

App based Physics

Preparing for the Future...TODAY

Compilation of ideas from Michael Strange's presentation in Portland, Pat Callahan and Dave McCachren's preparation for March 2014 workshop at Misericordia Univ. in PA and participants of Misericordia workshop.



Apps to Assist with Classroom Presentations



www.reflectorapp.com



Reflector

1.5.4 [Release Notes](#)

Your **iPhone** or **iPad**. On your **Mac** or **PC**.

AirPlay mirror your iPhone 4S, iPad 2 or the new iPad to any Mac or PC, wirelessly.

↓ Download

\$ Purchase

-> 7.2 MB - Free Download is a limited time trial. Requires OS X 10.6.8 or Windows XP and greater and a compatible device.



\$12-Single



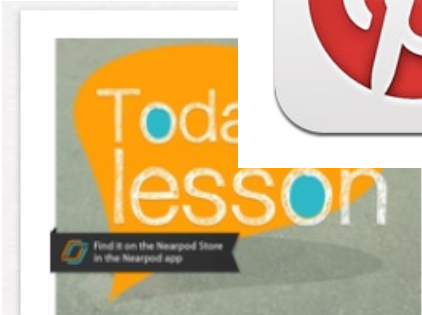
An all-in-one solution for the synchronized use of iPads in the classroom.

Make your lessons more engaging through interactive multimedia presentations.

teacher's view

students' view

Spice up your PPT's



This NPP can be used whenever you want during a lesson :) Test your students' knowledge on the fly! Find




This presentation is based on a TedEd video that explores the famous Fermi Paradox. Given the vast number of





In this lesson students will discover how Newton's 3 laws of motion help them ride their bikes. Find this and



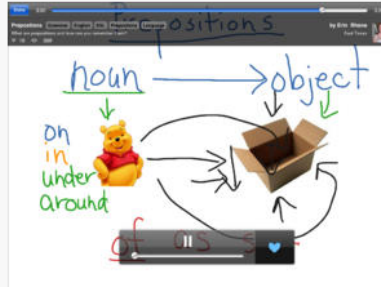
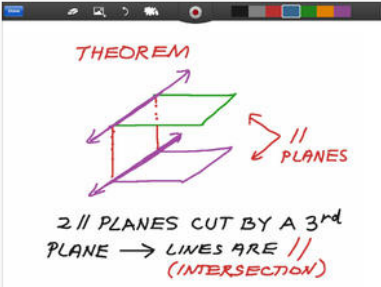
In this lesson, students will learn what logarithms are and why they are useful, and the basics of mathematical

 ShowMe Interactive Whiteboard
Learnbat, Inc.
★★★★☆ (108) [OPEN](#)

 Show Me on an Apple Free
LIVING PAPER FREE, LLC.
★★★★☆ (27) [FREE](#)

 **ShowMe Interactive Whiteboard** 4+ [Share](#)
Learnbat, Inc. >
Offers In-App Purchases
★★★★☆ (108) [OPEN](#)

[Details](#) [Reviews](#) [Related](#)



Description

Turn your iPad into your personal interactive whiteboard!

ShowMe allows you to record voice-over whiteboard tutorials and share them online. It's an amazingly simple app that anyone can use, no matter how young or old!
[...more](#)

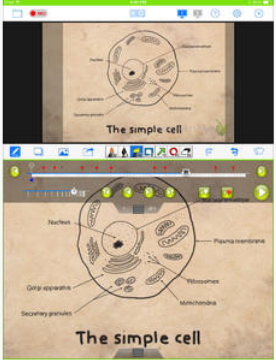
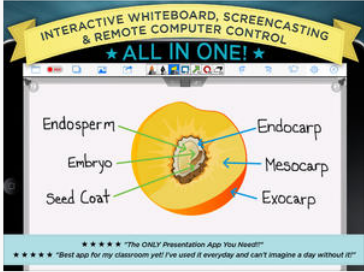
iPad 11:22 AM 69%

Cancel iPad Only Any Price All Categories By Relevance doceri

Doceri Interactive Whiteboard
SP Controls, Inc.
★★★★★ (20) **FREE**

Doceri Interactive Whiteboard 4+
SP Controls, Inc. >
Offers In-App Purchases
★★★★★ (20) **FREE**

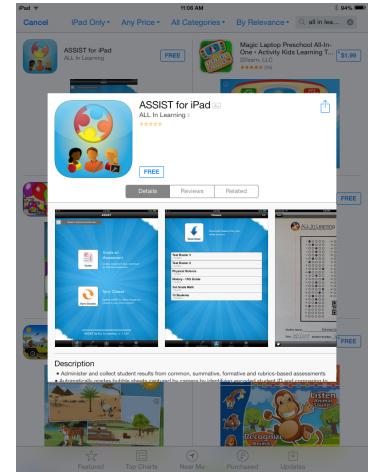
Details Reviews Related



Description
Combining screencasting, desktop control, and an interactive whiteboard in one app, you'll never have to turn your back to the class or audience again. Create a lesson or presentation, insert images, save and edit your

Featured Top Charts Near Me Purchased Updates

Apps to Assist with Teacher/Student Tasks



iPad 11:06 AM 94%

Cancel iPad Only Any Price All Categories By Relevance all in lea...

ASSIST for iPad
ALL In Learning

FREE

Magic Laptop Preschool All-In-One • Activity Kids Learning T...
22learn, LLC
★★★★★ (15)

\$1.99

ASSIST for iPad 4+
ALL In Learning >
★★★★★

FREE

Details Reviews Related

FREE

FREE

Description

- Administer and collect student results from common, summative, formative and rubrics-based assessments
- Automatically grades bubble sheets captured by camera by identifying encoded student ID and comparing to

Featured Top Charts Near Me Purchased Updates

Assist Grading

- Five random answers
- Instant Grades
- Instant Feedback
- Practice





Teachers.io

A Place for Teachers!

Organize your classes, share with students and connect with teachers.

[learn more](#) ➤



Sign in

Sign up

Sche

Pho



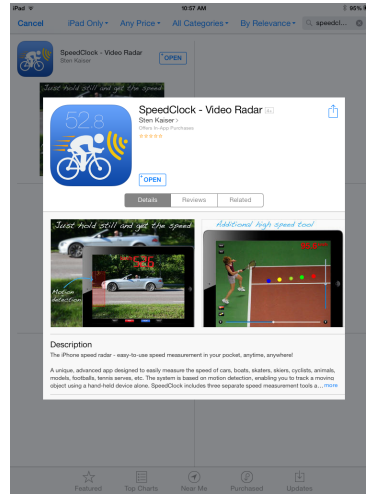
Teach
what'

Your
seme

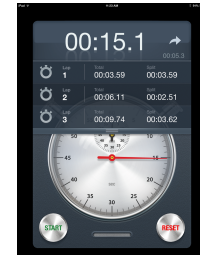
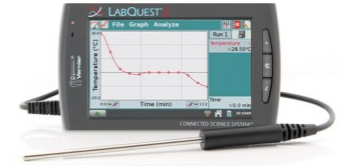


