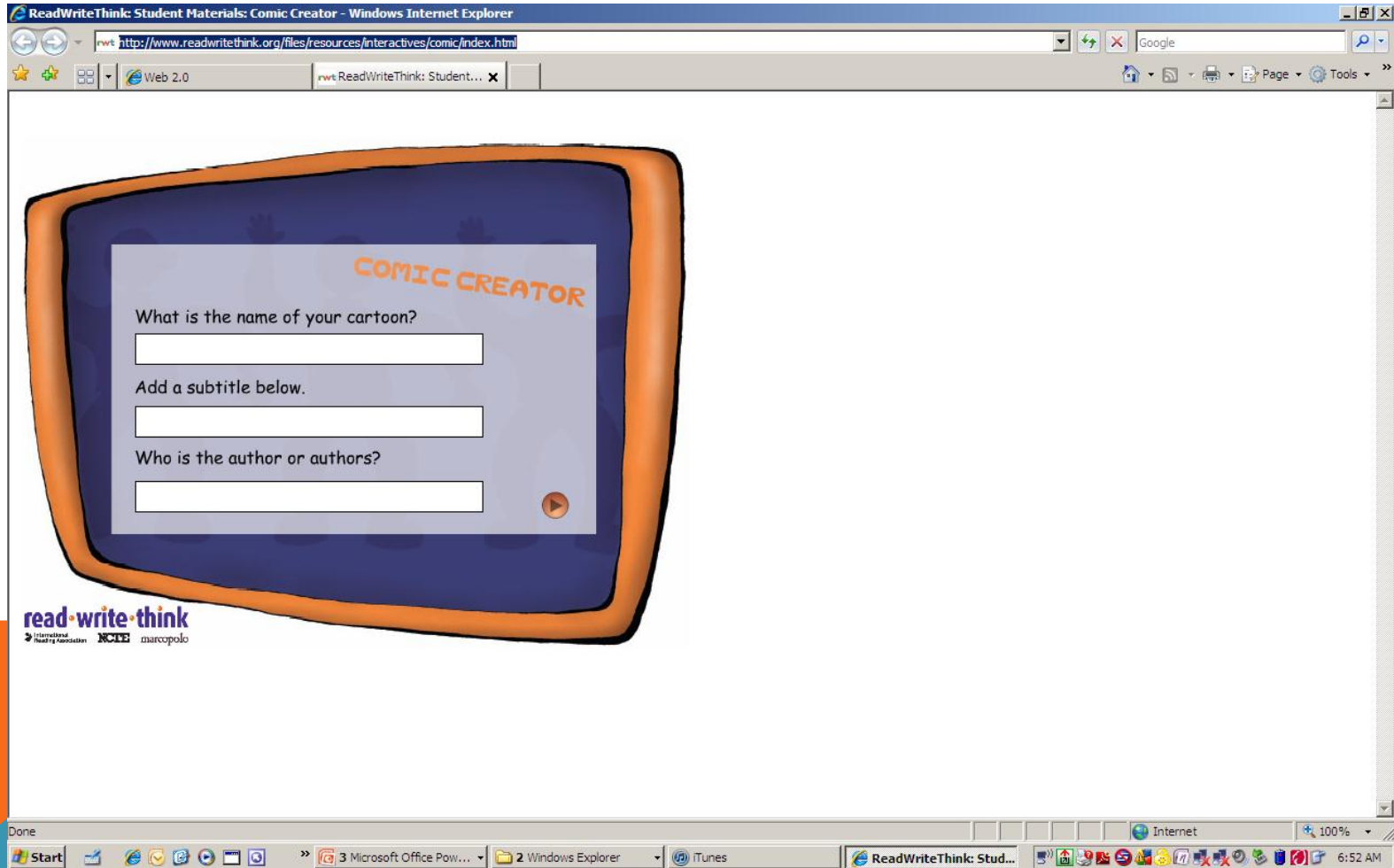
Break it Down <http://www.sciencenetlinks.com/interactives/breakitdown.html>

Make A Mission <http://www.sciencenetlinks.com/messenger/mission.htm>



# COMIC CREATOR

[HTTP://WWW.READWRITETHINK.ORG/FILES/RESOURCES/INTERACTIVES/COMIC/INDEX.HTML](http://www.readwritethink.org/files/resources/interactives/comic/index.html)



# QUIZLET

## QUIZLET.COM (WEB 2.0)

TN 6<sup>th</sup> grade science academic vocabulary

The screenshot shows the Quizlet website interface. At the top left is the Quizlet logo. To its right is a navigation bar with links for Home, Help & Features, Find Flashcards, Make Flashcards, and Blog. Further right are login options: a Facebook connection button, a 'Sign Up' button, a 'Login' button, and a 'Remember me for 3 weeks' checkbox. A search bar is located on the right side of the navigation bar.

Below the navigation bar, the main content area is divided into several sections:

