



# college ready learning technologies

Supported by the Bill & Melinda Gates Foundation

**T**he College Ready Team at the Bill & Melinda Gates Foundation invests in learning technologies with the core aim of accelerating student learning. This first group of early investments represents a sampling from three portfolios:

***The College Ready Work (CRW) & Next Generation Models (NGM) Portfolios:***  
Focus on multi-year projects designed to innovate in the areas of digital courseware; games for learning; embedded assessments; and social networking environments.

***The Next Generation Learning Challenges (NGLC) Portfolio:***  
A larger short-term cohort of investments also designed to support and innovate within the fields of modular courseware, games for learning, and embedded assessments.

Our goal in all the projects has been to fund highly engaging digital tools that support students in mastering rich and rigorous learning tasks anytime, anywhere. This collection of investments includes technologies that support students in math, science, literacy and social studies. All investments asked grantees to carefully align their offerings to the cognitive demands of the Common Core State Standards.

We cordially thank our partners for joining us in the quest to find ways to dramatically improve student achievement.

## Contents by Subject

### Grade Page Math

2-6	3	Reasoning Mind Blended Learning Elementary Mathematics Program
3-8	3	Center for Game Science, University of Washington Fractions and Proportions Game World
5-8	4	Imagine Education Ko's Journey
6-8	4	The Education Arcade at MIT Labyrinth Challenge
6-8	5	University of South Florida, St. Petersburg SunBay Digital Mathematics for Middle Grades
7	5	Center for STEM Research, Hofstra University WISEngineering
7-11	6	University of Massachusetts Wayang Outpost, Intelligent Tutor for Learning Mathematics
7-12	6	WNET Get the Math
8-9	7	Texas Tech University APS4Math
9-10	7	The Education Arcade at MIT Cosmos (working title)

### Science

6-8	8	University of Wisconsin, Madison Wisconsin Center for Education Research CoMPASS-Physics
9-12	8	CAST, Inc. Foundation Science Physics, Universal Design for Learning

### Literacy

6-10	9	iCivics, Inc. The Drafting Board
8-9	9	Classroom, Inc. Reading in the Real World, The Sports Network
9, 12	10	Florida Virtual School English I, English IV

### Multi-disciplinary

K-12	10	Computers for Youth Power My Learning
K-12	11	Khan Academy Khan Academy
3-9	11	LearnZillion LearnZillion
4-12	12	SMALLab Learning SMALLab Learning
5-9	12	Arizona State University Atlantis Remixed
5-12	13	Gooru Gooru
5-12	13	Worcester Polytechnic Institute ASSiSTments
6-8	14	DaVinci Minds WhyPower
6-8	14	DePaul University Digital Youth Network
6-8	15	Institute of Play Playforce, Gamekit, Toolkit, Quest Everlasting, Mobile Quest
6-12	15	University of Southern California, Annenberg Innovation Lab PLAY!
7	16	Center for Children & Technology/Education Development Center, Inc. Wordplay Games
7-9	16	Louisiana Department of Education Louisiana Virtual School
8	17	North Carolina State University Crystal Island, Lost Investigation
8-10	17	Educurious Partners Educurious High School Courses & The Educurious Expert Network

## college ready learning technologies

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**CLICK on the  
organization's  
URL or Logo to go  
to its website,  
CLICK on its  
Contact Address  
to connect to  
its eMail.**

URL: [www.organization](http://www.organization)



**Contact:**  
[email@address.org](mailto:email@address.org)

**Portfolios**  
complete listing  
Page 18

BILL & MELINDA  
GATES foundation

## Reasoning Mind

### Blended Learning Elementary Mathematics Program

The *Blended Learning Elementary Mathematics Program* is an online program that adaptively teaches students in grades 2-6. It provides students with a self-paced curriculum for independent study, freeing teachers' time to work one-on-one with students during class time and increasing the potential for individualized intervention and data-driven instruction.

**Grades:** 2-6

**Subjects:** Math

**Completion Date:** August 2013

**Portfolio:** Next Generation Models (NGM)

**Availability:** Fee for enrollment.

**URL:** [www.reasoningmind.org](http://www.reasoningmind.org)

**Contact:**

**Jesse Obbink**

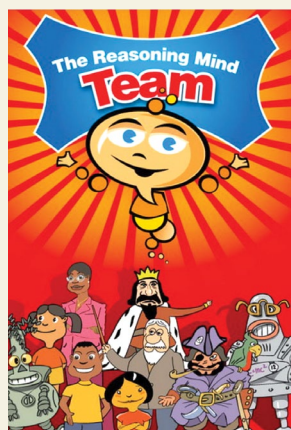
[jesse.obbink@reasoningmind.org](mailto:jesse.obbink@reasoningmind.org)

(832) 255-2904

3050 Post Oak Boulevard, Suite 1200

Houston, Texas 77056

(823) 255-2900



Welcome to RM city.

## Center for Game Science, University of Washington

### Fractions and Proportions Game World (Refraction)

*Fractions and Proportions Game World* is a multiplayer, immersive pre-algebra game for elementary and middle school students, aimed at deep conceptual understanding of fractions and proportional reasoning. This game adapts to every learner for optimal individualized learning, offering over twenty hours of potential playtime. A teacher/parent portal allows for a classroom setup and displays key learned misconceptions for each student, generating in-game homework sets, and providing suggested focus points of instruction that will have the greatest benefit for the class/school population. This portal can be used in informal learning settings. A larger scale administrator portal will soon become available.

**Grades:** 3-8

**Subjects:** Pre-Algebra

**Completion Date:** Beta version available now  
finished product in 2013

**Portfolio:** College Ready Work (CRW)

**Availability:** Free on the web. Requests for specific interfaces for teachers, parents or administrators should be made with primary contact.

**URL:** [games.cs.washington.edu/FractionWorld](http://games.cs.washington.edu/FractionWorld)

**Contact:**

**Beatrice Marx**

[beamarx@cs.washington.edu](mailto:beamarx@cs.washington.edu)

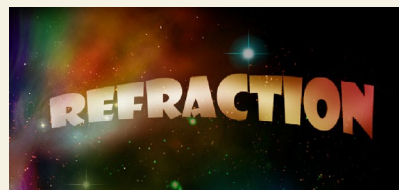
(206) 616-2660

Center For Game Science

Paul Allen Center 101

University of Washington

Seattle, Washington 98195



*Refraction* is a puzzle game for teaching fractions.