Socrative

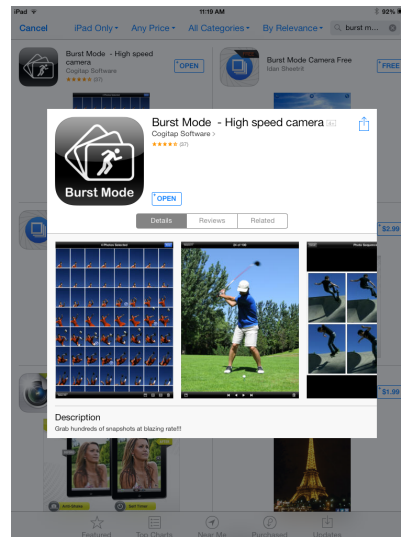
Engaging Quiz with Instant Feedback

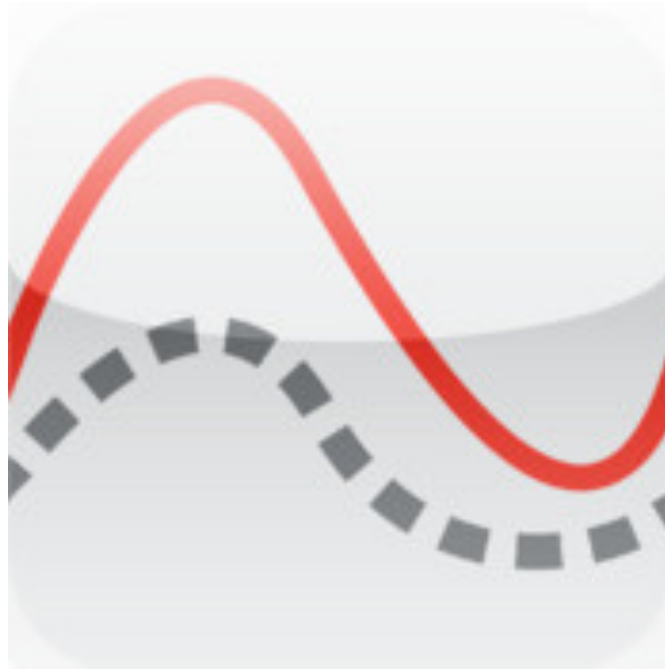


LABQUEST²
The most powerful, connected,
and versatile interface ever.



Data Acquisition and Analysis





Vernier's Graphical Analysis



Sparkvue

Find acceleration...and more



Vernier Video Physics

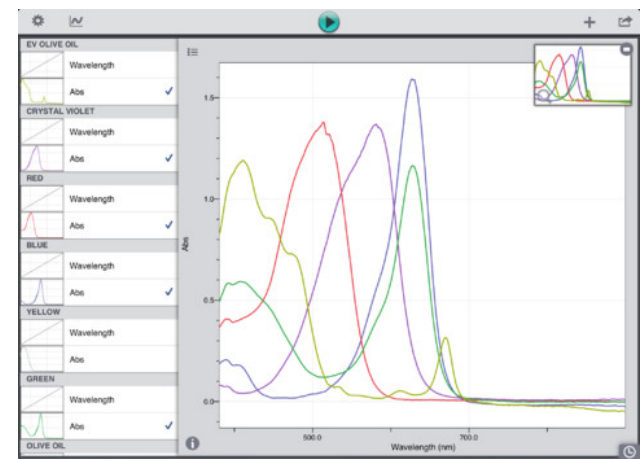
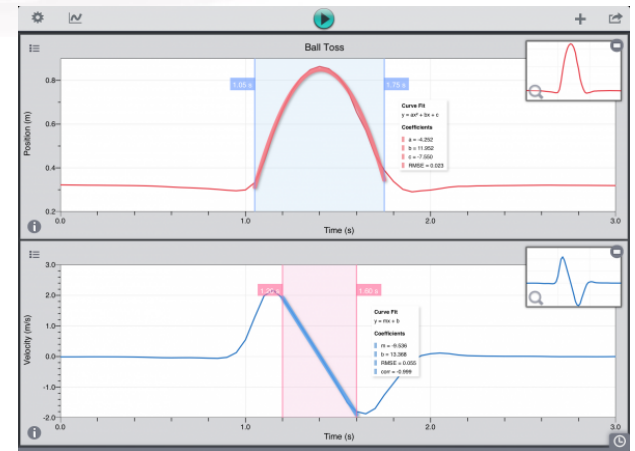
Plotting Linear/Projectile Motion
Not Free



The most powerful, connected,
and versatile interface ever.



- Display data from Labquest2 on iPad anywhere within wifi
- View multiple graphs of same data
- View multiple variables within same graph





SpeedClock - Video Radar
Sten Kaiser

OPEN

Just hold still and get the speed



SpeedClock - Video Radar

Sten Kaiser >
Offers In-App Purchases
★★★★★

OPEN

Details Reviews Related

Just hold still and get the speed



Additional high speed tool




Description


The iPhone speed radar - easy-to-use speed measurement in your pocket, anytime, anywhere!


A unique, advanced app designed to easily measure the speed of cars, boats, skaters, skiers, cyclists, animals, models, footballs, tennis serves, etc. The system is based on motion detection, enabling you to track a moving object using a hand-held device alone. SpeedClock includes three separate speed measurement tools a...[more](#)

iPad 11:19 AM 92%




Cancel iPad Only Any Price All Categories By Relevance burst m...

 **Burst Mode - High speed camera**
Cogitap Software
★★★★★ (37) [OPEN](#)

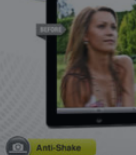


 **Burst Mode Camera Free**
Idan Sheerit [FREE](#)

 **Burst Mode - High speed camera** [OPEN](#)
Cogitap Software >
★★★★★ (37)

Details Reviews Related

Description
Grab hundreds of snapshots at blazing rate!!!

Featured Top Charts Near Me Purchased Updates



Stopwatch+



ProTuner - Chromatic Tuner

24/7 apps >

★★★★☆ (23)

FREE

- Details
- Reviews
- Related



Description

* FREE FOR 24H to Promote iTube Radio - Save Radio Songs immediately on separate tracks, with lyrics, cover art and more *

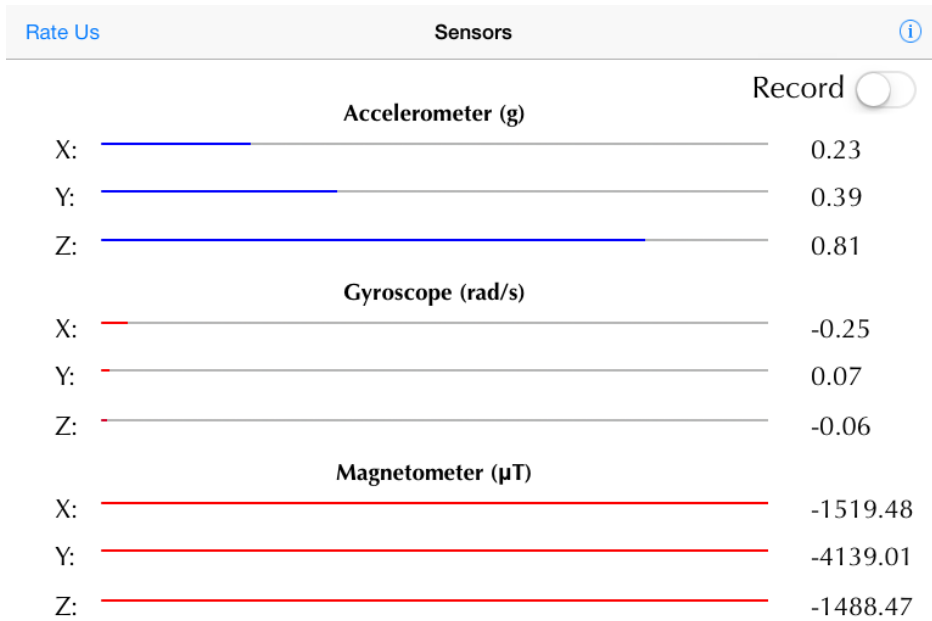


N-Track Tuner

Create a specific pitch or tune an instrument



AccelMeter



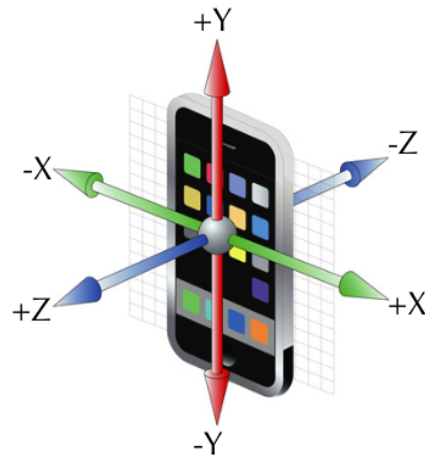
Data Collection

App uses sensors built into device

Roll: -15°

Pitch: 22°

Yaw: 14°



iPad 11:18 AM 70%

Cancel iPad Only Any Price All Categories By Relevance clinometer



Clinometer + slope finder + bubble level (3 in 1)
Peter Breitling
★★★★★ (8) **+\$0.99**