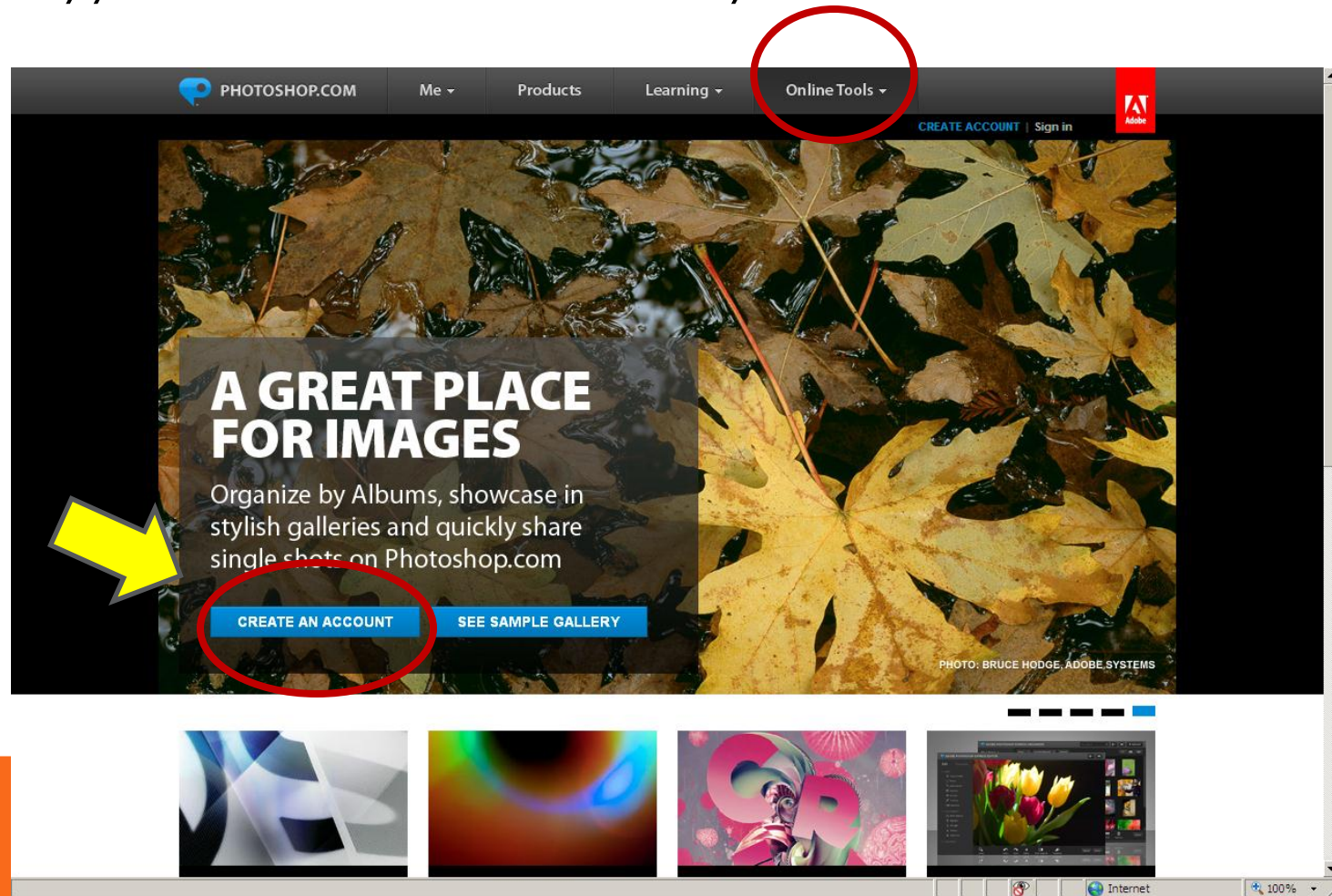
- Statistics:** A box showing '2,701 new flashcard sets today' and '670 users online now'.
- Languages & Vocabulary:** A table with links for English, Spanish, Chinese, French, German, and 'see all'.
- Standardized Tests:** A table with links for SAT, GRE, GMAT, AP, LSAT, and 'see all'.
- Math & Science:** A table with links for Algebra and Geometry.
- Quizlet eats flashcards for breakfast!** A featured section with a photo of a boy eating and several links: 'Study vocabulary or almost anything', 'Create your own flashcards - sign up free', 'Share flashcards with your friends', and 'View the quick guide or watch the video tour'.
- Example: U.S. Capitals** A quiz interface showing 'Remaining 5', 'Alabama', and a text input field with the prompt 'Type "Montgomery" here' and an 'Answer' button.
- What people say** A testimonial box with a quote: 'Quizlet is a great place to study and saves me time rather than cutting out flash cards and other things. Quizlet has helped me do other...'

## Set: 6th grade academic vocabulary

[Familiarize](#)[Learn](#)[Test](#)[Play Scatter](#)[Play Space Race](#)[Voice Scatter](#)[Voice Race](#)[Combine with other sets](#)[Login to add to Favorites](#)[Print: Term List | Flashcards](#)[Editing not allowed](#)[Export](#)[Deleting not allowed](#)

# PHOTOSHOP.COM

## HTTP://WWW.PHOTOSHOP.COM/
















**You must set up an account and login into your account to use the tools.**

# TEACHERS' DOMAIN

## Subtopic: Operations

12 out of 12 resources are within grades K-12 [Change grade range](#)

Resource	Grade Level	Media Type
 <a href="#">10th's and Decimals</a> In this video segment from <i>Cyberchase</i> , the CyberSquad replaces a piece of track to get the Madre Bonita Express to the Mother's Day harvest.	3-6	 QuickTime Video <a href="#">View</a>
 <a href="#">Addition of Decimal Numbers and a Common Error</a> Students practice carefully lining up decimal places while calculating sums of decimals that total more than one.	4-7	Lesson Plan <a href="#">View</a>
 <a href="#">Estimating Costs, Estimating Profits</a> Franklin works with Laverne to create a budget for a job painting a room, in this video segment from TV 411.	4-8	 QuickTime Video <a href="#">View</a>
 <a href="#">Estimating Profit from a Job</a> Students learn about estimation and rounding and practice rounding with decimal points.	5-8	Lesson Plan <a href="#">View</a>
 <a href="#">Fractions, Decimals, and Percents</a> This video from WOUB Athens and WVIZ Cleveland takes you step by step through a review of the math concepts of fractions, decimals and percents.	5-7	MPEG 4 Video <a href="#">View</a>
 <a href="#">How Far to Wells Road?</a> In this <i>Cyberchase</i> video segment, Bianca drives to visit her friend, but learns that she has incorrectly added decimal amounts, so she ends up at the wrong location.	4-8	 QuickTime Video <a href="#">View</a>
 <a href="#">How Many Rails for the Detour?</a> The CyberSquad adds decimals to figure out how many rails they need to build a detour that will help them go around a mountain in this <i>Cyberchase</i> video segment.	4-8	 QuickTime Video <a href="#">View</a>
 <a href="#">Introducing Decimals and Simple Decimal Addition</a> Students are asked to recognize the equivalence of fractional tenths and decimals and to do simple decimal addition to find lengths both shorter and longer than 1.	3-6	Lesson Plan <a href="#">View</a>
 <a href="#">Planning a Budget</a> Students practice column addition and lining up decimal points in the		

teachers'dor

Sign-in Name:   
 Password:   
[Forgot Your I](#)

Teachers' Domain is an exper  
 produced by public televisio  
 development. [more informat](#)

Browse:

By K-12 Subject:

Arts

English Language Arts

Mathematics

Science

Social Studies

Professional Development

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Online Courses

Teaching Strategies

Special Collections:



# ILLUMINATIONS



*Illuminating*  
**NCTM's Vision**  
for School Mathematics

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## Activities

Explore our library of 105 online activities that help to make math come alive in the classroom or at home

\*\*\* **Special Notice: Illuminations will be down for maintenance Thursday, May 20 from 10:00 to 11:00 PM EDT. We apologize the inconvenience. Thank you for your patience as we work to improve Illuminations.** \*\*\*

## Lessons

View our collection of 551 lessons for preK-12 math educators

### Highlighted Activity

#### Two Terrains

Investigating Distance, Rate, and Time



Some vehicles fly down the highway, while others are dirt-track specialists. This activity allows you to explore the relationships between, distance, rate, and time. Can you identify the best path for a vehicle? Try to predict what will happen if you set on-road or off-road performance measures.

