

Newsletter

Special Interest Articles

- School Spotlight
- HASTI

Individual Highlights

- TED-Ed
- Algebra Genie
- TI-Nspire
- Algebra Touch
- Math Ref
- Inner Body
- PhET

Spotlight: Edgewood High School

Ellettsville, Indiana



PRISM Educational Liaison, Bob Jackson, visited to Edgewood High School in Ellettsville, Indiana on November 26th. He visited Anatomy, Physiology, and two Algebra classes to experience Moodle classes in action. He spoke with several students and teachers using Moodle in Math and Science classes. Most of the Math and Science teachers at Edgewood

High School are using Moodle and some of the Social Studies and English/Foreign Language teachers. These teachers have put a great deal of time into developing their impressive Moodle courses. Their courses are well-organized, comprehensive in content, and utilize a variety of resources.

All of the students at Edgewood have had iPads for the last two school years. The majority of the students really like having these as a learning tool and in the place of textbooks. The majority of the students really liked having their classes on Moodle for a variety of reasons. One of the main reasons were as a replacement for many of the notes in class. Teachers liked having their lessons organized on the Moodle platform and particularly liked the linear organizational format. Many of the teachers have used Moodle for two years now and some of them have just come on board to using Moodle in the last year. Edgewood started using Moodle on PRISM in 2013. All of the Moodle teachers at Edgewood High School say that setting up a Moodle course is a great deal of work up-front; however, they really like using it in class and in coordination with the students all having iPads.

We welcome Edgewood High School to PRISM. We are looking forward to working with the faculty at Edgewood High School. Future visits are planned and a more intensive Moodle training workshop for Edgewood High School is being planned.

The PRISM team at Rose-Hulman would like to thank Mr. Ackerman, Principal at Edgewood High School, for allowing us to visit the school and to all the teachers for welcoming us into their classrooms.

PRISM provides free, on-site professional development events for Indiana schools? Topics and services are given below. Or, we can tailor a training session specifically for your needs. Contact Bob, PRISM Educational Liaison, jackson2@rose-hulman.edu to schedule a convenient time to share PRISM with your staff.

- Easily find teaching and learning resources from our library of over 3,000.
- Create and share lesson plans using your favorite resources.
- Develop interactive online classrooms.
- Store classroom materials online so that they are available from any computer.
- Reach your students more effectively by using web media.
- Earn PGP Points by completing free PRISM led online Moodle courses available several times throughout the school year.



<http://ed.ted.com/>

TED-Ed

TED-Ed is a free educational website for teachers and learners. We are a global and interdisciplinary initiative with a commitment to creating lessons worth sharing. Our approach to education is an extension of TED's mission of spreading great ideas.

Within the growing TED-Ed video library, you will find carefully curated educational videos, many of which represent

collaborations between talented educators and animators nominated through the TED-Ed platform. This platform also allows users to take any useful educational video, not just TED's, and easily create a customized lesson around the video. Users can distribute the lessons, publicly or privately, and track their impact on the world, a class, or an individual student.



<https://edshelf.com/tool/algebra-genie>

Algebra Genie

Next-generation interactive textbook, at the fraction of the cost of tutoring or your current paper textbook!

The most complete and interactive Algebra course, developed by over 100 Algebra teachers and used by millions of Algebra students worldwide. The Algebra Genie gets you learning quickly while having fun.

Developed using the latest in game mechanics, we have spared no cost to make sure we have the best learning app covering Algebra!

Over 250 interactive and dynamic lessons, covering all the important Algebra topics, to get you into college quickly!



<https://edshelf.com/tool/ti-nspire>

TI-Nspire

Texas Instruments, the No. 1 recommended brand of graphing calculators in the U.S., has optimized its most powerful handheld technology for an all-in-one iPad app that makes teaching and learning math more engaging, meaningful and ... fun!

ONE APP. ALL THE MATH.

Open the door to math mastery with the first-in-class iPad app that delivers comprehensive graphing, data entry and analysis, statistical modeling and calculating functionality.