U-Clinometer
Unirac, Inc. **FREE**



Clinometer + slope finder + bubble level (3 in 1) ⁴⁺
Peter Breitling >
Offers In-App Purchases
★★★★★ (8) **+\$0.99**

Details Reviews Related



Description

This professional tool called Clinometer is the most precise (all you can get with some calculations) slope measurement tool for the iPhone, iPod Touch and iPad using all sides of the device plus the camera. It can be



Featured Top Charts Near Me Purchased Updates



Scope Pro

Oscilloscope made easy
Not Free \$0.99 at last check



Spectra Snapp

Quick Spectrums made easy



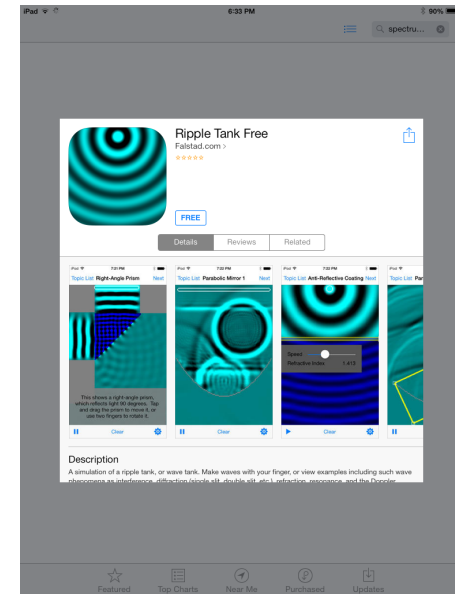
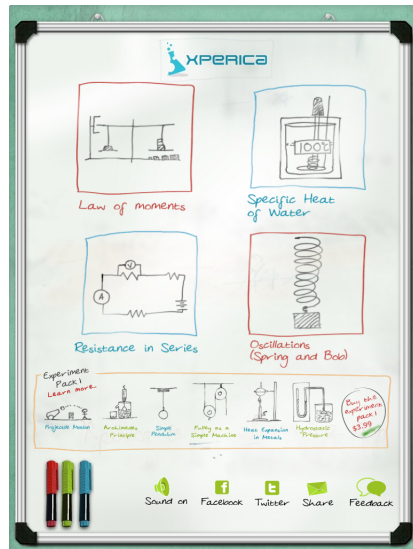
Spectrum Analysis

Hand held spectroscope
(Not Free) \$1.99 at last check

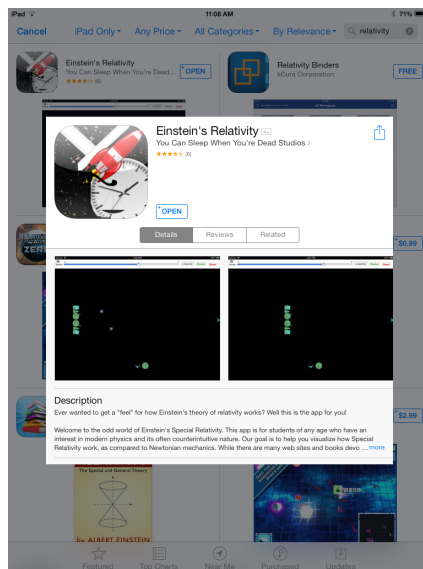


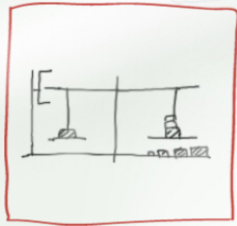
Flashlight

With strobe light (iPhone)

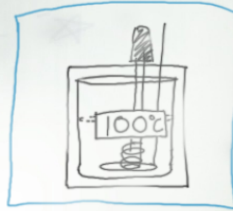


Simulations

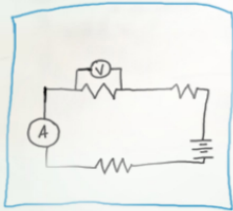




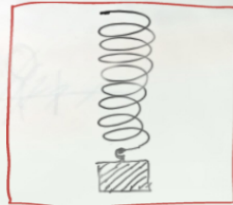
Law of moments



Specific Heat of Water

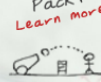


Resistance in Series



Oscillations (Spring and Bob)

Experiment Pack 1
Learn more..



Projectile Motion



Archimedes Principle



Simple Pendulum



Pulley as a Simple Machine



Heat Expansion in Metals



Hydrostatic Pressure



Sound on



Facebook



Twitter



Share



Feedback

Login



SimPhysics

Designed by Teachers, Built by Engineers

Login

facebook

Siminsights



Login to learn with friends and receive 1 year free premium membership to siminsights.com collaborative simulation platform, a \$60 value



Ripple Tank Free

Falstad.com >

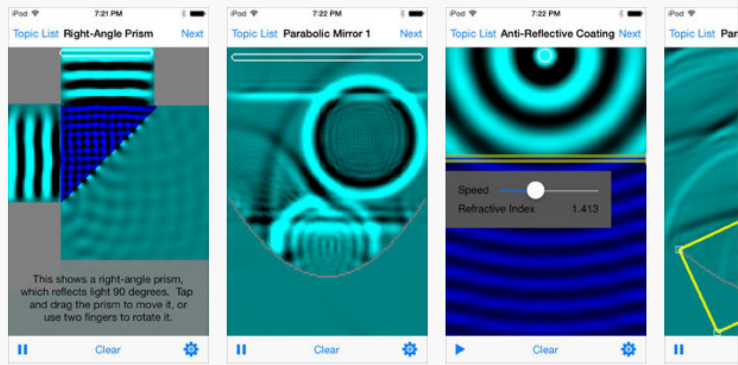
★★★★★

FREE

Details

Reviews

Related




Description


A simulation of a ripple tank, or wave tank. Make waves with your finger, or view examples including such wave phenomena as interference, diffraction (single slit, double slit, etc.), refraction, resonance, and the Doppler

iPad 11:08 AM 71%


Cancel iPad Only Any Price All Categories By Relevance relativity



Einstein's Relativity
You Can Sleep When You're Dead...
★★★★☆ (6) [OPEN](#)

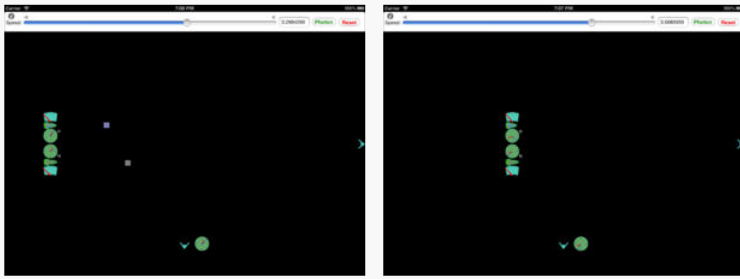


Relativity Binders
kCura Corporation [FREE](#)



Einstein's Relativity 4+
You Can Sleep When You're Dead Studios >
★★★★☆ (6) [OPEN](#)

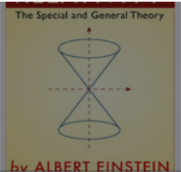
[Details](#) [Reviews](#) [Related](#)




Description

Ever wanted to get a "feel" for how Einstein's theory of relativity works? Well this is the app for you!