### Highlighted Lesson

#### Invest in Your Education

Learning Percents by Buying School Supplies



Do your students appreciate their education and all you do for them? Let them show their appreciation and learn percents at the same time. This lesson has students buy common items used in a math classroom—desks, chairs, calculators, manipulatives, etc. Give them a budget and coupons, and see if they get the best deals they can.

Want more resources on number sense? Check out the variety of materials at [Verizon Thinkfinity](#).

## Standards

Learn about NCTM's *Principles and Standards for School Mathematics*

## Web Links

Check out hundreds of exemplary online resources, as identified by an editorial panel

calculation  
Nation



### Influential Teachers

Teachers wear many different hats throughout their career. They act as mentors, role models, and coaches. The Illuminations team is honoring their most

### [Dynamic Paper Tool](#)

Create customized activity sheets for your classroom! Nets of 3-D shapes, tessellations, coordinate graphs, and more — all based on

# BILINGUAL MATHEMATICS DICTIONARY

Welcome to the Bilingual Mathematics Dictionary/Bienvenidos al Diccionario Bilingue de Matematicas

Welcome  
Bienvenidos

Introduction  
Introducción

Bilingual Mathematics Dictionary  
Diccionario matemáticas bilingüe

Bibliography  
Bibliografía

Contact Information  
Información de contacto

A B C D E F G H I J K L M N O P Q R S T U V W X Y Z



You may print and distribute as many copies of this dictionary as you wish provided that there is no fee charged to the recipients.

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All Rights Reserved  
URL: <http://nw.pima.edu/dmeeks/spanmain.htm>

Last updated: 09/05/2007 10:06:51

[Home](#)

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Northwest Campus  
Pima Community College  
7600 N. Shannon  
Tucson, Arizona 85709-7030  
(520)206-2247



# A MATHS DICTIONARY FOR KIDS



## A Maths Dictionary for Kids

2010



by Jenny Eather

Aa Bb  
Cc Dd  
Ee Ff  
Gg Hh  
Ii Jj  
Kk Ll  
Mm Nn  
Oo Pp  
Qq Rr  
Ss Tt  
Uu Vv  
Ww Xx  
Yy Zz

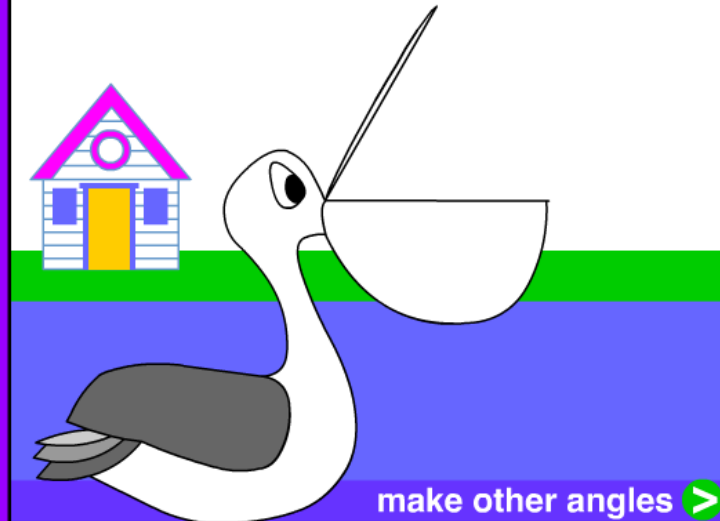
abacus	anti-clockwise
abacus - Chinese	apex
absolute value	approximate
abundant number	arc
acre	area
acute angle	arithmetic
acute triangle	arms (of an angle)
addend	array
add, addition	ascending order
additive identity	associative law
adjacent	asymmetry
algorithm	attribute
align	average
altitude	axis
altitude (triangle)	
algebra	
a.m.	
amount	
analogue clock	
angle	
angle of rotation	
annual, annually	
annulus	

### acute angle

- an angle measuring less than 90 degrees.
- Enter a number between  $0^\circ$  and  $90^\circ$  in the box.
- Click the button.

Watch the pelican's beak !!

60



other Sites

▶ Writing Fun  
▶ Rainforest Maths

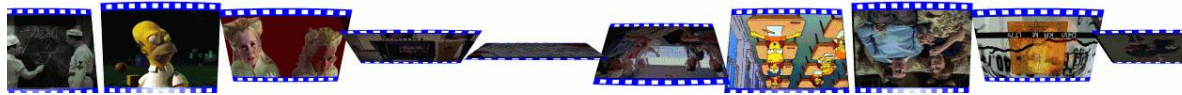
▶ help

▶ feedback

© Jenny Eather 2001 - 2010  
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# MATHEMATICS IN MOVIES

## BY HARVARD UNIVERSITY



### Mathematics in Movies

This is a collection of movie clips in which Mathematics appears. I'm collecting DVDs and VHS tapes of such movies. This is a working document to be extended over time. I started this page during spring break 2006. See also the page "[Begin of lectures in college teaching](#)" and "[End of lectures in college teaching](#)" and "[Examples of good talks](#)". To see the movies larger, to see it on the Iphone or include it in a presentation, chose the quicktime ipod version, which are files with .m4v extension. ([Media RSS link](#)).

