

## Internet Sites for K-8 Mathematics

from <http://www.merrybee.info> -02/18/08

Listings for other subjects in the curriculum online at <http://www.merrybee.info/subj.html>

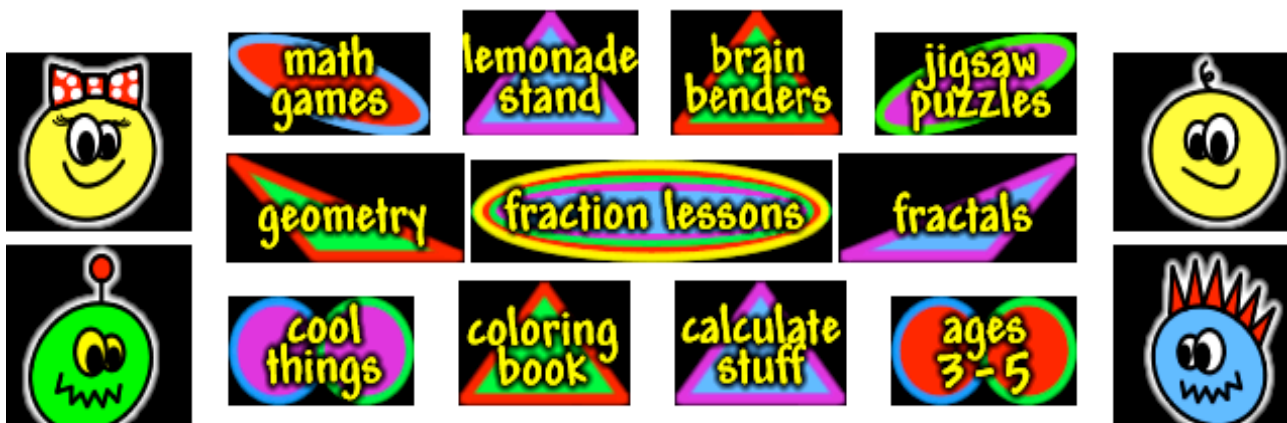
Listings for uses of the Internet in the classroom at <http://www.merrybee.info/book.html>

- <http://www.enchantedlearning.com/calendar/>  
*A to Z Calendar Printouts.* Topic: time  
Make and print your own calendar or choose one of the theme calendars. Link to page with activity booklets to print based on calendar concepts. For teachers to use with grades k-5.
- <http://www.aplusmath.com>  
*A+ Math.* Topic: computation  
Interactive flashcards and teacher can create his/her own. Online games. Matho (Bingo/Math), Concentration, and Hidden Picture. Students use Homework Helper to check their answers to problems. Teachers can print Math Word Finds, worksheets, and flashcards. grades 1-6.
- <http://www.aaamath.com/index.html>  
*AAA Math.* Topic: various  
Select by grade level from kindergarten through 8, or by topic from addition through statistics. Each page includes an explanation of the concept or skill, interactive practice, and online game.
- <http://www.learningwave.com/abmath/>  
*Absurd Math.* Topic: problem solving  
Episodes from a science fiction adventure integrate prealgebra math into the game play. The four episodes at the site are free examples of the subscription that Learning Wave sells that includes over fifty interactive math stories. This sampling might hold the attention of some students who would otherwise disdain doing the math, but whether students learn any strategies for problem solving is questionable. Best considered as an optional extra for a pair of students in the computer lab or library. The episodes don't change. grades 6-8.
- <http://www.allmath.com>  
*Allmath.* Topic: various  
Use online flash cards, Magic Square game, metric converter. Reference pages for biographies of math, multiplication table forms, and both a math glossary and dictionary. Links. Some sections don't work on some systems. grades 3-8.
- <http://www.oswego.org/ocsd-web/games/Mathmagician/mathsmulti.html>  
*Are You a Math Magician?* Topic: basic facts  
One minute multiplication drill. Select a single multiplier 1 through 10, or mixed. A keyboard with a keypad is a benefit to entering the answers. grades 2-5
- <http://www.dupagechildrensmuseum.org/aunty/index.html>  
*Aunty Math.* Topic: problem solving  
Biweekly math challenge. Students can compare approaches others use to solve problems. Archived. grades K-5.
- <http://io.uwinnipeg.ca/~jameis/New%20Pages/EYR21.html>  
*Automaticity of the basic facts of arithmetic.* Topic: basic facts  
Why students must master the basic facts and strategies for teaching them. This is an article for the teacher, not for student access. for TEACHERS of the primary grades
- <http://www.cosi.org/onlineExhibits/farm/farmFrame.htm>  
*Bet The Farm.* Topic: real world  
In this interactive simulation, players assume the role of a farmer and make decisions about what products to raise, how to manage product growth, and how to market the harvest in an effort to keep the farm profitable at the end of the year. No calculations are necessary to play, but with repeated trials students will probably see the need to use mathematics in planning their choices. A lot of information lies beneath the surface; click on "information" and "report" buttons. Maintained by Ohio's Columbus Center of Science and Industry. grades 4-8.