Welcome to the odd world of Einstein's Special Relativity. This app is for students of any age who have an interest in modern physics and its often counterintuitive nature. Our goal is to help you visualize how Special Relativity work, as compared to Newtonian mechanics. While there are many web sites and books devo ... [more](#)



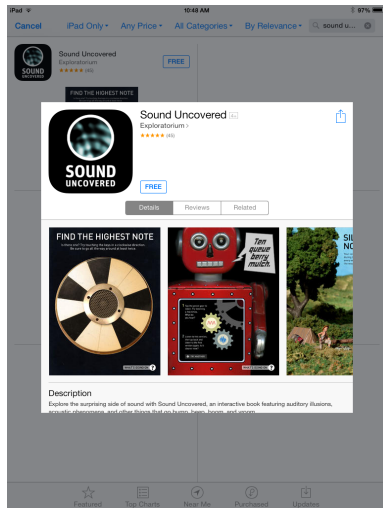
The Special and General Theory
by ALBERT EINSTEIN



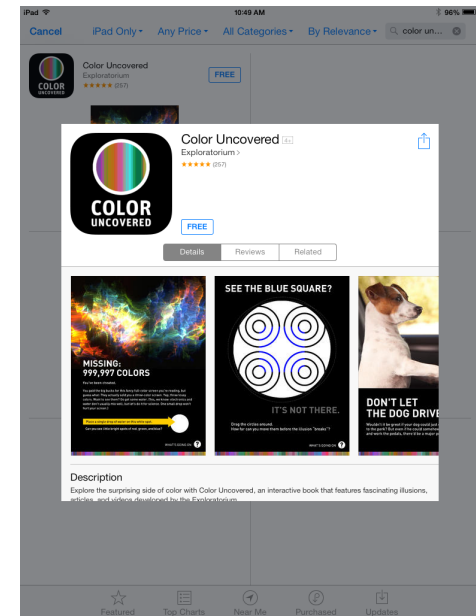
Spacetime and Geometry

[\\$0.99](#) [\\$2.99](#)

Featured Top Charts Near Me Purchased Updates



Topical Curricular Material





Sound Uncovered Exploratorium 4.5 (45)

FREE

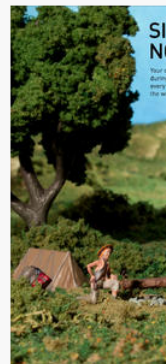
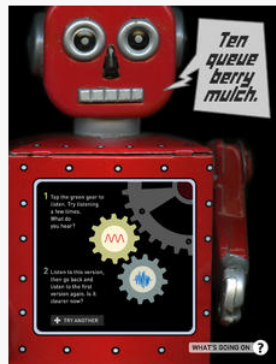
FIND THE HIGHEST NOTE



Sound Uncovered Exploratorium 4.5 (45)

FREE

Details Reviews Related



Description

Explore the surprising side of sound with Sound Uncovered, an interactive book featuring auditory illusions, acoustic phenomena, and other things that go bump, beep, boom, and vroom.

iPad 10:49 AM 96%

Cancel iPad Only Any Price All Categories By Relevance color un...

Color Uncovered
Exploratorium
★★★★★ (257) **FREE**

Color Uncovered Exploratorium >
★★★★★ (257) **FREE**

Details Reviews Related

MISSING: 999,997 COLORS
You've been cheated.
You paid the big bucks for this shiny full-color screen you're reading, but guess what? There actually isn't quite as much color as you think. You see those colors? Well, to see them? Do get some water. (Yes, we know, clean screens and water don't usually mix well, but it's a tip for anyone. One small step won't hurt your screen.)
Place a single drop of water on this white spot.
Can you see little bright spots of red, green, and blue?
WHAT'S GOING ON?

SEE THE BLUE SQUARE?
Bring the circles around.
How far can you move them before the illusion "breaks"?
WHAT'S GOING ON?

DON'T LET THE DOG DRIVE
Wouldn't it be great if your dog could just go to the park? But even if he could somehow and work the pedals, there'd be a major problem.
WHAT'S GOING ON?






Description
Explore the surprising side of color with Color Uncovered, an interactive book that features fascinating illusions, articles, and videos developed by the Exploratorium.

Featured Top Charts Near Me Purchased Updates


iPad 5:53 PM 38%

The PARTICLE ZOO

Quarks

-  **Up Quark**
-  **Down Quark**
-  **Strange Quark**
-  **Charm Quark**
-  **Bottom Quark**
-  **Top Quark**