## Imagine Education

### Ko's Journey

The ancient approach of teaching through story-telling takes on new meaning in *Ko's Journey*, a web-based game that sends students on a rite-of-passage journey filled with purposeful, meaningful math that's aligned with the Common Core State Standards. Fast becoming "America's Favorite Math Game", *Ko's Journey* is currently the only math game where problems are fully integrated into the context of a story. Online play is complemented by live-action videos explaining how the math mastered in the game relates to real-life situations and standardized tests. Student progress and assessment are automated and accessed through a secure administrator dashboard.

**Grades:** 5-8 (primary focus on 7th grade)

**Subjects:** Math

**Completion Date:** Complete

**Portfolio:** Next Generation Learning Challenges (NGLC)

**Availability:** Select subscription plans available.

**URL:** [www.kosjourney.com](http://www.kosjourney.com)

**Contact:**

**Dr. Scott Laidlaw**

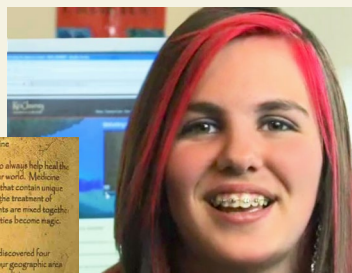
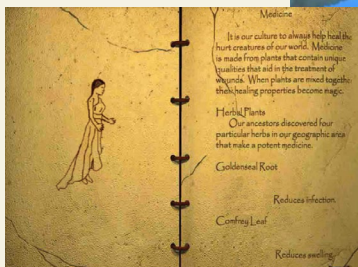
[scott@imagineeducation.org](mailto:scott@imagineeducation.org)

(801) 657-1035

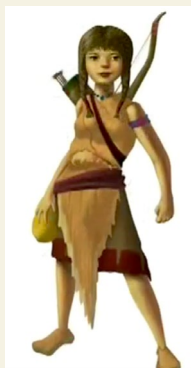
P.O. Box 2276

Taos, New Mexico 87571

*Ko's Journey*



Maddy Ortega, 6th grade student at Taos Academy, *Ko's Journey* In The Classroom product video.



## The Education Arcade at MIT

### Labyrinth Challenge

*Labyrinth Challenge* is a nationwide competition to encourage and evaluate the use of a puzzle adventure game which teaches middle school mathematics. Playing on teams, students will not only learn the big ideas of pre-algebra, but they'll also demonstrate 21st century skills such as collaboration, problem solving, and media literacy. The contest will be open to students regardless of ability level, and schools that compete will all receive recognition.

**Grades:** 6-8

**Subjects:** Math

**Completion Date:** August 31, 2012

**Portfolio:** Next Generation Learning Challenges (NGLC)

**Availability:** Free on website.

**URL:** [www.Labyrinth.thinkport.org](http://www.Labyrinth.thinkport.org)

**Contact:**

**Caitlin Feeley**

(617) 715-4635

The Education Arcade

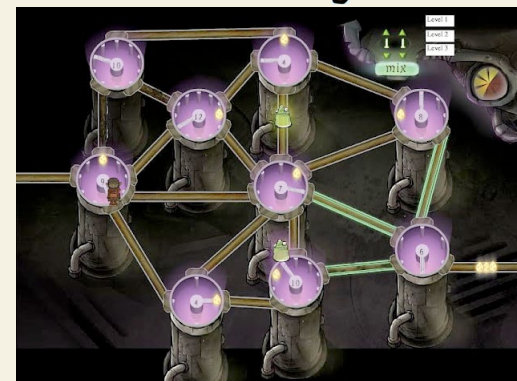
77 Mass Avenue, Building 315-301

Cambridge, Massachusetts 02139

(617) 253-4197



Where is Snoop?



## University of South Florida, St. Petersburg

### SunBay Digital Mathematics For Middle Grades

*SunBay Digital Mathematics* provides teachers with the intensive professional development needed to engage students in learning mathematics through the use of dynamic representations and research-tested learning modules. It engages learners in complex mathematics with graphs, tables, equations, and pictures in motion. *SunBay Digital Mathematics* emphasizes foundational ideas critical to students' deep conceptual understanding of mathematics, helping students at all skill levels bring these concepts to life.

**Grades:** 6-8

**Subjects:** Math

**Completion Date:** Fall 2012

**Portfolio:** Next Generation Learning Challenges (NGLC)

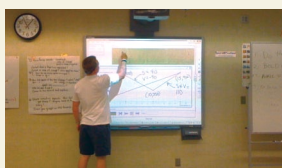
**Availability:** Contact USFSP for accessibility and permissions.

**URL:** [www.usfsp.edu/coe/sunbay.htm](http://www.usfsp.edu/coe/sunbay.htm)

**Contact:**

**Dr. Vivian Fueyo**  
[vfueyo@usfsp.edu](mailto:vfueyo@usfsp.edu)  
(727) 873-4824

University of South Florida, St. Petersburg  
College of Education, SunBay Mathematics  
Attn: Dr. Susan Holderness  
140 Seventh Avenue South  
St. Petersburg, Florida 33701



Using *SunBay*, students build mathematical meaning by thinking critically to solve complex problems and understand proportionality and linear functions in a connected and coherent way.



## Center for STEM Research, Hofstra University

### WISEngineering

*WISEngineering* is a technology-based curriculum delivery, assessment and feed-back system that uses informed engineering pedagogy to introduce middle school mathematics in innovative ways. The freely accessible environment will provide support to high-need students who typically attend schools with limited resources. The curriculum modules will provide hands-on experiences using mathematics to create, construct and think in contextualized design scenarios, particularly appealing to those students who often become disengaged from traditional learning experiences and eventually drop out or lose interest in STEM.

**Grades:** 7

**Subjects:** Math

**Completion Date:** June 30, 2012

**Portfolio:** Next Generation Learning Challenges (NGLC)

**Availability:** Materials on site are open source and available.

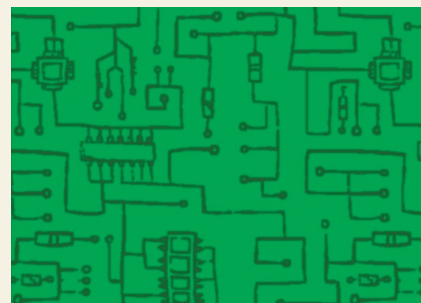
**URL:** [www.wisengineering.org](http://www.wisengineering.org)

**Contact:**

**Dr. David Burghardt**  
[m.d.burghardt@hofstra.edu](mailto:m.d.burghardt@hofstra.edu)  
(516) 463-5550

Center for STEM Research  
Hofstra University  
773 Fulton Avenue  
Hempstead, New York 11549  
(516) 463-6482

WISEngineering



*WISEngineering* is an online environment that guides students through engineering design projects.