Make math more meaningful by importing images from the iPad camera or photo library and overlaying graphs and equations on them to illustrate abstract math principles in the real world.

Visualize crucial connections by observing how equations change — in real time, on one screen — when you touch, grab and interact with shapes, graphs and objects on the screen.

Graph functions, inequalities, implicit functions, conic sections, scatter plots, statistical plots and regression models, 3D graphs, parametric, polar and differential equations.

Enter equations in proper math notation so math symbols and formulas on the screen are identical to those in text books and on the board.



<https://itunes.apple.com/us/app/algebra-touch/id384354262>

Algebra Touch

Have you forgotten most of your algebra? Algebra Touch will refresh your skills using touch-based techniques built from the ground up for your iPhone/iPad/iPod Touch.

Enjoy the wonderful conceptual leaps of algebra, without getting bogged down by the tedium of traditional methods.

“With this app, the author has successfully made algebra beautiful. I really wish this app existed when I was studying algebra 25 years ago.”

Drag to rearrange, tap to simplify, and draw lines to eliminate identical

terms. Easily switch between lessons and randomly-generated practice problems. Create your own sets of problems to work through in the equation editor, and have them appear on all of your devices with iCloud.

Simplification, Like Terms, Commutativity, Order of Operations, Factorization, Prime Numbers, Elimination, Isolation, Variables, Basic Equations, Distribution, Factoring Out, Exponent Product Rule, and Exponent Quotient Rule are functions that can be done with Algebra Touch.



<https://edshelf.com/tool/math-ref>

Math Ref

Math Ref is an award winning education app. With it you can browse over 1,400 formulas, figures, and examples to help you with math, physics, chemistry and more. Use an expanding list of helpful tools such as a unit converter, quadratic solver, and triangle solver to perform common calculations.

Math Ref covers a range of mathematics disciplines, such as:

- Algebra
- Geometry
- Trigonometry
- Series & Sequences
- Derivatives
- Integration
- Intro Probability and Statistics
- Intro Physics
- Intro Algorithms
- Intro Financial
- Greek Alphabet
- Prime Numbers

New Features:

- New Tools - Algebra to Physics
- Search
- Print Support - Print equations
- Editable Notes
- Zoomable Equations
- App Orientation Locking
- UI - An all around better UI

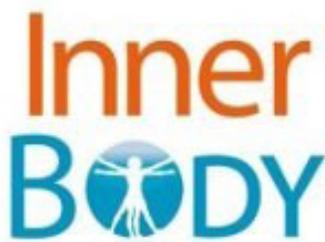
The free version gives you just a sample (over 700) of the over 1,400 helpful formulas, figures, tips, and examples that are included in the full version of Math Ref. So, if you're a student, teacher, or need math for work and want to try before you buy, the free version is for you.

2012 Best App Ever

- 🏆 1st Place Best College Student App
- 🏆 2nd Place Best High School App
- 🏆 2nd Place Best Middle School App

• 2011 Best App Ever

- 🏆 2nd Place Best Young Adults App
- 🏆 3rd Place Best High School App
- 🏆 Nominee Best Middle School App
- 🏆 Nominee Best College Student App



<http://www.innerbody.com/>

Inner Body

Explore the human body like never before! With hundreds of interactive anatomy pictures and descriptions of thousands of objects in the body, InnerBody.com will help you discover what you want to know about human anatomy, right here at your fingertips.

Online since 1997, InnerBody is your go-to resource for accurate and easy-to-use information about human anatomy, exploring all systems of the human body. More than 10 million patients, students, and other inquisitive people visit our website each year. More than 200 high schools and community colleges integrate our content into their curriculum and use InnerBody as a fun, interactive alternative to expensive textbooks. We're proud of the fact that InnerBody has received excellence awards from the likes of Popular Science, Homeschool.com, and other organizations dedicated to furthering education.

InnerBody's new InnerBody Explorer interactive learning tool features over

300 high-resolution 3D CAD views of over 1500 objects in the body, covering all 13 major anatomical systems. InnerBody Explorer makes learning about the human body fun. No fancy browser plugs-ins or Flash are needed (just make sure your browser version is up to date) and perhaps best of all, our site is 100% free.