Date: March  
2006 - January  
2010  
by:  
**Oliver Knill**  
Department of  
Mathematics  
Harvard  
University



#### [Rain Man \[IMDb link\]](#)

$3^*82=246 = 250-4$  (Thanks to Joia Felice for the suggestion)

1988

Play the [flash version \(.swf\)](#), or watch the [quicktime file \(.m4v\)](#)

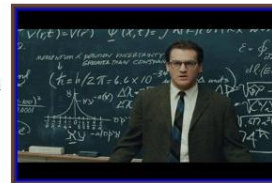


#### [Three O'Clock High \[IMDb link\]](#)

Some algebra problems are visible in a quiz. To determine who cheated, buddy has to solve 2 blackboard problems on square roots.

1987

Play the [flash version \(.swf\)](#), or watch the [quicktime file \(.m4v\)](#)



#### [A Serious Man \[IMDb link\]](#)

The Uncertainty Principle in Quantum Mechanics.

2009

Play the [flash version \(.swf\)](#), or watch the [quicktime file \(.m4v\)](#)



#### [G.I. Joe - Rise of the Cobra \[IMDb link\]](#)

The shadow determines the latitude where the picture was taken. Compare the idea of Eratostenes to measure the shadows of a stick on different locations to get the radius of the earth. Thanks to Robin Zaruba.

2009

Play the [flash version \(.swf\)](#), or watch the [quicktime file \(.m4v\)](#)

Done

Internet

100%

# MATH PLAYGROUND



Play with Numbers and Give Your Brain a Workout



Home

Math Games

Word Problems

Logic Puzzles

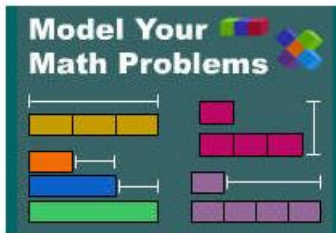
Math Videos

About

Educational Products



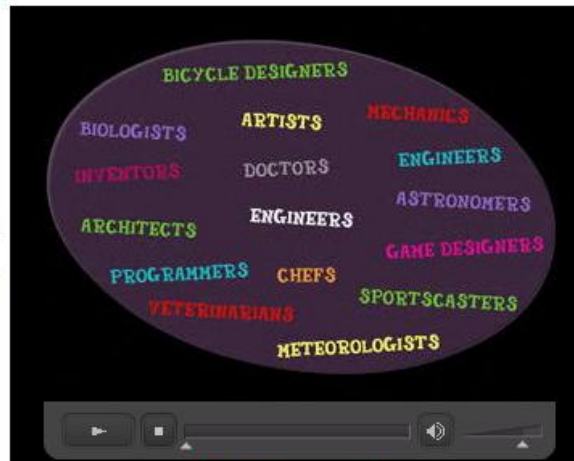
Welcome to Math Playground, an action-packed site for elementary and middle school students. Practice your math skills, play a logic game and have some fun!

Thinking Blocks



Computation



Math Apprentice

Math Is The Path To Anything You Want To Be!



# INTERACTIVATE

The screenshot shows the Interactivate website interface. At the top, there is a green navigation bar with the "Interactivate" logo on the left, a "Jump To:" dropdown menu, a "Browse:" dropdown menu, and a "Search" input field. The "Browse:" menu is open, showing options: "By Subject (broad)", "By Topic (specific)", "By Audience", and "By Resource Type". Below the navigation bar, the breadcrumb path "Shodor > Interactivate > Home Page" is visible. The main content area is divided into several sections. On the left, there are three hexagonal icons: a sine wave with the equation  $y = \sin((x^2)/2)$ , a fractal, and a bar chart. To the right of these icons is a green box with the text "DONATE and receive Interactivate free on CD". Below this, there are two columns of hexagonal icons: "Learners" (Activities, Dictionary, Tools) and "Instructors" (Lessons, Discussions, Standards). The SHODOR logo is at the bottom right of this section. Below the main content area, there is a text block stating: "The goals of *Interactivate* are the creation, collection, evaluation, and dissemination of interactive Java-based courseware for exploration in science and mathematics." Below this text are three links: "Site Map", "Guide to Interactivate", and "What's New?". To the right of the text is a "Featured Activity" section with three small images showing scientific data visualizations. At the bottom of the page, there is a green footer bar with the text "©1994-2010 Shodor Website Feedback" on the left and "A RESOURCE FROM CSERD A PATHWAY PORTAL OF NSDL" on the right. The Windows taskbar at the bottom shows the Start button, several application icons, and the system tray with the time "6:04 AM".



# Activities

**DONATE** and  
Interactivate

[Shodor](#) > [Interactivate](#) > Activities

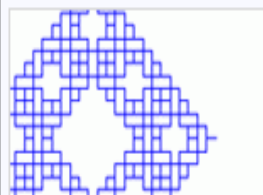
Sort by Subject

159 items total

Sort by Audience

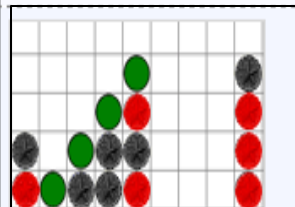
[Number and Operations](#) • [Geometry](#) • [Algebra](#) • [Probability](#) • [Statistics](#) • [Modeling](#) • [Discrete](#) • [Other](#) • [Show All](#)

## Number and Operations (44)



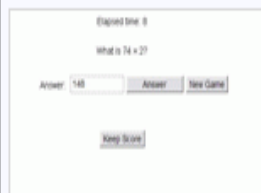
### [Another Hilbert Curve Generator](#)

Students work step-by-step through the generation of a different Hilbert-like Curve (a fractal made from deforming a line by bending it), allowing them to explore number patterns in sequences and geometric properties of fractals.



### [Arithmetic Four](#)

A game like Fraction Four but instead of fraction questions the player must answer arithmetic questions (addition, subtraction, multiplication, division) to earn a piece to place on the board. Parameters: time limit, difficulty level, types of questions. Arithmetic Four is one of the Interactivate assessment games.



### [Arithmetic Quiz](#)

Similar to Arithmetic Four: Arithmetic Quiz gives the user randomized questions to answer on arithmetic with whole numbers and integers. Parameters: Level of difficulty and types of questions. Arithmetic Quiz is one of the Interactivate assessment quizzes.

# Arithmetic Four

[Shodor](#) > [Interactivate](#) > [Activities](#) > Arithmetic Four

**DONATE** and  
Interactivate

*Learner*

*Activity*

*Help*

*Instructor*

## Welcome to Arithmetic Four!

Choose settings and click "Start Game."