## University of Massachusetts

### Wayang Outpost: Intelligent Tutor for Learning Mathematics

*Wayang Outpost* is an intelligent electronic tutoring system that uses multimedia and animated adventures to help prepare middle and high school students for standardized math tests, such as the SAT and state exams and to assist in preparing students for college-level mathematics classes. *Wayang* uses state-of-the-art technology and is designed to learn along with the student. As the student progresses through the math problem presented, *Wayang* adjusts instruction, using individualized strategies that are effective for each student. It also helps teachers to assess students' strengths.

**Grades:** 7-11

**Subjects:** Math

**Completion Date:** The tutor is complete, more Mathematics topics are being added

**Portfolio:** Next Generation Learning Challenges (NGLC)

**Availability:** Free on website.

**URL:** [www.wayangoutpost.com](http://www.wayangoutpost.com)

**Contact:**

Ivon Arroyo

[ivon@cs.umass.edu](mailto:ivon@cs.umass.edu)

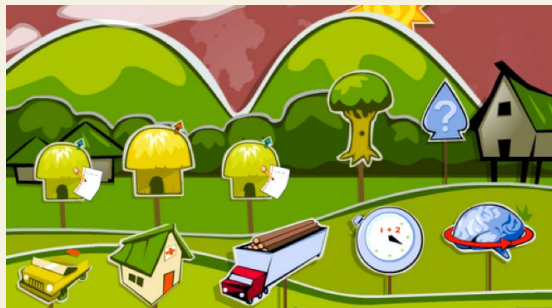
(413) 577-1370

Department of Computer Science, University of Massachusetts

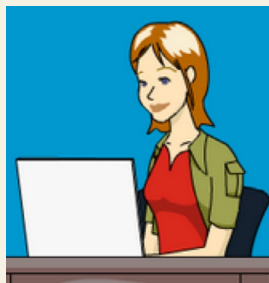
140 Governors' Drive

Amherst, Massachusetts 01003-9264

(413) 545-1309



Evelyn Lee Barney, 2011, Wayang Outpost



Jane, a Wayang Outpost study partner.

## WNET

### Get the Math

*Get the Math* mixes video and web interactivity to help middle and high school students develop algebraic thinking skills for solving real-world problems. Drawing on conventions of popular reality shows, video segments begin with profiles of young professionals working in fashion, videogame development, music production, the restaurant industry, the NBA, and special effects. They pose challenges connected to their jobs to two teams of teens. Viewers can tackle the challenges themselves using interactive tools and hints before watching a video that shows the teams' solutions. Students then can deepen their understanding of the algebra concepts explored through additional interactive challenges.

**Grades:** 7-12

**Subjects:** Algebra I

**Completion Date:** May 2012

**Portfolio:** Next Generation Learning Challenges (NGLC)

**Availability:** Free on website.

**URL:** [getthemath.org](http://getthemath.org)

**Contact:**

Jill Peters

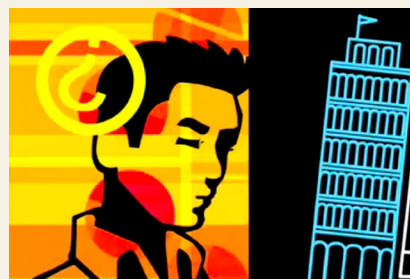
[peters@thirteen.org](mailto:peters@thirteen.org)

(212) 560-8180

WNET

825 Eighth Avenue

New York, New York 10019



*Get the Math* is a multimedia project about algebra in the real world.



## Texas Tech University

### APS4Math

*APS4Math* is an adaptive web-based tutorial which supports students' mathematics problem solving skills by incorporating adaptive instruction, practice and feedback based on learner characteristics. A key characteristic of the tutorial is the integration of assessment and teaching components. While students solve problems, their knowledge and skills will be continuously monitored and the assessment items, feedback, and scaffolds will be adapted to students' knowledge and skill levels.

**Grades:** 8-9

**Subjects:** Math

**Completion Date:** Fall 2012

**Portfolio:** Next Generation Learning Challenges (NGLC)

**Availability:** Free on website for the partner schools.

**URL:** [www.aps4math.com](http://www.aps4math.com)

**Contact:**

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[inanfethi@gmail.com](mailto:inanfethi@gmail.com)

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**Tena Gonzales, M.B.A.**

Grant Coordinator

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(806) 742-1998, extension 482

College of Education, MS 41071

Texas Tech University

Lubbock, Texas 79409

**APS4 Math**



A major goal for the web-based *APS4Math* tutorial is to help teachers support students with diverse backgrounds.

## The Education Arcade at MIT

### Cosmos (working title)

*Cosmos* is a massively multiplayer online game (MMOG) aligned to high school math Common Core State Standards that lets students take on the role of a scientist or mathematician and use inquiry skills to solve problems and explore the world. Players work collaboratively to gain content knowledge and develop authentic scientific habits of mind. *Cosmos* includes contextual task-based assessments and collects relevant data about student progress in order to provide feedback to both students and teachers.

**Grades:** 9-10

**Subjects:** Math and Biology (select topics), Language Arts, Social Studies, English, Special Education, Media Studies

**Completion Date:** Fall 2013

**Portfolio:** College Ready Work (CRW)

**Availability:** Free on forthcoming website.

**URL:** [n/a](#)

**Contact:**

**Eric Klopfer**

[klopfer@mit.edu](mailto:klopfer@mit.edu)

(617) 253-2025

20 Ames Street, Building E14-301

Cambridge, Massachusetts 02142

the education arcade



Students will use inquiry skills to solve problems and to explore the world in *The Education Arcade* game *Cosmos*.