- <http://www.bbc.co.uk/schools/ks2bitesize/index.shtml>  
*Bitesize Maths*  
Click 'Maths'; then 'Number'; then scroll to 'Number System'. Covers place value, multiply & divide by 10 or 100, rounding, comparing numbers. Select the guided activity, a factsheet, or a quiz. grades 3-6. Topic: number system
- <http://www.harcourtschool.com/activity/buzz/buzz.html>  
*Buzzing With Shapes*. Topic: shapes  
Two players find shapes with a specified number of sides (1-6). Shapes are not named. presch-1
- <http://www.funbrain.com/cashreg/index.html>  
*Change Maker*. Topic: money  
Teaches making change in a game format with four levels from easy to super brain. In the game if the answer is correct, the amount of change is added to a piggy bank. If the answer is wrong, the correct amount of change is subtracted from the piggy bank. The more money you get in your piggy bank, the harder the questions will get. grades 2-8
- <http://sln.fi.edu/time/keepers/Silverman/index.htm>  
*Community of Clocks*. Topic: number system  
Two games at upper left relate to understanding Roman Numerals for 1 to 12: match with Arabic and put in order. grades 2-3
- <http://coolmath4kids.com/>  
*Coolmath4kids*. Topic: various  
Fun math activities from printable coloring pages to geometrical concepts provide something for grades K-8. Games cover basic computation, word problems, and special topics such as tessellations. Online calculator. Note the caution at the bottom concerning similar URLs. grades k-6



FUN FUN FUN



- <http://www.counton.org/magnet/minus/index.html>  
*Count On: Issue 1*. Topic: number system  
Five of the seven games here develop concepts of number system. Once introduced to the game instructions, then students can play independently. grades k-2

- <http://nces.ed.gov/nceskids/graphing/>  
*Create A Graph.* Topic: data analysis  
Templates for creating area, bar, line, pie, and XY plot graphs. grades 5-8
- [http://pbskids.org/cyberchase/webisode\\_1/web\\_1game.html](http://pbskids.org/cyberchase/webisode_1/web_1game.html)  
*Crack Hacker's Safe.* Topic: patterns  
Select shape, color, and number attributes to complete the sequence. Three screens with no variation on repeat plays. grades 4-6
- <http://standards.nctm.org/document/eexamples/chap4/4.1/index.htm>  
*Creating, Describing, and Analyzing Patterns.* Topic: patterns  
Students use an interactive pattern making tool to create, compare, and predict. Two classroom extension lessons: Describing Patterns gives examples of various ways of analyzing patterns, Extending Pattern Understandings describes creating a grouping that can be repeated.  
grades preschool-2
- <http://www.mathmastery.com/cyberchallenge/index.cfm?CFID=525988&CFTOKEN=47581244>  
*CyberChallenge.* Topic: basic facts  
Choose operation for an online timed drill. Scored. Requires Flash. grades 2-4
- <http://www.math.rice.edu/~lanius/>  
*Cynthia Lanian's Lessons.* Topic: various  
Lessons section has instructional activities for variety of ages from counting to online geometry. Other sections on girls and computers, Web-based presentations, curriculum links by subject.  
grades k-8
- <http://www.goenc.com>  
*ENC: K-12 Math and Science Teacher Resources.* Topic: teaching mathematics  
The Eisenhower National Clearinghouse was discontinued September 29, 2005 when the U.S. Dept of Education stopped funding this resource. ENC is now a subscription service, but the search feature is free. For an annual fee of \$349 all teachers in a school can access the online lessons, articles about education issues, links, information about curriculum materials, the national standards, and other professional development aids previously offered by the Eisenhower National Clearinghouse. grades k-12
- <http://www.figurethis.org/>  
*Figure This!* Topic: real world  
Eighty real world problem activities designed to be used at home as family challenges. Gives hints and resources about the concept. Introductory online video. Spanish option. grades 5-8
- <http://www.first-school.ws/theme/shapes.htm>  
*First Shapes.* Topic: shapes  
Activities and crafts using shapes, many associated with holidays and seasons. Additional print pages to color, worksheets, and flashcards at [http://www.first-school.ws/theme/shapes\\_preschool\\_printables.htm](http://www.first-school.ws/theme/shapes_preschool_printables.htm) grades preschool-1
- <http://www.edu4kids.com/index.php?TB=2&page=12>  
*Flashcards for Kids.* Topic: computation  
User can choose operation, the complexity, the number size, score on or off, timer on or off, horizontal/vertical. grades 1-6
- <http://www.sssoftware.com/arithmeticfacts/index.html>  
*Free Arithmetic Fact Pages.* Topic: basic facts  
Print basic fact tables. For student practice, fold the printed page so that answers are hidden. Good for takehome. grades 1-3
- <http://www.rblewis.net/technology/EDU506/WebQuests/shapes/shapes.html>  
*Fun With Shapes.* Topic: shapes  
A webquest for students to examine circle, square, and triangle shapes in a variety of online and offline activities. grades k-1