Time Limit:

Difficulty:

Problem

- Whole Number
- Whole Number Subtraction
- Whole Number Multiplication
- Whole Number Division
- Integer Addition
- Integer Subtraction
- Integer Multiplication
- Integer Division

Start Game

# WONDERVILLE



# THE MISSION SCIENCE LAB

Designed for kids age 10–16 to learn basic principles of physics in a most entertaining way.

click on a random object in the lab and complete a related “mission.”

Meanwhile, they’re also trying to learn Professor XYZ’s secret identity and gain access to the final mission, “Professor XYZ’s Grand Tour.”



[http://nfbkids.ca/lamission/home\\_e.php](http://nfbkids.ca/lamission/home_e.php)



# BBC SCIENCE CLIPS

## Bitesize 1

[http://www.bbc.co.uk/schools/scienceclips/ages/6\\_7/science\\_6\\_7.shtml](http://www.bbc.co.uk/schools/scienceclips/ages/6_7/science_6_7.shtml)

Forces and Motion

## Bitesize 2 -

<http://www.bbc.co.uk/schools/ks2bitesize/science>

## Bitesize 3 -

<http://www.bbc.co.uk/schools/ks3bitesize/science/>



# WHERE TO FIND MICROSOFT FREE TOOLS:

**AutoCollage\***

[microsoft.com/AutoCollage](http://microsoft.com/AutoCollage)

**WorldWide Telescope**

[worldwidetelescope.org](http://worldwidetelescope.org)

**Photosynth®**

[photosynth.net](http://photosynth.net)

**Songsmith® Free Trial\***

[microsoft.com/songsmith](http://microsoft.com/songsmith)

**Photo Story for Windows® XP**

[microsoft.com/PhotoStory](http://microsoft.com/PhotoStory)

**Interactive Classroom and  
Mathematics Add-in**

[microsoft.com/officeaddins](http://microsoft.com/officeaddins)

**Bing™ Search and Bing™ Maps**

[bing.com](http://bing.com)

**Bing™ Translator**

[microsoftTranslator.com](http://microsoftTranslator.com)

**Mouse Mischief™**


[microsoft.com/multipoint/mouse-mischief](http://microsoft.com/multipoint/mouse-mischief)

# MICROSOFT MATHEMATICS

The screenshot displays the Microsoft Mathematics application interface. At the top, there is a menu bar with 'File', 'Home', 'Insert', and 'View'. Below the menu bar is a ribbon with various tool categories: 'Clipboard' (Undo, Paste, Redo, Cut, Copy), 'Numbers & Angles' (Real Numbers, Degrees, Radians, Gradians, Decimal Places, Not fixed), 'Input' (Keyboard, Ink), and 'Tools' (Equation Solver, Formulas and Equations, Triangle Solver, Unit Converter). The main workspace is divided into three sections: a 'Worksheet' tab on the left, a 'Graphing' tab on the right, and a calculator interface on the far left. The 'Worksheet' tab shows a text input field with the equation  $mx + b = c, x$  and a 'solve' button. Below the input field, the solution steps are displayed: Solution 1:  $x = -\frac{b-c}{m}, m \neq 0$ ; Solution 2:  $\emptyset, m = 0 \text{ and } b - c \neq 0$ ; Solution 3:  $x \in \mathbb{R}, m = 0 \text{ and } b - c = 0$ . The 'Graphing' tab shows a coordinate plane with a blue line representing the equation  $y = x + 2$  and a green horizontal line representing  $y = 12$ . The calculator interface on the left includes a numeric keypad, function keys, and a display screen.

Video

InterroBang? is a game where you get to have fun with problems. Students complete real-world missions with deeds that can win prizes, improve problem solving skills, and connect them with others to do things that just might change the world.



# WORLD WIDE TELESCOPE (WEB 2.0)



The screenshot shows the Microsoft Research WorldWide Telescope website. At the top left is a circular logo featuring a blue galaxy. The header includes the text "Microsoft® Research" and "WorldWide Telescope". A navigation menu contains links for "Home", "What is WWT", "Experience WWT", "Support", and "Aut". The main content area features a large yellow heading "Experience WorldWide Telescope" and a sub-heading "Immerse yourself in a seamless beautiful environment." Below this is a paragraph describing WWT as a virtual telescope that brings together imagery from the best ground and space-based telescopes in the world, offering narrated guided tours. A second paragraph mentions a web-based version available via Microsoft Silverlight 3.0. On the right side, there are two buttons: "Install W" (with subtext "Windows 6 (For Mac OS") and "Ru" (with subtext "Mac & PC - C"). At the bottom, a section titled "WorldWide Telescope Ambassadors Program" describes Galileo's New Order as the first of a new range of tours created under the Ambassadors program.

Microsoft® Research  
WorldWide Telescope

Home | What is WWT | Experience WWT | Support | Aut

## Experience WorldWide Telescope

Immerse yourself in a seamless beautiful environment.

WorldWide Telescope (WWT) enables your computer to function as a virtual telescope, bringing together imagery from the best ground and space-based telescopes in the world. Experience narrated guided tours from astronomers and educators featuring interesting places in the sky.

A web-based version of WorldWide Telescope is also now available. This version enables seamless, guided explorations of the universe from within a web browser on PC and Intel Mac OS X by using the power of Microsoft Silverlight 3.0.

[Install W](#)  
Windows 6  
(For Mac OS

[Ru](#)  
Mac & PC - C

### WorldWide Telescope Ambassadors Program

Galileo's New Order is the first of a new range of tours for WorldWide Telescope created under the Ambassadors program designed to teach astronomy experts how to create WWT tours as teaching aids. [This tour](#) shows how

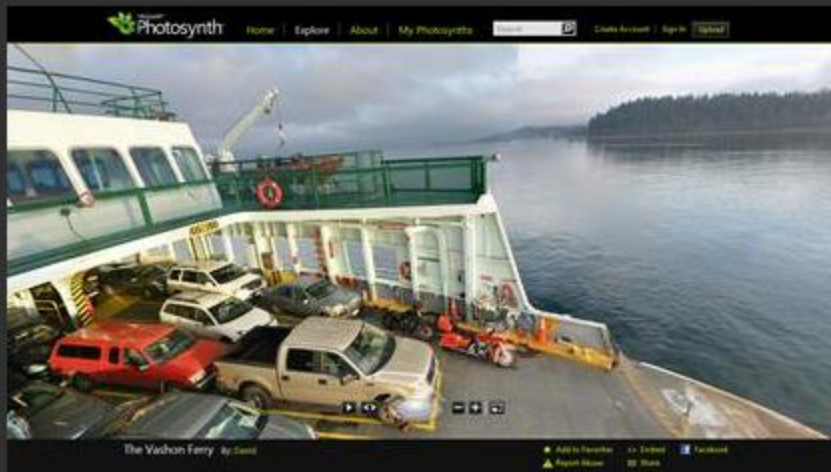


# PHOTOSYNTH IS A POWERFUL SET OF TOOLS FOR CAPTURING AND VIEWING THE WORLD IN 3D.

How do I Capture the World in 3D?