Leptons

-  **Electron**

Quark
Lepton
Boson
Theory
Baryon
Meson
Universe



ALFRED P. SLOAN
FOUNDATION



EXPLORE
THE INTERACTIVE
PERIODIC TABLE

NOVA

elements



with
David Pogue

PLAY
DAVID POGUE'S
ESSENTIAL ELEMENTS

WATCH
HUNTING THE
ELEMENTS



MORE PBS APPS

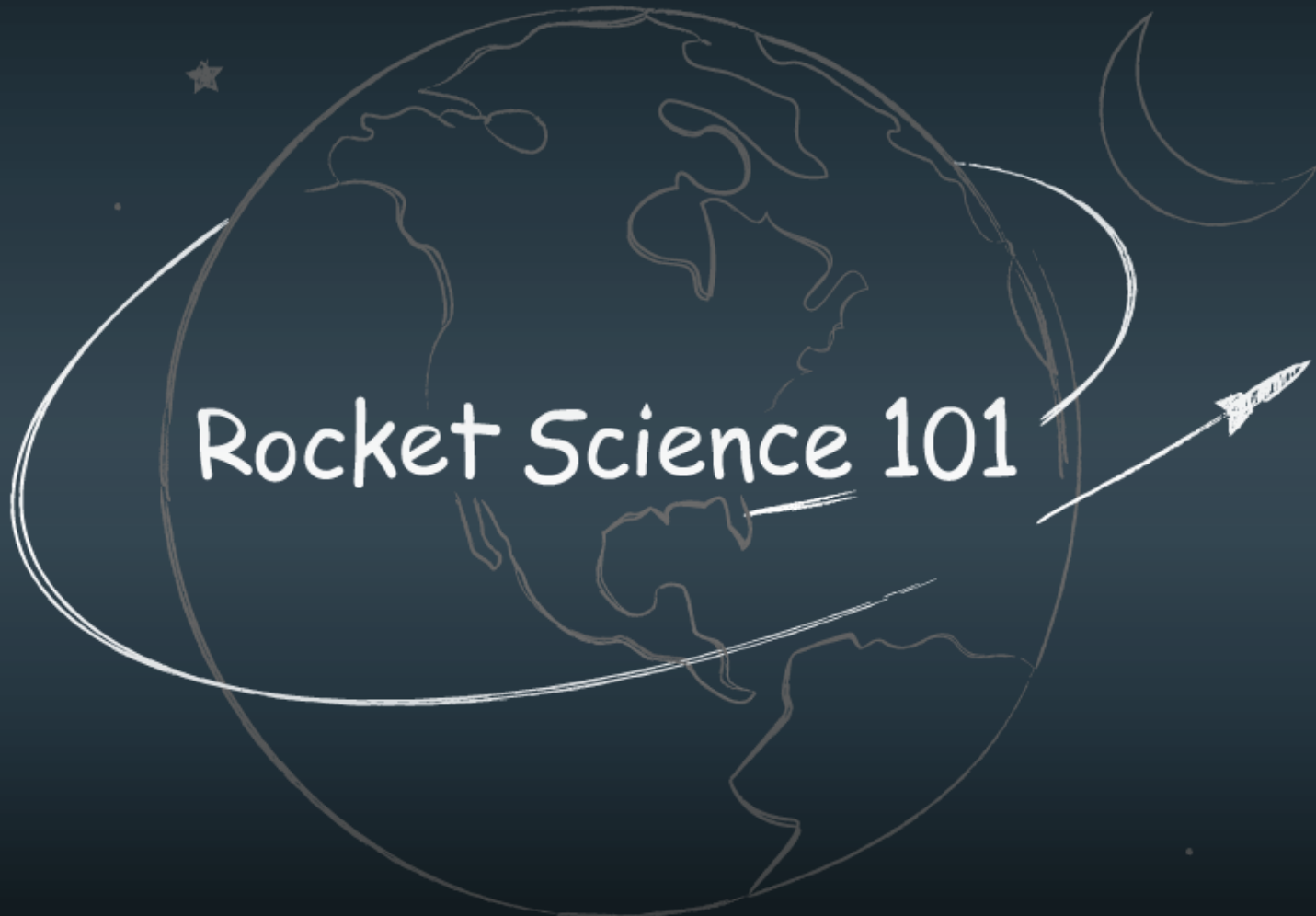
ABOUT

CREDITS

SETTINGS



Rocket Science 101



go  react



museum of
science+industry
chicago



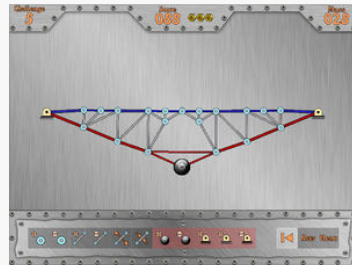
Truss Me!

Scientific Monkey LLC >

★★★★★ (5)

\$1.99

Details Reviews Related



Description

Designed by a true rocket scientist, Truss Me helps students build intuition on how truss structures behave, and to understand how they fail through physics-based simulations.

Truss Me utilizes state of the art simulation techniques used by aerospace, mechanical, and civil engineers to provide the most realistic behavior for your structures. If well designed, your structures will resist as they...[more](#)



 AMERICAN MUSEUM OF NATURAL HISTORY

CREATURES OF LIGHT

NATURE'S BIOLUMINESCENCE



The EXHIBITION



Enchanted EVENING



Light on LAND



A Sparkling SEA




Altered LIGHT





The Deep OCEAN

iPad 12:05 PM 68%

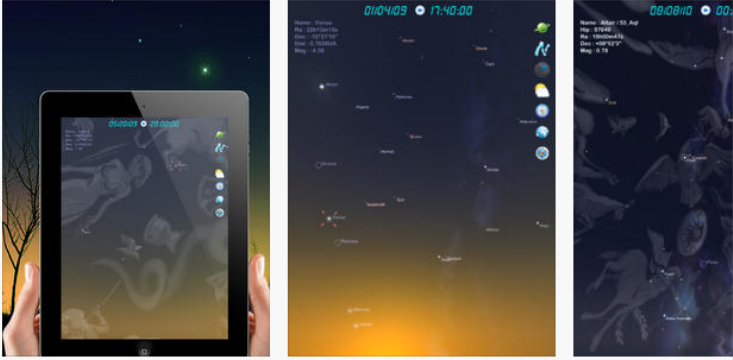
Cancel iPad Only Any Price All Categories By Relevance star rov...

 **Star Rover HD - Stargazing and Night Sky Watching**
EEFan Inc. [OPEN](#) ★★★★★ (57)

 **Star View Rover Tracker - Sky Astronomy Guide -Stargazing...**
VIMAL BHANVADIYA [+\\$0.99](#)

 **Star Rover HD - Stargazing and Night Sky Watching** [id+](#)
EEFan Inc. > ★★★★★ (57) [OPEN](#)

[Details](#) [Reviews](#) [Related](#) [+\\$9.99](#)



Description
Do you love the starry night? Do you want to know everything in the sky? Star Rover HD is the fantastic planetarium for your iPad... Just hold up your iPad and Star Rover HD will tell you exactly what you are pointing

[Featured](#) [Top Charts](#) [Near Me](#) [Purchased](#) [Updates](#)

Done

EveryCircuit Free - Android Apps on Google Play



Search Images Maps **Play** YouTube News Gmail Drive More Sign in

- Apps
- My apps
- Shop
- Games
- Editors' Choice



EveryCircuit Free

MuseMaze - January 9, 2014
Education

Install Add to Wishlist

★★★★☆ (7,355)

8+1 +7190 Recommend this on Google



Description

All joking aside, this time you will understand how electronic circuits work. 'I stumbled upon some serious gold' - GeekBeat.tv
 'This app takes design to a whole new level of interactivity' - Design News

Build any circuit, tap play button, and watch dynamic voltage, current, and charge animations. This gives you insight into circuit operation like no equation does. While simulation is running, adjust circuit parameters with analog knob, and the circuit responds to your actions in real time. You can even generate an arbitrary input signal with your finger!

That's interactivity and innovation you can't find in best SPICE tools for PC like Multisim, LTSpice, OrCad or PSpice (trademarks belong to their respective owners).

EveryCircuit is not just an eye candy. Under the hood it packs custom-built simulation engine optimized for interactive mobile use, serious numerical methods, and realistic device models. In short, Ohm's law, Kirchhoff's current and voltage laws, nonlinear semiconductor device equations, and all the good stuff is there.

Growing library of components gives you freedom to design any analog or digital circuit from a simple voltage divider to transistor-level masterpiece.

Schematic editor features automatic wire routing, and minimalistic user interface. No nonsense, less tapping.

[Read more](#)


Reviews

[Write a Review](#)




iPad 11:23 AM 69%


Cancel iPad Only Any Price All Categories By Relevance chemo



Chemio - A Student's Chemical Reference
AppBit Software, LLC
★★★★★ (59) **\$1.99**





Chemio Lite - An Interactive Periodic Table
AppBit Software, LLC **FREE**



Chemio - A Student's Chemical Reference ⁴⁺
AppBit Software, LLC >
★★★★★ (59) **\$1.99**

Details Reviews Related

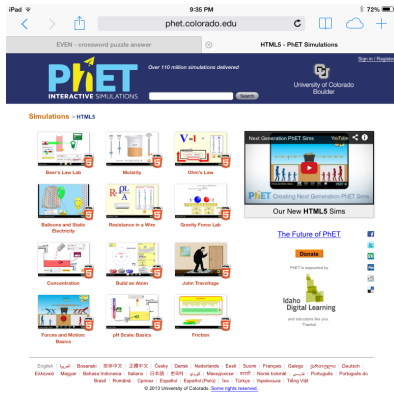



Description

Interactive periodic table, solubility table, molar mass calculator and the 3D widget for designing electron configuration of atom. The most necessary chemical references for students in the one neat app - it's Chemio!