## University of Wisconsin, Madison Wisconsin Center for Education Research (WCER)

### CoMPASS-Physics

*CoMPASS-Physics* uses a technology-rich, interactive learning environment that enhances digital and science literacy and deep understanding of science content. Available tools include: a hypertext system; design challenges that guide students' investigations; scientist journals where students record notes and data, write predictions, formulate justifications, and develop evidence-based explanations; and online, embedded assessments.

**Grades:** 6-8

**Subjects:** Physics

**Completion Date:** September 2012

**Portfolio:** Next Generation Learning Challenges (NGLC)

**Availability:** Access and materials provided upon request.

**URL:** [www.compassproject.net/info/index.html](http://www.compassproject.net/info/index.html)

**Contact:**

**Sadhana Puntambekar**

Professor in Learning Sciences

[puntambekar@education.wisc.edu](mailto:puntambekar@education.wisc.edu)

(608) 263-4828

Wisconsin Center for Education Research

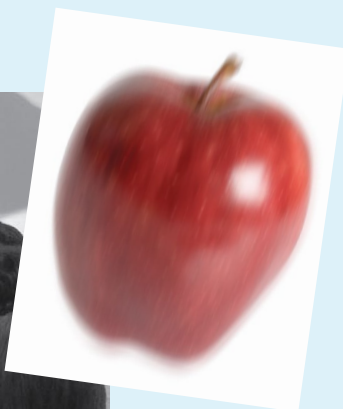
Education Sciences Building

1025 West Johnson Street

Madison, Wisconsin 53706-1796



WCER Research Highlights Newsletter, Winter 2008-09



## CAST, Inc.

### Foundation Science Physics: Universal Design for Learning Edition

Using an open source authoring platform, *CAST, Inc.* is developing a series of digital learning modules in high school physics. This learning module, created using the *Universal Design for Learning (UDL)* framework, will address learner variability by incorporating *UDL* scaffolds and supports for learners, embedded formative assessment and learning analytics that will give students and teachers immediate feedback and just-in-time support to advance science literacy and science learning.

**Grades:** 9-12

**Subjects:** Physics

**Completion Date:** July 2012

**Portfolio:** Next Generation Learning Challenges (NGLC)

**Availability:** Free on forthcoming website.

**URL:** [n/a](#)

**Contact:**

**Gabrielle Rappolt-Schlichtmann**

Director Of Research

[gschlichtmann@cast.org](mailto:gschlichtmann@cast.org)

(781) 245-2212

CAST, Inc.

40 Harvard Mills Square, Suite 3

Wakefield, Massachusetts 01880-3233

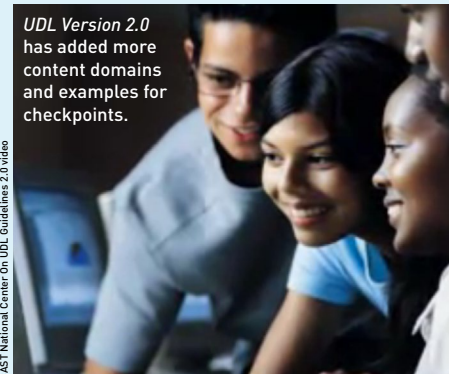


Princes George's Country Public Schools.org



Keyboard with video buttons.

CAST National Center On UDL Guidelines 2.0 video



*UDL Version 2.0* has added more content domains and examples for checkpoints.



## iCivics, Inc.

### The Drafting Board

*The Drafting Board* engages students in researching and writing a persuasive essay through a free suite of online, interactive applications. Aligned to Common Core standards, it facilitates reasoning and argumentation around civic issues. Students discover and analyze information, and identify and connect claims, evidence, and reasoning to produce a complete and well-structured argument. As students develop their polished essay, embedded assessments provide instant feedback and opportunities for correction throughout the argument-construction process.

*iCivics.org*, founded by Justice Sandra Day O'Connor, is the nation's leading civics curriculum.

**Grades:** 6-10

**Subjects:** Literacy

**Completion Date:** September 2012

**Portfolio:** Next Generation Learning Challenges (NGLC)

**Availability:** Free on website.

**URL:** [www.icivics.org](http://www.icivics.org)

**Contact:**

**Kelly Landis**

[kelly.landis@icivics.org](mailto:kelly.landis@icivics.org)

(202) 729-8132

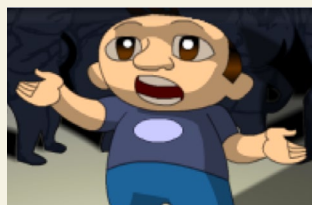
1875 K Street NW, Suite 500

Washington DC 20006

(202) 729-8144



*iCivics* prepares students to become knowledgeable 21st century citizens.



## Classroom, Inc.

### Reading in the Real World: The Sports Network (TSN-2)

*TSN-2* is a twenty hour web-based reading program in which students act as executives at *TSN-2*, a simulated sports media corporation. Students attend meetings, conduct research, and prepare a pitch for a new show. They work through a series of real world problems requiring them not only to develop Common Core literacy skills but also understand the relevance of what they learn in school to the world of work. Embedded assessments support differentiation and monitoring of progress toward mastery. *Classroom, Inc.* has a strong track record over its twenty years as a nonprofit—engaging students and rapidly improving achievement.

**Grades:** 8-9

**Subjects:** Literacy

**Completion Date:** September 2012

**Portfolio:** Next Generation Learning Challenges (NGLC)

**Availability:** Free on forthcoming website.

**URL:** [www.classroominc.org](http://www.classroominc.org)

**Contact:**

**Sylvia J. Barsion, Ph.D.,**

Vice President Curriculum and Assessment

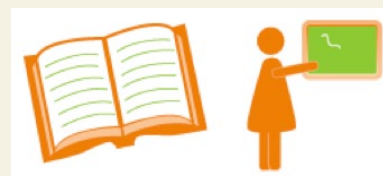
[sbarsion@classroominc.org](mailto:sbarsion@classroominc.org)

(212) 653-8148

245 Fifth Avenue, 20th Floor

New York, New York 10022

(212) 545-8400



*Classroom, Inc.* closes the academic achievement gap for low-income adolescents by using technology and the world of work to engage, teach, and inspire.



## Florida Virtual School:

### English I, English IV

*English I* (9th grade) and *English IV* (12th grade) courses utilize the Literacy Design Collaborative (LDC) framework to address the new Common Core standards. These year-long online courses are STEM-focused, and offer teachers the ability to place students in a path of coursework that is appropriate to their skill level at course entry. This flexibility provides teachers with information about student learning gains and the ability to further challenge students or to scale back the level of intensity in the coursework as needed.