Photosynth offers two styles for creating immersive 3D experiences: synths and panoramas. The following diagram shows the differences between them, and the tools available for creating them.

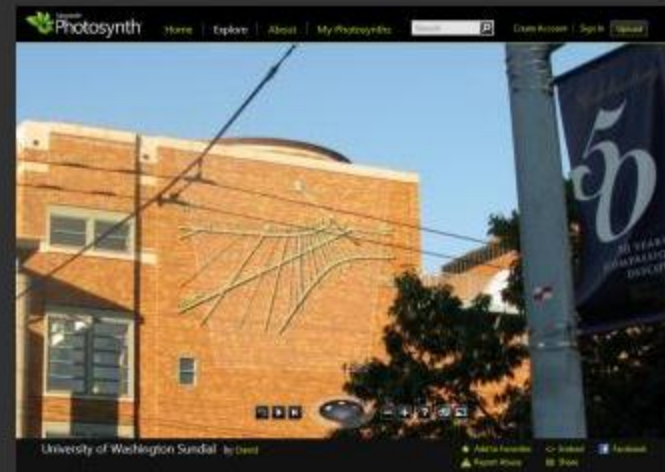
## Panorama



Choose a panorama when you can capture everything from a single location with a single zoom level. Great for giving a sense of what it feels like to be in a one particular place. Can be 360° in both directions, but doesn't have to be.

Simple to navigate - all you can do is go left/right, up/down and zoom in/out.

## Synth



Good for capturing different sides or details of an object. Synths were the original experience on this site, and they remain its unique feature.

More complex to navigate than panoramas because you are moving from photo to photo.

# TEACH ENGINEERING

## TEACH Engineering

Resources for K-12

[Home](#)
[Browse](#)
[Search](#)
[Get Involved](#)
[K-12 Engineering](#)
[About Us](#)
[MyTE](#)

[Home](#)

Welcome to TeachEngineering!

Browse

[Activities](#)
[Lessons](#)
[Curricular Units](#)
[Subject Areas](#)
[Educational Standards](#)

[Advanced Search >>](#)

Editor's Pick

Most Popular

Recently Added



June 2011 Editor's Pick:  
[Land on the Run](#)

Landslides and mudslides are dramatic and fun for fourth-graders to think about, and a perfect topic from which to learn about gravity and friction, as well as other ear...  
[...more](#)

The *TeachEngineering* digital library provides teacher-tested, standards-based engineering content for K-12 teachers to use in science and math classrooms. Engineering lessons connect real-world experiences with curricular content already taught in K-12 classrooms. Mapped to educational content standards, *TeachEngineering's* comprehensive curricula are hands-on, inexpensive, and relevant to children's daily lives.

*Remember — you don't need to be an engineer to use these curricular resources!*

Simple Activity Word Search:

First 1 2 3 4 5 Last

Showing page 1 of 61 pages. Viewing records 1-10 of 607 records returned.

Search By: [A](#) [B](#) [C](#) [D](#) [E](#) [F](#) [G](#) [H](#) [I](#) [J](#) [K](#) [L](#) [M](#) [N](#) [O](#) [P](#) [Q](#) [R](#) [S](#) [T](#) [U](#) [V](#) [W](#) [X](#) [Y](#) [Z](#) [\(show all\)](#)

Title	Summary	Grade	Educational Standards	Time	Group Size	Cost/Grp
<a href="#">Applying Hooke's Law to Cancer Detection</a>	In this activity, students will explore Hooke's Law in small groups at their lab bench. They will collect displacement data for a spring with an unknown spring constant, k, by adding various masses of... <a href="#">...more</a>	11 (10-12)	MD : ♦ <a href="#">Science</a> (2002)	90 mins	3	US\$ 0.00
<a href="#">20/20 Vision</a>	Engineering Category: ●○○ In this activity, students determine their own eyesight and calculate what a good average eyesight value for the class would be. Students learn about technologies to enhance eyesight and how engineers play an important role in the development of these technologies.	5 (3-5)	CO : ♦ <a href="#">Science</a> (2009) ♦ <a href="#">Math</a> (2009) ITEA : ♦ <a href="#">Technology</a> (2000)	50 mins	2	US\$ 0.00
<a href="#">Able Sports</a>	This activity focuses on getting students to think about disabilities and how they can make some aspects of life more difficult. The students are asked to pick a disability and design a new kind of sport for it.	8 (6-11)	MA : ♦ <a href="#">Science</a> (2001)	50 mins	4	US\$ 0.00
<a href="#">Acid (and Base) Rainbows</a>	Engineering Category: ●○○ Students are introduced to the differences between acids and bases and how to use indicators, such as pH paper and red cabbage juice, to distinguish between them. They learn why it is important for engineers to understand acids and bases.	6 (4-6)	CO : ♦ <a href="#">Science</a> (2009) ♦ <a href="#">Math</a> (2009) ITEA : ♦ <a href="#">Technology</a> (2000)	60 mins	3	US\$ 3.00
<a href="#">Acid Attack</a>	Engineering Category: ●○○ In this activity, students explore the effect of chemical erosion on statues and monuments. They use chalk to see what happens when limestone is placed in liquids with different pH values. They also ... <a href="#">...more</a>	3 (3-5)	CO : ♦ <a href="#">Science</a> (2009) ITEA : ♦ <a href="#">Technology</a> (2000)	30 mins	3	US\$ 2.50

# TRY ENGINEERING

The screenshot shows the TryEngineering website interface. At the top left is the TryEngineering logo featuring a butterfly. The top navigation bar includes links for Search, Sitemap, and English, along with a search input field and a 'Go' button. Below this is a secondary navigation bar with links for COUNSELORS, PARENTS, STUDENTS, and TEACHERS. A main navigation bar contains buttons for Explore Engineering, Opportunities, Find a University, Lesson Plans, Ask an Expert, and Play Game. The breadcrumb trail reads 'TryEngineering Home > Lesson Plans'. The main content area is titled 'Lesson Plans' and includes a 'SHARE' button with icons for email, print, Facebook, and Twitter. The text describes the variety of lesson plans available, their alignment with education standards, and provides a link to a training module. A photograph of a yellow pulley system is shown. Below the photo, there is a section for 'Search Lesson Plans' with dropdown menus for 'Age Range' (set to 10-12) and 'Category' (set to Energy), a text input for 'Keyword', and a 'Search' button. A 'Download Complete Listing (PDF)' button is also visible.