- <http://www.comsewogue.k12.ny.us/~ssilverman/graphs/>  
*Graph Goodies*. Topic: data analysis  
Click "Student Graphs" for an online interactive graph book. Graphs were created as an online project coordinated by Mrs. Silverman in 2002. grades k-2
- <http://earthobservatory.nasa.gov/Laboratory/Biome/graphindex.html>  
*Great Graph Match*. Topic: data analysis  
Pairs of temperature-rainfall graphs are presented for the student to match with a city. Students can check descriptions of the biome in which the city is found. Measurements are given in Celsius and millimeter. Two levels: select either beginner or advanced. grades 5-8
- <http://people.clarityconnect.com/webpages/terri/terri.html>  
Homepage For New Math Teachers  
Articles and tips about teaching, for example: classroom management, homework. Links to resources for both teachers and students. The teacher-author emphasizes a balance in teaching skills, concepts and problem solving. grades k-9
- <http://illuminations.nctm.org/>  
*Illuminations*. Topic: teaching mathematics  
Over 500 lesson plans, 92 online activities, and the complete NCTM standards with teaching examples for reflection. Links to hundreds of other reviewed online lessons and student investigations organized by standard. Searchable. grades preschool-12

- <http://darkwing.uoregon.edu/~moursund/Math/>  
*Improving Mathematics Education*. Topic: teaching mathematics  
Features pdf file of the book *Improving Math Education in Elementary Schools* by Dave Moursund, November 2004, with three sections: Brain Theory, Craft & Science of Teaching & Learning, and Information & Communications Technology. Site includes other documents. Designed for teacher study in a workshop or self-study.
- <http://www.kidsbank.com/>  
*Kids Bank*. Topic: money  
Cartoon characters give large print explanations about money from 5 pennies = 1 nickel to checking, interest, and ATM. grades 3-6, and 1-2 with assistance.

- <http://www.k111.k12.il.us/king/math.htm>  
*King's Math Activities*. Topic: various  
Links to sites with math activities are organized by topic; downloadable or to do online with Shockwave. Lesson plans for teachers. Sample online tests. Managed by the technology coordinator at a grade 4-6 school, but content is K-8.
- <http://www.funbrain.com/math/>  
*Math Baseball*. Topic: computation  
Online game for one or two players. Select skill level and addition, subtraction, multiplication, division, or mixed. Type in the answer and submit by clicking Swing. How far the ball goes depends on the difficulty of the problem. grades 2-7
- <http://www.mathgoodies.com/>  
*Math Goodies*. Topic: various  
Interactive math lessons designed for grades 5 - 8 using a problem-solving approach includes: number theory, integers, probability, percent, area, pre-algebra. A separate section includes Homework Help, Chat Boards, Math News, Puzzles, and a Parents Place. grades 5-8

## Math Help



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Welcome to Math Goodies, a math help portal featuring [interactive lessons](#), [worksheets](#) and [homework help](#). A pioneer of interactive help, our site has been [reviewed](#) on television and radio! Today we have over 500 pages of activities for students, educators and parents.