Chemio is an interactive chemical reference. It provides a set of useful instruments, which allow you to p...[more](#)

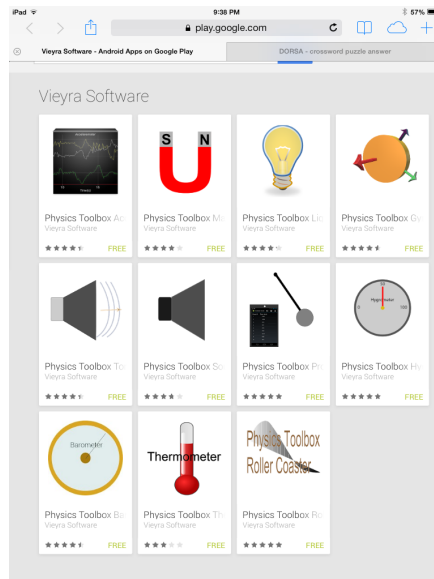
Featured Top Charts Near Me Purchased Updates



McCulley's HTML 5 Physics Resources

- **Lab Simulations**
 - Stopping Distance Lab
 - Projectile Lab
 - Circular Motion Lab
 - Test Track
 - Energy Transformation
 - Simple Circuit
 - Series Circuit
 - Parallel Circuit
 - RC Circuit
 - Resistance of Wire
- **Tools**
 - Geometry Formulas
 - Magic Triangle
 - Quadratic Equation Solver
 - Periodic Table
 - Visualizing Sines and Cosines
- **Games/Study Aids**
 - Metric Challenge
 - Speed Challenge
 - Torque Challenge
 - Resistor Challenge
 - Color Matching Challenge
- **Randomly Generated Worksheets**
 - Metric Prefixes
 - Unit Conversions
- **Randomly Generated Problems**
 - Force Gravity at Altitude Problem
 - Vertical Motion Problem
 - Freefall at Altitude Problem
 - Stopping Distance Problem
 - Buoyancy Problem
 - Horizontally Fired Projectile
 - Projectiles Fired at an Angle
 - Car on Turn
 - Orbital Motion
 - Torque Problem
 - Electrostatic Force

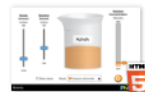
Cross Platform Apps



Simulations > HTML5



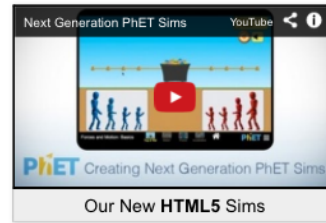
Beer's Law Lab



Molarity



Ohm's Law



Our New HTML5 Sims



Balloons and Static Electricity



Resistance in a Wire



Gravity Force Lab



Concentration



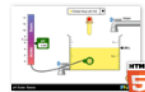
Build an Atom



John Travoltage



Forces and Motion: Basics



pH Scale: Basics



Friction

The Future of PhET

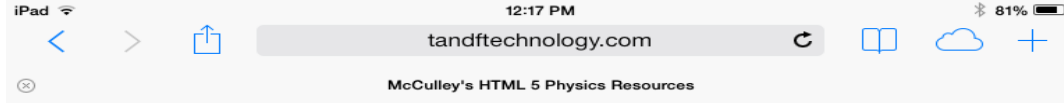
Donate

PhET is supported by



and educators like you. Thank!





McCulley's HTML 5 Physics Resources

■ Lab Simulations

- Stopping Distance Lab
- Projectile Lab
- Circular Motion Lab
- Test Track
- Energy Transformation
- Simple Circuit
- Series Circuit
- Parallel Circuit
- RC Circuit
- Resistance of Wire

■ Tools

- Geometry Formulas
- Magic Triangle
- Quadratic Equation Solver
- Periodic Table
- Visualizing Sines and Cosines

■ Games/Study Aids

- Metric Challenge
- Speed Challenge
- Torque Challenge
- Resistor Challenge
- Color Matching Challenge

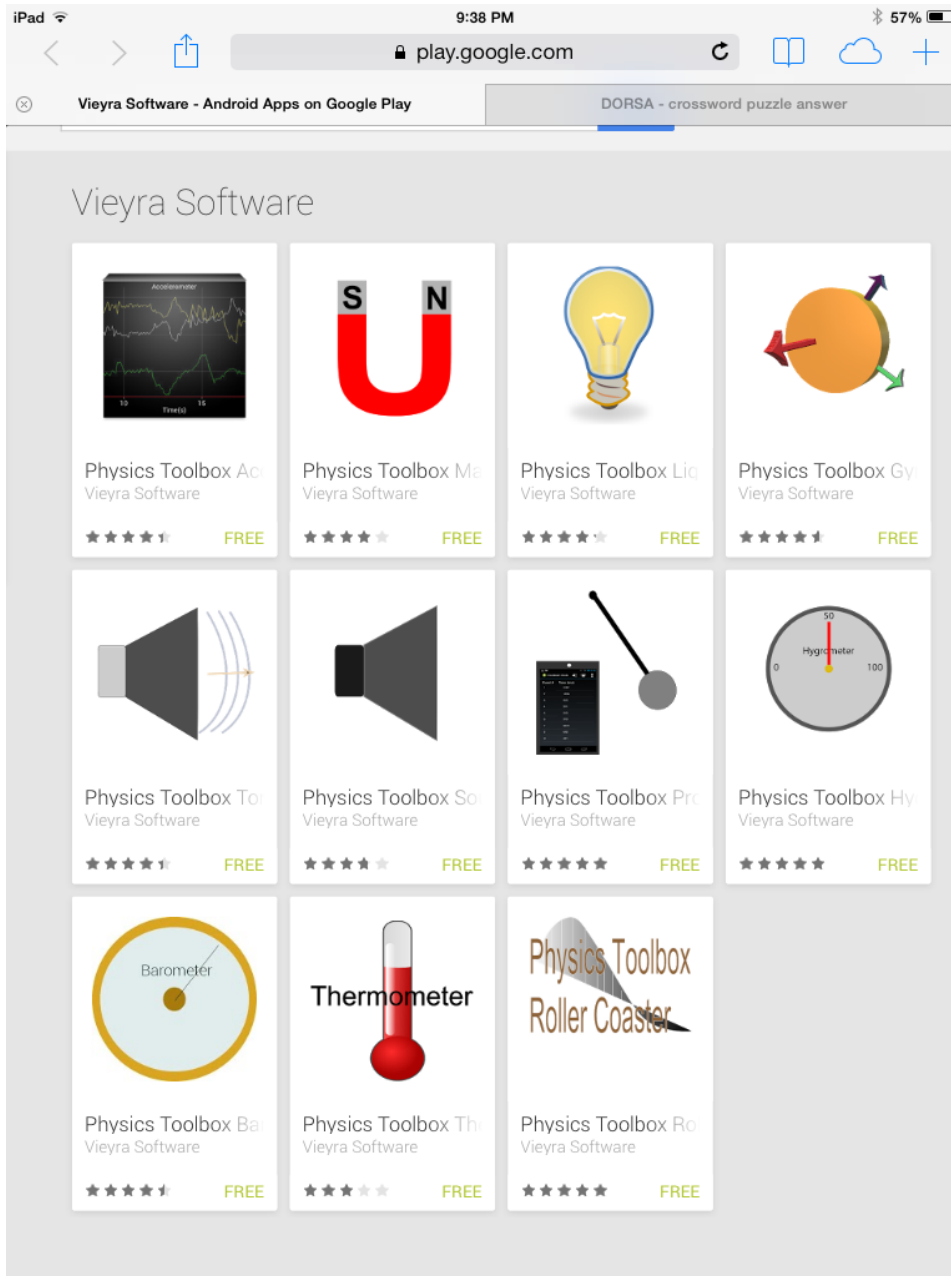
■ Randomly Generated Worksheets

- Metric Prefixes
- Unit Conversions

■ Randomly Generated Problems

- Force Gravity at Altitude Problem
- Vertical Motion Problem
- Freefall at Altitude Problem
- Stopping Distance Problem
- Buoyancy Problem
- Horizontally Fired Projectile
- Projectiles Fired at an Angle
- Car on Turn
- Orbital Motion
- Torque Problem
- Electrostatic Force

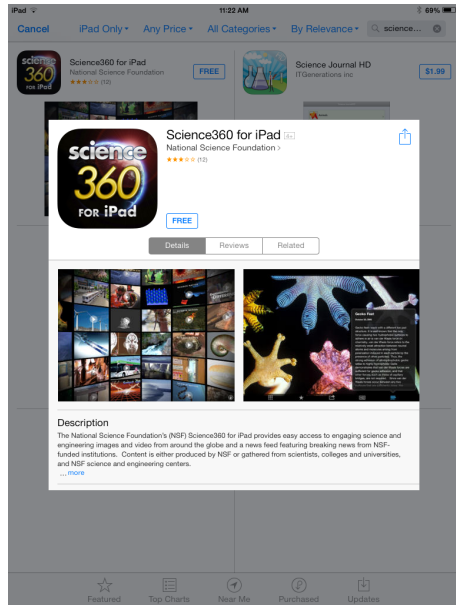
<http://www.tandftechnology.com/Physics/Programs/index.html>



Apps using built in sensors for Android devices. For additional information and support for classroom use contact Rebecca Vieyra, PTRA from Illinois


rvieyra@d155.org

Physics/Science Video Resources




iPad 11:22 AM 69%


Cancel iPad Only Any Price All Categories By Relevance science...



