

Addressing the Challenges of Bringing Games and Simulations to Scale for Science Learning

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Boom Blox in the Classroom

- Preparation for future learning in physics
 - Shape, Mass and Gravity
 - Momentum and Inertia
 - Analysis, Inquiry and Design
 - Interconnectedness, Cause and Effect; Systems and Models; Magnitude and Scale
- Create Mode and Online Functionality
 - Students apply understanding to new levels
 - Peer-to-peer teaching and learning

Learning Games Network

Non-profit spin-off of the MIT Education Arcade and the University of Wisconsin's Games Learning and Society Group that was established to...

- *Foster improved design, production, and distribution of new games informed by research in the learning sciences across a complete range of subject areas from electrostatics to Shakespeare.*
- *Identify existing and develop new best practice strategies and activities, including teacher training resources, for the use of any games that support informal and formal instruction.*
- *Explore emerging business development opportunities to address growing student and teacher demand for commercial and open tools that support individual and collaborative learning in the 21st Century.*

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Join. Play. Cure.
Game for Good at
generationcures.org

Children's Hospital Boston



CLEAR CHANNEL

Generation Cures

- *Generation Cures* program and online resources have been built especially for tweens (ages 8-12), their parents, and teachers.
 - <http://www.generationcures.org> and <http://kids.generationcures.org>
- Program is designed to teach kids to use their powers for good while supporting learning in character development, science, and math, inspiring creativity while strengthening skills of logic, reason, and critical thinking.
 - <http://www.generationcures.org/education>
- The site enables students to give by both recruiting sponsors for an ongoing game-a-thon and organizing local and classroom-based fundraising drives:
 - <http://www.g4gmib.org>
- As kids have fun watching stories, playing games, and participating in online forums at *Generation Cures*, they begin to understand that they can make a difference in the lives of others.
- Although all of the rich content on the *Generation Cures* website is free, gifts inspired by *Generation Cures* fund research and find treatments for the world's most debilitating childhood diseases. Kids make a direct impact.

Learning Content



ZebraFish, a hip web-based cartoon series that sparks philanthropic awareness and empathy. Kids tune in to see how the story of this struggling rock band unfolds and soon their eyes begin opening to the needs of others and the world around them.



Caduceus, an interactive online game that evolves from the ZebraFish characters. Kids compete against themselves and other kids as they learn and gain points through an increasingly challenging interactive adventure. At each stage they are given the opportunity to give back and further advance in the game.



Real-life Kid-Produced Videos spotlight Children's Hospital Boston researchers and doctors through the eyes of former patients and their friends, providing kids with a view into the very real effects of the research and care.



Caduceus

Staff of the
Alchemist

Can you help to save the people of Alterica?

Play





Give

Join Today

Tell a Friend



Home

Learn More About Us

Try "The Difference Engine"

Login: Email

Password

Search



For Educators

Generation Cures content reflects diverse curriculum areas. Our mission and website are unique in their strong focus on character development, social responsibility, and contributing to the community, as well as introducing students to important concepts in math and science.

Generation Cures

Our goal is to involve kids and others across the nation in finding cures for the most devastating childhood diseases. The first step is education. Through the Generation Cures website, we aim to increase students' awareness about how illness impacts the lives of others and the process of scientific research with a special focus on how researchers and doctors search for treatments and cures for diseases.

By doing things they already love -- playing online games and watching web-based stories and videos -- we invite students who participate in Generation Cures to think about opportunities to share with others and recognize that they have the power to affect change in bold new ways

Children's Hospital Boston

life-changing care world-changing research

Welcome to Generation Cures. An online community created by Children's Hospital to let kids and their families learn and have fun while raising funds for research that can help sick children worldwide.

More ▶

You Can Help

Start Fundraising

Involve Kids

Make A Gift

Open Gaming/Independent Games

- Create a new vision to address challenges, offer solutions
 - Establish pedagogical, creative, and technical frameworks that enable expansion and extension
- Establish space for interdisciplinary design collaboration and game production
 - Requires new research and development processes
 - Provides opportunities to develop and deploy new resources and tools
- Explore fertile area for development and expansion
 - Identify expanded opportunities for teaching and learning

Concept: A Learning Platform

- Reduce barriers to entry for application development
- Enable and encourage experimentation across diverse communities of contributors and collaborators
 - Create pedagogical and creative context
 - Establish technical bedrock that supports modular expansions
 - Identify and support early development partners
- Support, sustain, and scale efforts through a variety of content, curricular, and data services extensions
 - Content licensing revenue across additional media
 - On-line course enrollment fees
 - Measurement, assessment, and evaluation reports with subscriptions

Integrated Social Learning Environment



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ISLE: Integrated Social Learning Environment



- Global Learning Objects
 - The raw materials, including facts, information, procedures, formulas, historical references, theorems, proofs, etc.
 - Tagged with different variables for multiple uses
- Global Learning Goals
 - Science-specific goals across major topic areas
 - Framework adapted from multiple curricular resources and standards requirements/recommendations
- Global Activity Engines
 - Open and re-usable game and activity frameworks with exposed APIs, plus expandable community spaces

ISLE Rationale

- Technical and pedagogical bedrock enables us to go beyond “one-size fits all” and to design for multiple variables
 - Data sets and engines provide standardized framework that opens possibilities for modular , tailored solutions for different subject areas, educational goals, and learning environments
- Growing R&D community innovates new interactive solutions for social learning
 - Solutions built on standardized data sets/engines while leveraging behaviors and interests of growing development and user communities
- Curriculum developers and individual teachers add to growing repository of teaching resources
 - Sample lesson plans, classroom activities, mentoring strategies, worksheets, assignments, and tests/performance evaluations

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Images

Slides 2-5 — *Boom Blox* and *Boom Blox Bash Party* screenshots and box art, Copyright © 2007, 2008, and 2009 by Electronic Arts

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