Join our growing community and [sign up for our free newsletter!](#) We'll keep you informed of the latest math news and site updates while respecting your [privacy](#).

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**Feature of the Week**

[Percent: learn the meaning of percent!](#)

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- <http://teacher.scholastic.com/mathhunt/index.asp>  
*Math Hunt*. Topic: real world  
Select a science or social studies topic and follow links to find data to solve math problems. Automatic scoring online. Teacher's Guide. grades 5-8
- <http://www.mathdrill.com>  
*MathDrill*. Topic: computation  
Drill on addition, subtraction, multiplication, division, ordering of numbers, fractions, decimals, percent, algebra. In practice mode, student works interactively through levels; 86 currently available. In homework mode, teacher assigns number of problems, level, grade and checks scores after completion. Includes direct computation and word problem format. Explanations given for answers. Requires free registration for teacher tracking purposes. Requires Java and cookies be enabled. Students work independently after teacher introduction. grades 1-8

- **<http://www.teachers.ash.org.au/jeather/maths/dictionary.html>**  
*Maths Dictionary For Kids*. Topic: various  
An interactive math dictionary explaining over 500 common mathematical terms. Click on a letter of the alphabet to load that wordlist on the left-hand page, then click on a word to load the definition on the right-hand page. In addition to a text definition, most entries have graphics and animation to illustrate the concept, and some have practice activities where appropriate. Created by Jenny Eather, a teacher in Australia. grades 2-6
- **<http://www.bbc.co.uk/education/mathsfile/gameswheel.html>**  
*Maths File Game Show*. Topic: number system  
Four number games provide practice for: ordering numbers, factors, fractions, rounding. Requires Shockwave. grades 5-8
- **<http://www.aaamath.com/mea.html>**  
*Measurements*. Topic: measurement  
Covers both U.S. and metric measurement units and also conversions. Each lesson has an explanation, interactive practice, and a challenge game. grades 5-8
- **<http://www.c3.lanl.gov/mega-math/workbk/contents.html>**  
*MegaMath*. Topic: problem solving  
"The MegaMath project is intended to bring unusual and important mathematical ideas to elementary school classrooms so that young people and their teachers can think about them together." grades 3-8
- **<http://sciencespot.net/Pages/classmetric.html>**  
*Metric Mania Lessons*. Topic: measurement  
Lesson plans created by a science teacher for measuring with the metric system and conversions from the American system to metric equivalents. Requires PDF Reader. Links. grades 5-8
- **<http://www.mathleague.com/help/metric/metric.htm>**  
*Metric Units and Measurement*. Topic: measurement  
Identifies metric units of measure and abbreviations for length, volume, mass, time and temperature. Explains the decimal concept. No activities, just fact sheets. grades 4-7
- **<http://www.edu4kids.com/index.php?page=18>**  
*Money Count*. Topic: money  
Count total of US coin images; will not be greater than \$2.00. Can choose whether to keep score and if timed or untimed. More activities to come. Access to options for increased difficulty with \$10 annual membership. grades 2-4
- **<http://www.moneyopolis.com/new/home.asp>**  
*Moneyopolis*. Topic: money  
Game of economics in which students learn about financial planning and money management. Free registration to play, but you can use a fictitious name. Optional record keeping for the teacher. Students will like the graphics. grades 6-8
- **<http://www.multiplication.com/>**  
*Multiplication.com*. Topic: basic facts  
A wealth of materials for proficiency in whole number multiplication. Gives the teacher alternative techniques and tips. Gives the student online lessons and games. Includes suggested activities and printable worksheets for offline practice and assessment.. grades 2-5
- **<http://nlvm.usu.edu/en/nav/vlibrary.html>**  
*National Library of Virtual Manipulatives*. Topic: teaching mathematics  
Move and experiment online with these manipulatives, such as base ten blocks, geoboard, spinners, etc. Select by grade span and NCTM standard. Each manipulative has a menu of instructions, activities, and teacher information. Keyword searchable. Java scripts may have problems on some systems. grades preschool-8