**Grades:** 9, 12

**Subjects:** English

**Completion Date:** Fall 2012

**Portfolio:** Next Generation Models (NGM)

**Availability:** All FLVS courses will be free to all Florida high school students. Additionally, it will be available for free to students in all other states as an open source course.

**URL:** [www.flvs.net](http://www.flvs.net)

**Contact:**

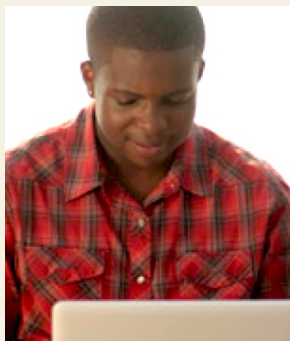
**Dorothy (Digi) Edwards**

[doedwards@flvs.net](mailto:doedwards@flvs.net)

(407) 513-3587

2145 Metrocenter Boulevard, Suite 200

Orlando, Florida 32835



A scene from the video  
*An Average Day at School*  
(FLVS English), 2010,  
by Stephen Picher/FLVS,  
B.I.G. Animation Studios.



## Computers for Youth

### Power My Learning

*PowerMyLearning.com* is a free, online, K-12 learning platform for students, teachers and parents that makes quality digital learning activities easily accessible and usable. Some features include an engaging, user-friendly interface for students, the ability for teachers and parents to target Common Core State Standards, playlist feature that makes it easy to select and sequence digital learning activities to individualize and customize learning.

**Grades:** K-12

**Subjects:** Math & Logic, Science, English Language Arts, Social Studies, Art & Music, Computer Programming

**Completion Date:** Interim version available beginning in the 2011-12 academic year; full-featured functionality with increased content available June 2013.

**Portfolio:** Next Generation Models (NGM)

**Availability:** Free on the web.

**URL:** [www.powermylearning.com](http://www.powermylearning.com)

**Contact:**

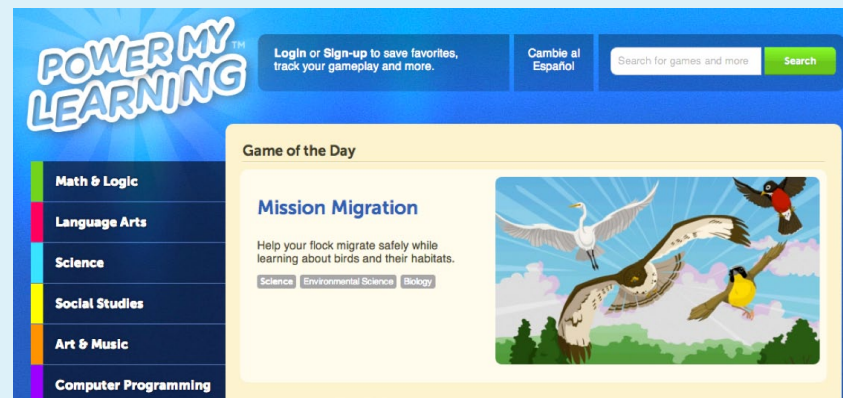
**Bill Rappel**

[brappel@cfy.org](mailto:brappel@cfy.org)

(212) 563-7300, extension 118

520 Eighth Avenue, 25th Floor

New York, New York 10018



## Khan Academy

### Khan Academy

*Khan Academy* is comprised of three elements that are freely available.

**Video library:** A library of thousands of videos which covers topics including Math, Science and Humanities.

**Exercises:** An ever-growing adaptive exercise software platform in Math. Students can work through a knowledge map and infinite practice problems based on their skill levels.

**Data:** A data-rich dashboard that provides real-time data on student performance to individual students as well as their teachers, mentors or parents (whom we refer to as coaches). This instantaneous feedback helps guide each individual student's learning on a day-to-day basis.

**Grades:** K-12

**Subjects:** Math, Science, Finance & Economics, Humanities, Test Prep

**Completion Date:** We continue to develop more content and features, and to learn from our users to iterate on our product.

**Portfolio:** Next Generation Models (NGM)

**Availability:** Free on website.

**URL:** [www.khanacademy.org](http://www.khanacademy.org)

**Contact:**

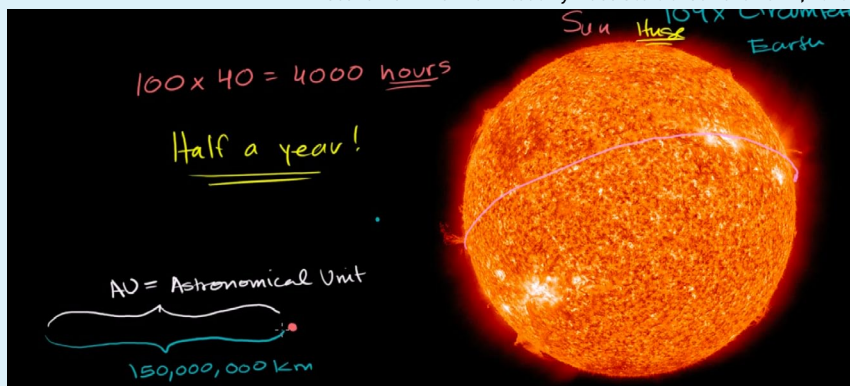
[khanacademy.desk.com](mailto:khanacademy.desk.com)

P.O. Box 1630

Mountain View, California 94042



A scene from the *Khan Academy* video *Scale of Sun and Earth*, 2010.



## LearnZillion

### LearnZillion

*LearnZillion* is a learning platform that helps teachers and parents meet the needs of every student. The site combines video lessons (created by talented teachers across the country), assessments, playlists, and progress reports. Each video lesson is short, highlights the Common Core, and captures pedagogical content knowledge developed by effective teachers. *LearnZillion* is currently being used in schools as a professional development tool and a strategy for personalizing instruction during class time. Almost 3,000 teachers and 7,000 students have registered to use *LearnZillion* in the past three months.