Science360 for iPad
National Science Foundation
★★★★☆ (12) **FREE**




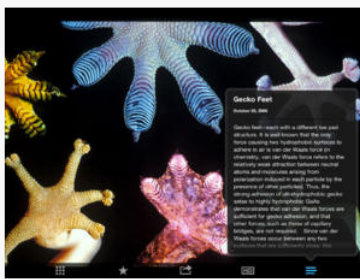
Science Journal HD
ITGenerations inc **\$1.99**



Science360 for iPad ⁴⁺
National Science Foundation >
★★★★☆ (12) **FREE**

Details Reviews Related

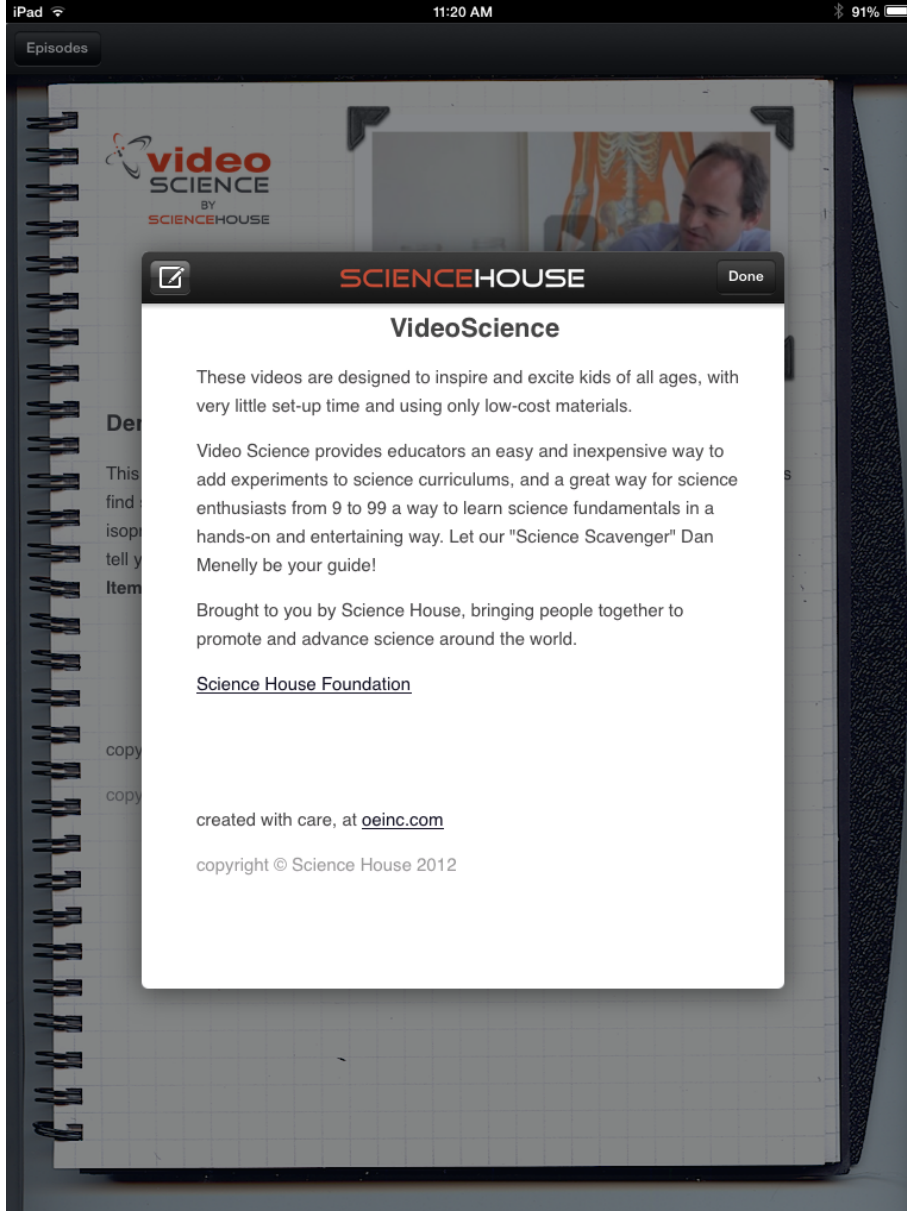




Squid Feet
Squid feet have a unique structure. It is well known that they are made of cartilage, not bone. However, the cartilage in squid feet is made of a different material than the cartilage in other animals. It is made of a protein called chitin. This protein is also found in the shells of mollusks and the exoskeletons of insects. It is a very strong and flexible material. Squid feet are also very sensitive to touch and can feel even the slightest vibration. This is why squid feet are so important for the squid's survival. They use their feet to catch their prey and to move through the water. They also use their feet to anchor themselves to the seabed. Squid feet are a fascinating example of evolution and adaptation. They show how nature can create complex structures from simple materials. The structure of squid feet is a result of millions of years of evolution. It is a testament to the power of natural selection. Squid feet are a true marvel of nature. They are a perfect example of how nature can create something so beautiful and functional from such simple materials. The structure of squid feet is a result of millions of years of evolution. It is a testament to the power of natural selection. Squid feet are a true marvel of nature. They are a perfect example of how nature can create something so beautiful and functional from such simple materials.

Description
The National Science Foundation's (NSF) Science360 for iPad provides easy access to engaging science and engineering images and video from around the globe and a news feed featuring breaking news from NSF-funded institutions. Content is either produced by NSF or gathered from scientists, colleges and universities, and NSF science and engineering centers.
[... more](#)

Featured Top Charts Near Me Purchased Updates



Episodes



SCIENCEHOUSE

Done

VideoScience

These videos are designed to inspire and excite kids of all ages, with very little set-up time and using only low-cost materials.

Video Science provides educators an easy and inexpensive way to add experiments to science curriculums, and a great way for science enthusiasts from 9 to 99 a way to learn science fundamentals in a hands-on and entertaining way. Let our "Science Scavenger" Dan Menelly be your guide!

Brought to you by Science House, bringing people together to promote and advance science around the world.