- **<http://www.nationalmathtrail.org/>**  
*National Math Trail*. Topic: real world  
 Take a walking tour of some place in the community and create math problems based on what you see and you have created a Math Trail. All you need to submit your Trail to the site is here: lesson plans, learning exercises, rubric assessment, examples of student work, technology guide, and the registration and submission process. If not creating a Math Trail, you can still use the Trails as real-world math practice, especially if someone has already done one for an area familiar to students (check the National Math Trails map). Can be targeted for any level from kindergarten (see Iowa - South Hamilton) on up. Site managers would LOVE to have more submissions. grades k and up
- **<http://www.edbydesign.com/math/index.html>**  
*Number Cruncher*. Topic: computation  
 Ten problem drill on addition, subtraction, multiplication, division, or all combined. Because of all the other links on the page, the teacher will need to select the type and one of three levels, then the student can do the drill independently. Not timed. A correct answer is scored immediately, but the correct answer is not shown when there is an error. Hint: be sure that the student clicks in the answer box to begin entering answers. grades 1-5
- **[http://abcteach.com/directory/basics/abc\\_activities/number\\_flashcards/](http://abcteach.com/directory/basics/abc_activities/number_flashcards/)**  
*Number Flashcards*. Topic: number system  
 Printable pages for numbers 1 to 20 with numeral, pictures to show number and word in D'Nealian. grades k-1
- **<http://scithon.terc.edu/>**  
*Online Science-athon*. Topic: data analysis  
 Free enrollment for a class data collection and analysis project: measurement for grades 2-3, choice of three for grades 4-8. grades 2-8
- **<http://sln.fi.edu/school/math2/index.html>**  
*Open-Ended Math Problems*. Topic: problem solving  
 Problems for each month, created to help prepare middle school students for testing. There are 5-10 problems on each page that get progressively more difficult. The problems encourage higher level thinking skills as well. grades 6-8
- **<http://www.shodor.org/master/interactivate/activities/patterns/index.html>**  
*Pattern Generator*. Topic: patterns  
 Activity to discover and continue a given shapes pattern. grades 2-5
- **[http://arcytech.org/java/patterns/patterns\\_j.shtml](http://arcytech.org/java/patterns/patterns_j.shtml)**  
*Pattern Blocks*. Topic: shapes  
 Designed to study fractions. Descriptions of shapes in relation to each other. Links to exercises. grades 3-6
- **<http://pbskids.org/cyberchase/games/patterns/patterns.html>**  
*Pattern Player*. Topic: patterns  
 Exploratory tool to create and hear audio patterns. Analysis for learning would need to be supplied by the teacher. grades 2-6
- **<http://primes.utm.edu/>**  
*Prime Pages*. Topic: number system  
 All about prime numbers: history, theory, trivia, links. Great site for enrichment for math whizkids and to amaze the rest of us that there is so much to be known about a single, seemingly simple, concept. grades 4-12
- **<http://www.wits.ac.za/ssproule/pow.htm>**  
*Problem of the Week*. Topic: problem solving  
 Sites that offer problem of the week content are listed with brief descriptions. Select elementary or middle school. Note that the "faces" are a code further describing each site. grades 1-8

- <http://www.shodor.org/master/interactivate/activities/patterns/index.html>  
*Project Interactivate*. Topic: various  
Tools and activities to explore math concepts organized by the NCTM math standards. Designed for middle school with a selection for grades 3-5. Requires java. grades 3-8
- <http://www.quia.com/mathjourney.html>  
*Quia: Math Journey*. Topic: computation  
Choose level of difficulty and either addition, subtraction, multiplication, division, rounding, or mixed. Solving the problems advances the user on a trip around the world. grades 1-8
- [http://gouchercenter.edu/jcampf/searching\\_for\\_solutions.htm](http://gouchercenter.edu/jcampf/searching_for_solutions.htm)  
*Searching for Solutions*. Topic: problem solving  
This internet-based problem solving unit explains eight problem solving strategies and gives activities to apply these strategies. The original content in the unit is interwoven with links to other websites for collecting data. Includes printable recording sheets and rubrics for evaluating problem solving. grades 4-6
- <http://www.funbrain.com/poly/index.html>  
*Shape Surveyor*. Topic: shapes  
Calculate the perimeter and/or area of a rectangle. Choose from four levels of difficulty. grades 3-6
- [http://www.bornthinker.com/ctemplate.php?body=smiley\\_clock&t=](http://www.bornthinker.com/ctemplate.php?body=smiley_clock&t=)  
*Smiley Clock*. Topic: time  
Students are given a clock and click on the correct time to five minutes from a series of possible answers. Correct answers reveal features on the smiling face of the clock. Requires Shockwave. Young student can work independently after you have clicked "Play" to start the game from the site home page. grades 2-3
- <http://mathforum.org/geometry/rugs/>  
*Symmetry and Pattern: The Art of Oriental Carpets*. Topic: patterns  
Study principles of symmetry and patterns and then apply them to the analysis of design in Oriental carpets. grades 3-8
- [http://www.nist.gov/public\\_affairs/kids/kidsmain.htm](http://www.nist.gov/public_affairs/kids/kidsmain.htm)  
*Taking America's Measure*.  
Topic: measurement  
Uses puzzles and activities to explain the American standardized weights and measures and explains the metric system. Created by The National Institute of Standards and Technology. grades 5-8
- <http://learner.org/teacherslab/math/patterns/index.html>  
*Teachers' Lab: Patterns In Mathematics*. Topic: patterns  
Designed to deepen teacher understanding of concepts with materials that can be used in the classroom. Logic, number, and word patterns, each with the rationale and two activities. Suggests how to use the activities at different grade levels. grades k-5