**Grades:** 3-9

**Subjects:** Math

**Completion Date:** Version 1.0 complete;  
Version 2.0 coming September 2012

**Portfolio:** Next Generation Learning Challenges (NGLC)

**Availability:** Free on website,  
with premium services and functionality with subscription.

**URL:** [www.learnzillion.com](http://www.learnzillion.com)

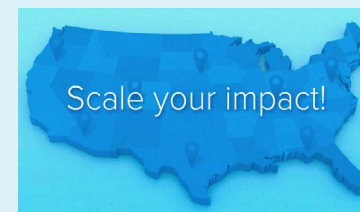
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[ericwestendorf@learnzillion.com](mailto:ericwestendorf@learnzillion.com)

(202) 491-1225

5038 MacArthur Boulevard, NW  
Washington, DC 20016



*LearnZillion* is selecting 100-200 ultra-talented teachers from across the country for its 2012 summer dream team.



## SMALLab Learning

### SMALLab Learning

*SMALLab Learning* creates embodied learning environments that integrate new technologies and contemporary research from the learning sciences. Using skeletal tracking cameras – like Kinect for Xbox – we design content that uses students' bodies as the "cursor". Several students can be tracked at the whiteboard as they experiment with virtual gears and levers in a game-like manner. Their physical gestures help them to understand the content in a deeper manner. They can learn the size of a circle they gesture, while seamlessly mapping to a formula underscoring how diameter affects gears' size and work. Multiple units of standards-supported content and embedded assessment measures are planned for development.

**Grades:** 4-12

**Subjects:** Math, Science, Physics, complex thinking collaboration

**Completion Date:** June 2012

**Portfolio:** Next Generation Learning Challenges (NGLC)

**Availability:** Most content free on website, with complete access available by subscription.

**URL:** [www.smallablearning.com](http://www.smallablearning.com)

**Contact:**

**Cyndi Boyd**

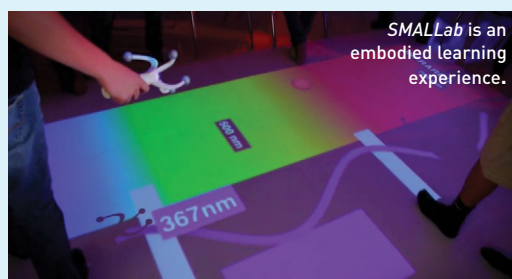
[Cyndi@smallablearning.com](mailto:Cyndi@smallablearning.com)

(888) 278-4620

SMALLab Learning

6325 Santa Monica Boulevard, Suite 202

Hollywood, California 90038



## Arizona State University

### Atlantis Remixed

A suite of 3D game-based curricular modules designed to support the learning of Common Core standards. The curricular designs provide game-based worlds where children are transformed into empowered scientists, doctors, reporters, and mathematicians who have to understand disciplinary content to accomplish desired ends.

**Grades:** 5-9

**Subjects:** Math, Science, English Language Arts

**Completion Date:** September 2012

**Portfolio:** College Ready Work (CRW)

**Availability:** Free on website.

**URL:** [www.atlantisremixed.org](http://www.atlantisremixed.org)

**Contact:**

**Sasha Barab**

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(480) 727-5674

(480) 965-3237 fax

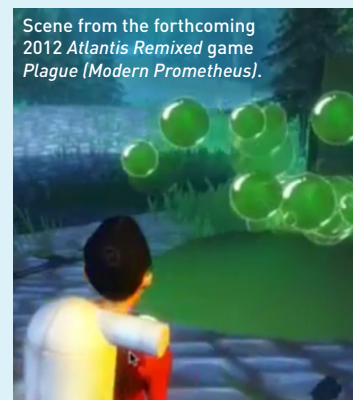
108D Payne Hall

Arizona State University

1000 South Forest Mall

Tempe, Arizona 85287

ATLANTIS *Remixed*





## Gooru

### Gooru

*Gooru* is a search engine for learning. Students and teachers discover collections of web resources and assessments for any 5th-12th grade math or science topic. Over 50,000 web resources—videos, slides, digital textbooks, interactives and more—are organized and vetted by educators into 2,600 collections for learning. Based on user preference and usage data, *Gooru* adapts and suggests the most relevant learning material for each student. *Gooru* dramatically increases student engagement and motivation by connecting topics with 21st century skills and real-life applications. Students interact with peers and teachers by posting questions, studying with groups and collaborating in real time.

**Grades:** 5-12

**Subjects:** Math, Science

**Completion Date:** Beta launch in June 2012

**Portfolio:** Next Generation Learning Challenges (NGLC)

**Availability:** Freely available as a web application on any device. *Gooru* is integrated as a Google Apps Marketplace and will be integrated with Facebook.

**URL:** [www.goorulearning.org](http://www.goorulearning.org)

**Contact:**

**Prasad Ram**

CEO And Founder

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(650) 331-0219

1032 Elwell Court, Suite 210

Palo Alto, California 94303

gooru



## Worcester Polytechnic Institute (WPI)

### ASSiSTments

*ASSiSTments* is a free web-based platform, hosted by WPI, that allows teachers to write individual *ASSiSTments*—a composition of questions and associated hints, solutions, and web-based videos. *ASSiSTments* is not just a math tutoring system. It's an "eco-system" of researchers, schools, parents, funders, and state partners, working together to help students with a vast collection of *ASSiSTments*.

**Grades:** 5-12

**Subjects:** All

**Completion Date:** Complete

**Portfolio:** Next Generation Learning Challenges (NGLC)

**Availability:** Free on the web.

**URL:** [www.assistments.org](http://www.assistments.org)

**Contact:**

**Neil T. Heffernan**

[nth@wpi.edu](mailto:nth@wpi.edu)

(508) 831-6470

100 Institute Road

Worcester, Massachusetts 01609

(508) 250-6470

ASSiSTments



"Using *ASSiSTments* has made class run much more efficiently. It highlights areas of comprehension and misconceptions that need to be readdressed."  
Courtney Mulcahy, 8th Grade Teacher



## DaVinci Minds

### WhyPower

*WhyPower* is an integrated math, science and career education game, located in "Whyville"—a learning-based virtual world for teens and tweens. For each supplemental lesson, students visit the *WhyPower* plant during teacher-facilitated exploratory lessons. *WhyPower* focuses on challenging core academic math and science content that cross-matches to academic standards for Grades 6 through 8, and addresses deeper learning competencies. Students earn career badges and explore local career pathways as they complete lessons and capture their student performance on Common Core math and Texas standards.