Who Produces This Resource?

InnerBody is produced and managed by a dedicated small team based out of San Francisco, CA. We are passionate about using technology to transform how we learn about health and the human body. InnerBody is a for-profit website with a not-for-profit mindset and mission. We believe that it is very important for Internet users throughout the world to have access to up-to-date and accurate information in a medium that takes advantage of the latest technologies. While not every patient, student or classroom can afford anatomy textbooks or iPad applications, anyone with an Internet connection has access to a wealth of information on InnerBody free of charge.



<http://phet.colorado.edu>

PhET

PhET provides fun, interactive, research-based simulations of physical phenomena for free. The authors and developers of PhET believe that research-based approach- incorporating findings from prior research and their own testing- enables students to make connections between real-life phenomena and the underlying science, deepening their understanding and appreciation of the physical world.

To help students visually comprehend concepts, PhET simulations animate what is invisible to the eye through the use of graphics and intuitive controls such as click-and-drag manipulation, sliders and radio buttons. In order to further encourage quantitative exploration, the simulations also offer measurement instruments including rulers, stop-watches, voltmeters and thermometers. As the user manipulates these interactive tools, responses are immediately animated thus effectively illustrating cause-and-effect relationships as well as multiple linked representations (motion of the objects, graphs, number readouts, etc.)

To ensure educational effectiveness and usability, all of the simulations are extensively tested and evaluated. These tests include student interviews in addition to actual utilization of the simulations in a variety of settings, including lectures, group work, homework and lab work. Our rating system indicates what level of testing has been completed on each simulation.

HASTI: The Next Generation

The 43rd Annual HASTI Conference, HASTI: The Next Generation, will be held February 5-7, 2014 at the Indiana Convention Center in Indianapolis, Indiana.

As a member of HASTI you will have the opportunity to:

- * participate in the annual conference, which is now attended by over 2000 science educators annually!
- * receive The Hoosier Science Teacher, a journal of professional articles, and the Sci-Ed-ogram, a newsletter on science developments
- * keep abreast of developments in school science programs through association meetings and publications
- * publicize innovation practices you are trying in your classroom
- * keep aware of upcoming meetings, institutes, and workshops of interest to science educators, K-16.
- * serve as a resource person
- * be a part of a group effort to improve the quality of science education in Indiana schools

For information on the general session speakers, please see below. For more detailed information go to:

<http://www.hasti.org/HASTIconference.html>

Happy Holidays!

The PRISM Team at Rose-Hulman Institute of Technology would like to wish you and your family Happy Holidays. Enjoy time with your family and friends over this Holiday Season. Take some time to rest and relax as you take a break from school.

Cordially,

The PRISM Team: Bob, Matt, Pat, Ryan

What PRISM Can Do For You!

- Easily find the perfect teaching and learning resources from our library of over 4,000.
- Store your classroom materials online so that they are available to you from any computer.
- Select from free learning resources that emphasize visualization, rich context, staged-problem solving, and electronically enabled collaboration / communication.
- Save a list of your favorite resources for quick retrieval.
- Reach your students more effectively by using web media for the digital age.
- Augment your own dynamic presence in the classroom with teaching tools that mirror the skills needed for success in higher education and the 21st Century workplace.
- Create and share lesson plans that teach your subjects utilizing your favorite resources.
- Earn PGP points by completing PRISM led online Moodle course – either Beginning Moodle or Intermediate Moodle courses are available to you at no cost several times throughout the year.

*Through our strong support from the **Lilly Endowment** and others, we are constantly growing and improving. Check our site regularly to see what new resources you can use in your classroom.*

www.rose-prism.org



PRISM is a free website that provides collections of online resources for Indiana educators in the fields of science, technology, engineering, and mathematics (STEM). The primary collection of digital teaching materials is indexed according to the Indiana Academic Standards for 6th, 7th, and 8th grade and secondary education courses.