## Symmetry and Pattern

### The Art of Oriental Carpets

[About Symmetry and Pattern](#)

[Rug Gallery](#)

[About Oriental Carpets](#)

[Educational Resources](#)

[About This Web Site](#)



ORIENTAL CARPETS have long been appreciated for their beauty. That beauty is achieved through the choice of colors and designs, as well as by the manipulation of designs and colors to form pleasing patterns.

Patterns in Oriental carpets are never quite what you expect – a surprise here, a flourish there, a change of color, the flip or rotation of a design where you might not predict it. The more you look, the more variations you will find.

How can we explain this phenomenon? Is it the result of human choice, or human error?

The study of symmetry offers one approach to analyzing patterns in Oriental carpets. Through symmetry analysis we may identify areas of pattern that exhibit expected repetitions, and areas that vary from that expectation.



- <http://www.fi.edu/qa00/attic3/>  
*Teaching Time*. Topic: time  
Online clock exhibits from The Franklin Institute cover the history of telling time and different kinds of clocks. Includes interactive games and features; lesson plans. grades 3-8
- <http://www.bbc.co.uk/wales/snapdragon/yesflash/time-1.htm>  
*Tell The Time*. Topic: time  
This is an optional site for limited use if it meets a specific need. Click on arrow to move clock hands to the time given by hours, and the dragon announces the time in English and Welsh. Created by the BBC. Requires Macromedia Flash. grades k-1
- <http://www.dositey.com/math/time.htm>  
*Telling Time*. Topic: time  
This is an optional site for limited use if it meets a specific need. Print worksheets for practice in telling time. Some other parts of this Dositey site are fee-based. Teacher use for grades 1-2.
- <http://www.lil-fingers.com/games/time/>  
*Time Teller*. Topic: time  
Students move hands on the clock to match a given time to five minutes. grades 2-5
- <http://www.tipsforkids.com/>  
*Tips for Kids*. Topic: money  
Four modules comprise an economics unit on money and investment. Designed to be taught 2-3 hours per week for ten weeks. Free, but requires registration. grades 6-8
- <http://www.primarygames.com/time/start.htm>  
*What Time Is It?*. Topic: time  
Match the time shown on an analog clock with the correct digital clock. Times to half hours. The need to ignore labeled ad windows and other links keep this from being recommended for independent use at lower levels. grades 1-4
- <http://www.whatworks.ed.gov/>  
*What Works Clearinghouse*. Topic: teaching mathematic  
Two reports of research related to math: *Middle School Math Curricula* and *Elementary School Math (K-5)*. What Works Clearinghouse reviews studies of education interventions (defined as programs, products, practices, and policies). grades 6-8
- <http://www.harcourtschool.com/activity/willy/willy.html>  
*Willy The Watchdog*. Topic: time  
Online game for two players to practice telling time to the half hour. The teacher will need to help students to get started with the pattern of play: click to roll die, click to move hands, click "done". Gameboard doesn't change with subsequent play. Requires Macromedia Shockwave plug-in. grades 1-3
- <http://oncampus.richmond.edu/academics/education/projects/webunits/measurement/>  
*World Of Measurement*  
Explanations and activities introduce upper elementary students to basics and everyday uses of measurement for length, mass, temperature, time, and volume. grades 3-6
- <http://www.younginvestor.com/kids/>  
*Young Investor*. Topic: money  
Money management information and games. Users examine earning money, planning and budgeting, and investing. grades 5-8

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