**Grades:** 6-8

**Subjects:** Math, Science, Career Education

**Completion Date:** February 2012

**Portfolio:** Next Generation Learning Challenges (NGLC)

**Availability:** Limited access to free content on website; subscription available for purchase.

**URL:** [www.whyville.net](http://www.whyville.net)

**Contact:**

**Leah Mendoza**

[info@davinci-minds.com](mailto:info@davinci-minds.com)

(210) 399-1314

6927 Leslie Road, Suite 102  
San Antonio, Texas 78254



Students visit the *WhyPower* plant during teacher-facilitated exploratory lessons.

## DePaul University

### Digital Youth Network

The *Digital Youth Network (DYN)* at DePaul University is establishing a national hub for testing, building, and advancing a badge-based interest-driven learning model that spans students learning across school, home and afterschool. *DYN* connects formal and informal learning settings through C21, a social learning network led by *DYN* mentors, engages youth in strengthening traditional literacies while leveling up in various literacy-based, role trajectories—as a graphic novelist, investigative reporter, or photojournalist. Students are involved in iterative creation of artifacts for authentic audiences that are grounded in rigorous coverage of the Common Core State Standards and the Literacy Design Collaborative framework. All student-produced media artifacts are supported by traditional written formats (essays, reports, reviews), enabling teachers to assess student development as writers and students to understand the essential connection between traditional and new forms of literacies..

**Grades:** 6-8

**Subjects:** Writing, Social Studies, Reading, Media Arts

**Completion Date:** July 2012

**Portfolio:** College Ready Work (CRW)

**Availability:** Curriculum and framework available online with paid subscriptions for use in and/or out of schools.

**URL:** [digitalyouthnetwork.org](http://digitalyouthnetwork.org)  
[remixlearning.com](http://remixlearning.com)

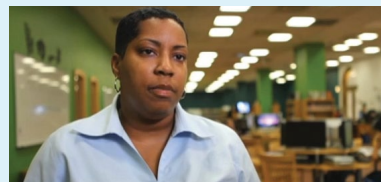
**Contact:**

**Nichole Pinkard**

[nicholepinkard@gmail.com](mailto:nicholepinkard@gmail.com)

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1 East Jackson Boulevard  
Chicago, Illinois 60604  
(312) 362-8000



Digital media scholar Nichole Pinkard.



## Institute of Play

### Playforce, Gamekit, Toolkit, Quest Everlasting, Mobile Quest

The *Institute of Play* has a number of game-based tools and resources for young people and educators. These include *Playforce*, an online digital experience that connects games to core learning outcomes via a crowd-source game review model, *Gamekit*, a set of self-paced game design challenge modules for teens, *Quest Everlasting*, an interactive toolkit for teachers grown out of the Quest school's game-like learning model, and *Mobile Quest*, a week-long summer day camp where middle school students explore location-based game design.

**Grades:** 6-8

**Subjects:** Common Core and 21st century competencies

**Completion Date:** December 2012

**Portfolio:** College Ready Work (CRW)

**Availability:** Free on the web, with Premium subscriptions for a fee.

**URL:** [www.instituteofplay.org](http://www.instituteofplay.org)

**Contact:**

**Brian Waniewski**

[Brian@instituteofplay.org](mailto:Brian@instituteofplay.org)

(212) 206-8908

134 West 26th Street, Room 780

New York, New York 10001



In this 2011 *Institute of Play* pilot program, a student works to develop a water purifier re-using a plastic bottle.

## University of Southern California, Annenberg Innovation Lab

### PLAY! (Participatory Learning And You!)

The *PLAY!* platform is a transmedia learning playground for the curation, creation and circulation of user-generated learning activities that cultivates co-learning among adults and youth. The platform is designed to promote learning through “challenges”—multi-disciplinary, blended learning activities that encourage participants to search, synthesize, collaboratively remix, and disseminate information. In this environment, users not only engage in interest-driven learning, but gain practice in the new media literacies—the social skills needed for full participation in most digital landscapes.

**Grades:** 6-12

**Subjects:** Math, Science, Social Studies, English, Language Arts, Government, Economics, US and World History, Special Education, Media Studies

**Completion Date:** Spring 2012

**Portfolio:** Next Generation Models (NGM)

**Availability:** Free on the web (Alpha Version).

**URL:** [50.57.84.243/play/playground.aspx](http://50.57.84.243/play/playground.aspx)

**Contact:**

**Erin Reilly**

[ereilly@usc.edu](mailto:ereilly@usc.edu)

(207) 251-1617

3502 Watt Way, ASC 104

Los Angeles, California 90089

(213) 740-0476





## Center for Children & Technology/ Education Development Center, Inc.

### Wordplay Games

*Wordplay Games* is a suite of narratively and conceptually linked online game that uses high-frequency social studies and science words to help students develop vocabulary skills.

*Code Invaders* is a single-player game in which players familiarize themselves with multiple meaning words they will use as they fulfill their mission.

*Cipher Force*, a team game, pushes students to think more explicitly about the different meaning of words. The social aspect of *Cipher Force* also encourages players to articulate and reflect on their ideas about the words and their various meanings.

**Grades:** 7

**Subjects:** Science, Social Studies

**Completion Date:** Games completed in April 2012

**Portfolio:** Next Generation Learning Challenges (NGLC)  
Next Generation Models (NGM)

**Availability:** Free on forthcoming website.

**URL:** [www.cct.edc.org](http://www.cct.edc.org)

**Contact:**

**Jay Bachhuber**

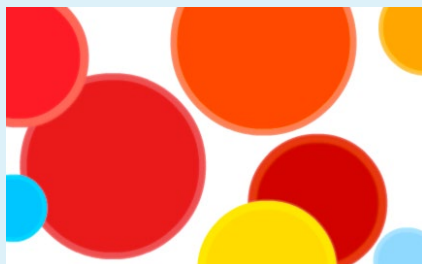
[jbachhuber@edc.org](mailto:jbachhuber@edc.org)

(212) 807-4219

CCT/EDC

96 Morton Street, 7th Floor

New York, New York 10014



## Louisiana Department of Education (LDOE)

### Louisiana Virtual School

The *Louisiana Virtual School* incorporates a multitude of 21st century digital tools which engage students in a technology-rich environment. *LVS* uses several tools that are Open Education Resources or available through an educational license purchase, such as GeoGebra, LiveScribe SmartPens, Wimba and Atomic Learning Tutorials to enhance courses originally developed for *LVS*.