## Electric Messages: Then and Now

**Lesson Focus:** Lesson focuses on exploring electric message systems, from light signals using International Morse Code to text messaging. Students construct a simple telegraph using a battery, wires, a switch, and bulb, and explore the impact of communications on society.

Ages 8-14

## Engineer a Dam

**Lesson Focus:** Lesson focuses on the different uses of dams and how they are engineered. Students work in teams to develop a system of damming water in a trough. The system must completely hold back the water and also have a way of executing a controlled release.

Ages 8-18

## Engineered Music

**Lesson Focus:** Lesson focuses on the engineering behind the design of musical instruments. Teams of students explore the engineering behind recorder manufacturing, and then design, construct, test, and evaluate a working musical instrument using easily found materials.

Ages 8-18

## Get Connected With Ohm's Law

**Lesson Focus:** Demonstrate Ohm's Law using digital multi-meters. Fun hands-on activities are presented that demonstrate Ohm's Law. Teachers use digital multi-meters to collect data that are plotted to show that voltage and current are related by linear functions for ordinary resistors and by power functions for light bulbs.

Ages 10-14

## Getting Your Bearings

**Lesson Focus:** Lesson focuses on the concept of friction and the use of ball bearings to reduce friction.

Ages 8-18

## Give Me a Brake

**Lesson Focus:** Lesson focuses on brakes, force, and friction, using bicycle rim brakes to demonstrate basic braking mechanisms to stop, slow, or prevent

Ages 8-18



# EXPLORATORIUM

Newspaper Bridges

Online Activities

Site includes:

- Treasure Trove
- Learning Resources Library from National Science Digital Library (NSDL).
- Special Collections including a microscope imaging station, math explorer database, webcasts, podcasts and media downloads

The screenshot shows the Exploratorium website homepage. At the top, there is a navigation bar with tabs for 'HOME', 'ABOUT', 'VISIT', 'PROGRAMS', and 'DONATE'. The main content area features a large image of a red bell on a post overlooking the ocean. Below this image is a banner for 'outdoor exploratorium fort mason'. To the right of the banner is a text box that reads: 'Visit the [Outdoor Exploratorium at Fort Mason](#) to explore the science behind wind, waves, and more.' Below the banner, there are several featured articles and sections, each with a small image and a title. These include: 'IRON SCIENCE TEACHER' (a video replay of teachers), 'SCIENCE OF MUSIC' (exploring the science of music), 'GLOBAL CLIMATE CHANGE' (researchers studying climate change), 'EXTREMOPHILES IN KAMCHATKA' (looking for life in hot springs), 'AFTERSCHOOL ACTIVITIES' (how-to videos for fun after school), 'DIGITAL LIBRARY' (search for photos, videos, and webcasts), 'EXPLORATORIUM IN SECOND LIFE' (virtual world), 'TEN COOL SITES' (browse archives for science, art, and education), and 'LEARNING STUDIO BLOG' (adventures of staff). On the right side of the page, there is a sidebar with several sections: 'AT THE MUSEUM' (Hours & Admissions, Directions, Calendar, Roof Cam), 'SUPPORT' (Donate, Membership, Volunteer), 'GET INFO' (Sign up for eNews, Press Office, Museum Rentals), and 'LATEST ON EXPLO.TV' (Upcoming events like 'Egg Science: An Ova-view of Eggs' and 'Hubble Space Telescope Servicing'). The date 'Tuesday, March 17th, 2009' is visible in the top right corner.

# NASA EDUCATION

The screenshot shows the NASA Education website layout. At the top is a dark navigation bar with the NASA logo on the left and menu items: HOME, NEWS, MISSIONS, MULTIMEDIA, ABOUT NASA, and CONNECT. Below the navigation bar is a search bar with a 'Search' button and links for 'Log In To MyNASA' and 'Sign Up'. A breadcrumb trail reads 'NASA Home > Education > For Educators > Grades K-4'. The main content area is divided into several sections:

- NASA Education** (left sidebar):
  - About NASA Education
  - For Educators
    - For Educators
    - Grades K-4
      - Grades K-4
        - Featured Materials
        - Featured Sites
        - Have You Seen ...
        - Education Programs
      - Grades 5-8
      - Grades 9-12
      - Higher Education
      - Informal Education
      - Find Teaching Materials
      - Education TV Schedule
      - Current Opportunities
    - For Students
      - NASA Kids' Club
- NASA eClips™** (bottom left)

- Featured Teaching Materials** (center):
- Living With a Star** (03.09.10): Includes an image of the 'Living With a Star' educator guide cover and a description: 'This NASA educator guide gives educators a quick reference to materials and resources that are useful for understanding the connections between the sun and Earth.' A 'View' link is present.
- Rocket Math**
- Kids Science News Network™: What is Gravity?** (with a 'View Archive' button)
- Featured Sites** (bottom center)
- Have You Seen...** (bottom center)
- Education Programs** (right sidebar):
- Text: 'NASA offers many educational programs for K-4 educators throughout the year. See what is available now.'
- Link: '> View Programs Listing'
- Current Opportunities** (right sidebar):
- GLOBE at Night 2010 Event**: 'From March 3-16, 2010, observe and record the magnitude of stars as a means of measuring light pollution in your area.'
- NASA eProfessional Development Network**: 'Join NASA on March 31, 2010, for a webcast demonstrating how teachers can benefit from the ePDN's certificate programs in Robotics, Statistics, Earth and Space Science, and Instructional'.