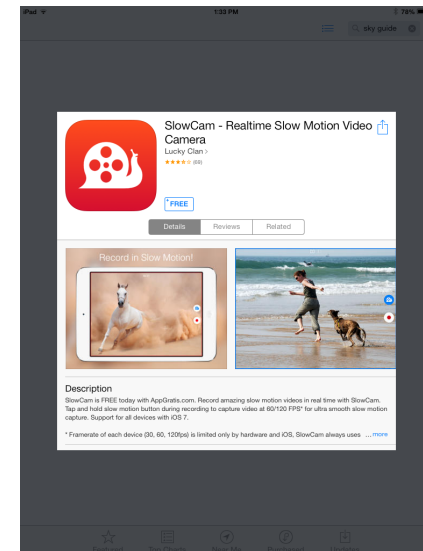
Science House Foundation

created with care, at oeinc.com

copyright © Science House 2012



Useful Tools for Student or Teacher Use





Tone Generator

Tuning Forks worst nightmare

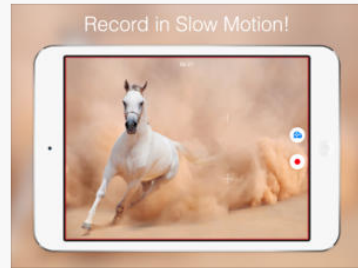


SlowCam - Realtime Slow Motion Video Camera

Lucky Clan >
★★★★☆ (69)

FREE

- Details
- Reviews
- Related

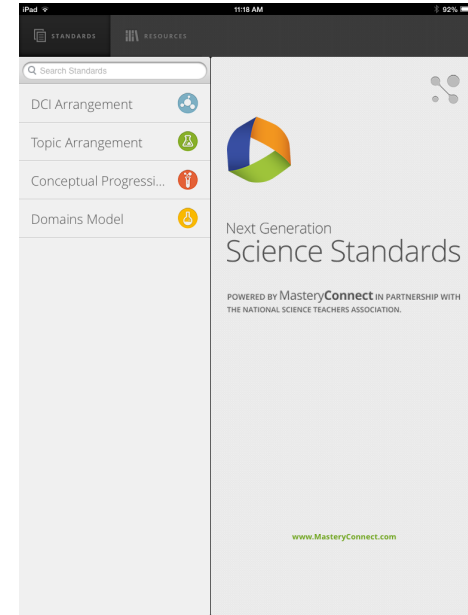
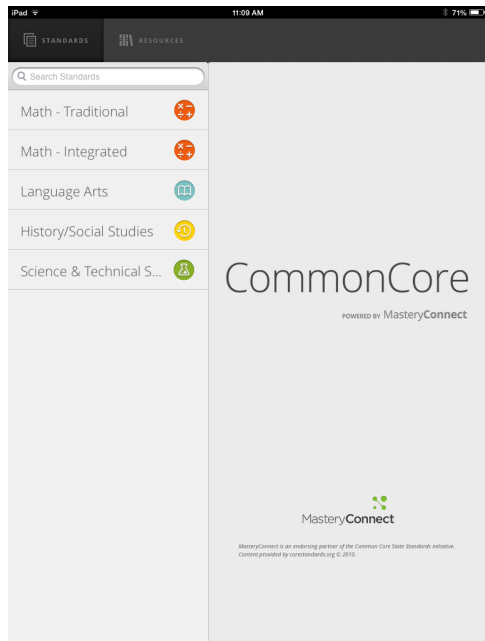


Description






SlowCam is FREE today with AppGratis.com. Record amazing slow motion videos in real time with SlowCam. Tap and hold slow motion button during recording to capture video at 60/120 FPS* for ultra smooth slow motion capture. Support for all devices with iOS 7.

* Framerate of each device (30, 60, 120fps) is limited only by hardware and iOS, SlowCam always uses ...[more](#)

Resources on Standards for Teacher Use



Search Standards

- Math - Traditional 
- Math - Integrated 
- Language Arts 
- History/Social Studies 
- Science & Technical S... 

CommonCore

POWERED BY MasteryConnect




MasteryConnect is an endorsing partner of the Common Core State Standards Initiative.
Content provided by corestandards.org © 2010.

iPad 11:18 AM 92%

STANDARDS RESOURCES

Search Standards

- DCI Arrangement
- Topic Arrangement
- Conceptual Progressi...
- Domains Model

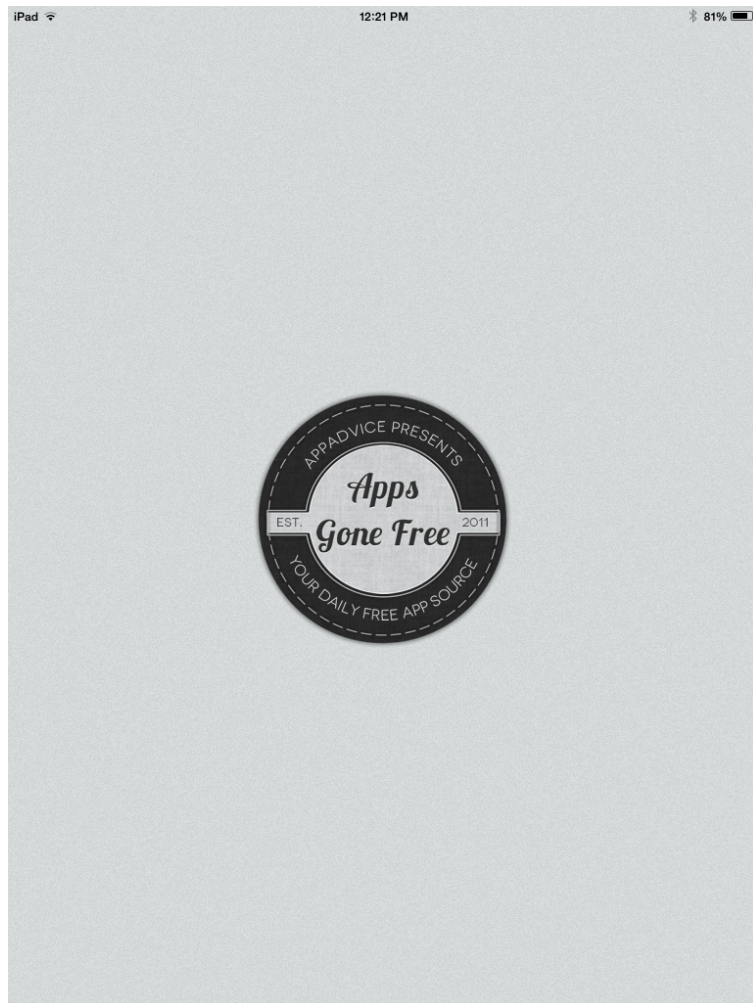


Next Generation
Science Standards

POWERED BY **MasteryConnect** IN PARTNERSHIP WITH
THE NATIONAL SCIENCE TEACHERS ASSOCIATION.

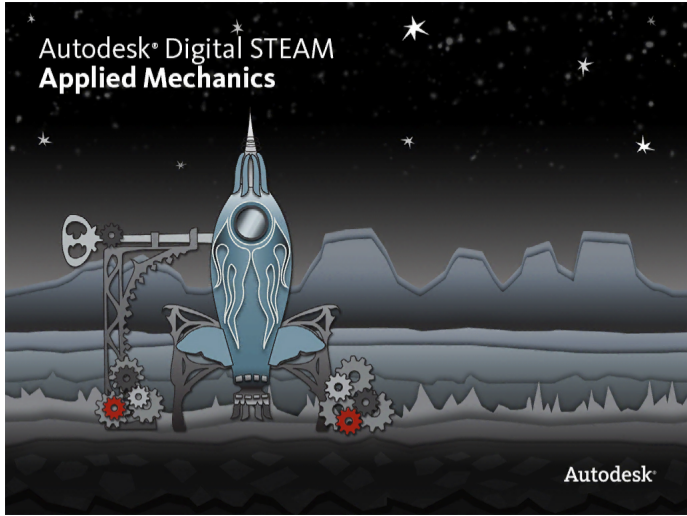
www.MasteryConnect.com

Useful site to keep eye on daily for real bargain apps!





Game Apps that claim to assist student Understanding of Physics principles



Autodesk®

TINKERBOX™



Puzzles



Invent



Options



Information

Autodesk® Digital STEAM Applied Mechanics



Autodesk®

Other Apps discussed during Misericordia workshop worth looking at!

- Bluestacks.com – Android emulator for Windows and MacOS
- Learn Light – Android app to study spectra
- Speed View – Android app to measure speed
- Kinematics+ - could be useful for struggling students
- 3d Compass
- Coaster Physics
- Evernote – similar to Goodnote
- pdfitall