**Grades:** 7-9

**Subjects:** Algebra 1

**Completion Date:** September 2012

**Portfolio:** Next Generation Learning Challenges (NGLC)

**Availability:** Fees for use on website.

**URL:** [www.louisianavirtualschool.net](http://www.louisianavirtualschool.net)

**Contact:**

**Dianne Gauthier**

Educational Technology Consultant

[Dianne.Gauthier@La.Gov](mailto:Dianne.Gauthier@La.Gov)

(225) 219-0442

(225) 219-0441 fax

Office of College And Career Readiness

Louisiana Virtual School, Louisiana Department of Education

1201 North 3rd Street - G219A

Baton Rouge, Louisiana 70802

**Ken Bradford**

[Ken.Bradford@La.Gov](mailto:Ken.Bradford@La.Gov)

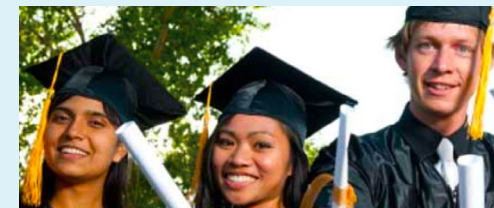
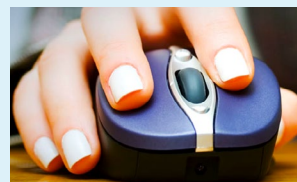
(225) 219-0434

Office Of College And Career Readiness

Louisiana Virtual School, Louisiana Department of Education

1201 North 3rd Street - G232

Baton Rouge, Louisiana 70802





## North Carolina State University

### Crystal Island: Lost Investigation

*Crystal Island: Lost Investigation* is a game-based learning environment for literacy and microbiology for 8th grade students. It features a science mystery about a mysterious epidemic that has struck a team of scientists stationed on a remote tropical island. The student's objective is to investigate the spreading illness, recover scattered pieces of a previous investigator's notes, and diagnose the illness by synthesizing information gleaned from reading complex informational texts on microbiology concepts.

**Grades:** 8

**Subjects:** Science, English Language Arts

**Completion Date:** Summer 2012

**Portfolio:** Next Generation Learning Challenges (NGLC)

**Availability:** Contact NCSU for accessibility and permissions.

**URL:** [n/a](#)

**Contact:**

**James Lester**

[lester@ncsu.edu](mailto:lester@ncsu.edu)

(919) 515-7534

Department Of Computer Science

North Carolina State University Engineering Building II

890 Oval Drive

Raleigh, North Carolina 27695-8206

(919) 515-2858

CRYSTAL  
ISLAND



Students virtually arrive on *Crystal Island* to solve a mystery.

## Educurious Partners

### Educurious High School Courses & The Educurious Expert Network (TEEN)

*Educurious* is creating next generation models of high school courses in Introductory Biology, Introductory English / Language Arts, and Algebra 1. They design, produce, test, and distribute three blended learning, project-based high school courses in which students tackle real world challenges delivered on a social media technology platform with the integrated involvement of a mentor network of disciplinary experts and working professionals (TEEN). The units in each course are standards-aligned, multimedia rich and based on trajectories toward mastery, with integrated assessments and performancebased badging of developing competencies, interests, and identities.

**Grades:** 8-10

**Subjects:** Algebra, Biology, English Language Arts

**Completion Date:** September 2013

**Portfolio:** College Ready Work (CRW)

**Availability:** Contact organization for access and availability.

**URL:** [www.educurious.org](http://www.educurious.org)

**Contact:**

**Michael Golden**

Co-PI, CEO, Educurious Partners

[info@educurious.org](mailto:info@educurious.org)

(206) 402-4489

2825 Eastlake Avenue East, #210

Seattle, Washington 98102

educurious  
learning that connects



The Edgar Allan Poe trans-media experience immerses students into the life and works of the author/poet via a current day mystery that unfolds around the students in real time.

## Bill & Melinda Gates Foundation

Guided by the belief that every life has equal value, the Bill & Melinda Gates Foundation works to help all people lead healthy, productive lives. In developing countries, it focuses on improving people's health and giving them the chance to lift themselves out of hunger and extreme poverty. In the United States, it seeks to ensure that all people—especially those with the fewest resources—have access to the opportunities they need to succeed in school and life. Based in Seattle, Washington, the foundation is led by CEO Jeff Raikes and Co-chair William H. Gates Sr., under the direction of Bill and Melinda Gates and Warren Buffett.

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## Portfolios

### Next Generation Learning Challenges (NGLC):

**CAST, Inc.** Foundation Science Physics, Universal Design for Learning

**Center for Children & Technology/EDC, Inc.** Wordplay Games

**Center for STEM Research, Hofstra University** WISEngineering

**Classroom, Inc.** Reading in the Real World, The Sports Network

**DaVinci Minds** WhyPower

**The Education Arcade at MIT** Labyrinth Challenge

**Gooru** Gooru

**iCivics, Inc.** The Drafting Board

**Imagine Education** Ko's Journey

**LearnZillion** LearnZillion

**Louisiana Department of Education** Louisiana Virtual School

**North Carolina State University** Crystal Island, Lost Investigation

**SMALLab Learning** SMALLab Learning

**Texas Tech University** APS4Math

**University of Massachusetts** Wayang Outpost, Intelligent Tutor

**University of South Florida, St. Petersburg** SunBay Digital Mathematics

**University of Wisconsin, Center for Education Research** CoMPASS-Physics

**WNET** Get the Math

**Worcester Polytechnic Institute** ASSiSTments

### College Ready Work (CRW):

**Arizona State University** Atlantis Remixed

**Center for Game Science, University of Washington** Refraction

**DePaul University** Digital Youth Network

**The Education Arcade at MIT** Cosmos

**Educurious Partners** Educurious High School Courses & Expert Network

**Institute of Play** Playforce, Gamekit, Toolkit, Quest Everlasting, Mobile Quest

### Next Generation Models (NGM):

**Center for Children & Technology/EDC, Inc.** Wordplay Games

**Computers for Youth** Power My Learning

**Florida Virtual School** English I, English IV

**Khan Academy** Khan Academy

**Reasoning Mind** Blended Learning Elementary Mathematics

**USC, Annenberg Innovation Lab** PLAY!