<http://www.nasa.gov/offices/education/about/index.html>

# WINDOWS TO THE UNIVERSE

The screenshot shows the homepage of the 'Windows to the Universe' website. At the top, the title 'WINDOWS TO THE UNIVERSE' is displayed in large, stylized letters, with a red orbital path graphic. To the right, there is a 'Spanish' button with a sun icon. Below the title, three main sections are highlighted: 'Our Planet' with an image of Earth, 'Our Solar System' with an image of the solar system, and 'Astronomy & the Universe' with an image of a galaxy. A navigation bar contains icons for 'Postcards from the Field', 'Citizen Science', 'Games & Puzzles', 'Journal Tool', 'Blogs', 'Science History Calendar', 'Science Store', and 'Educator ENews'. A 'Featured Topics' section lists: 'Climate in the Southeast Pacific', 'Eureka! New NSF Science Research', 'All About weather, clouds, & Climate', and 'Studying Megacity Air Quality'. At the bottom, there are icons for 'Life', 'Geology', and 'Physics', along with logos for NASA, NCAR, GMAP, and CISM. A large image of Jupiter is visible on the right side of the page.

## Windows to the Universe

### Science History Calendar

Choose a date to see this  in science history.

#### March 14

##### 1835 - [Giovanni Schiaparelli's birthday](#)

Gioavanni Schiaparelli was an Italian astronomer who lived between 1835-1910. He observed patterned str channels, later misinterpreted as "canals."

##### 1879 - [Birthday of Albert Einstein](#)

Albert Einstein was a German physicist who lived between 1879-1955. Probably the most well-known scientist and invented modern physics. He is most famous for his theory of relativity,

#### March 16

##### 1750 - [Caroline Herschel's birthday](#)

Caroline Lucretia Herschel was a German astronomer who lived between 1750-1848. She worked in England make astronomical observations and then making her own.

##### 1926 - [Robert Goddard uses first liquid rocket fuel.](#)

Robert Goddard was a pioneer of modern rocketry who discovered that liquid fuel is more efficient than solid him believe that travel into space and to the Moon was possible.

#### March 17

##### 1853 - [Death of Christian Doppler](#)

Christian Doppler was an Austrian mathematician who lived between 1803-1853. He is known for the principle 1842. This principle is now known as the Doppler Effect

WWW.POLLEVERYWHERE.COM

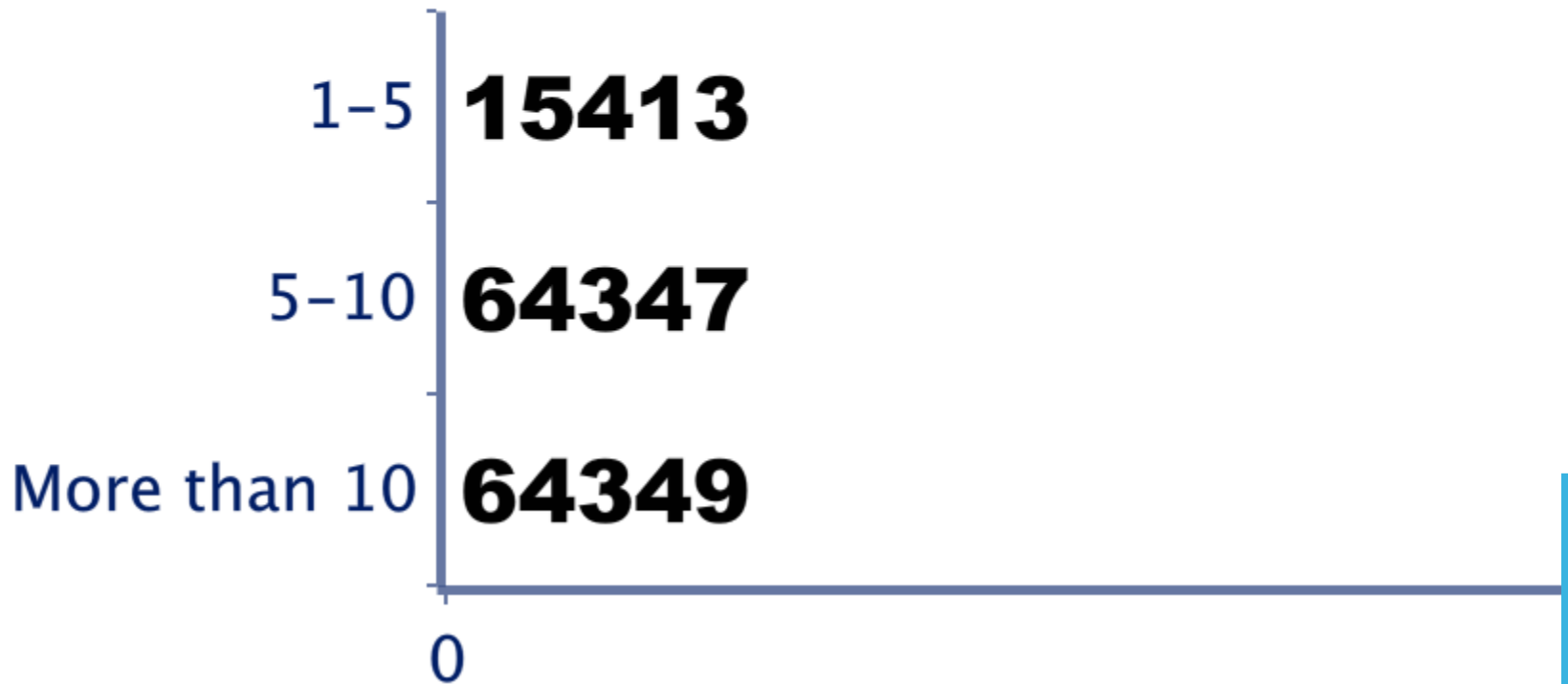
## How many resources did you learn about to for the first time?



Text a **CODE** to **37607**



Submit a **CODE** to **<http://pollev.com>**



**SPECIAL THANKS TO JAN  
COLEY - JEFFERSON COUNTY  
SCHOOLS**

**John Payne**

**[jpayne@k12k.com](mailto:jpayne@k12k.com)**

**Beverly Miller**

**[millerb@gcschools.net](mailto:millerb@gcschools.net)**