Brain Hackers Online: A Social Media Platform for Teaching Science

Chris Forsythe, PhD

President and Founder

Brain Hackers Association

During 2016-17 school year, we were in 28 schools with over 2,500 students participating

Mostly, students have participated through in-class activities

Brain Hackers activities have included

Girl Brain / Boy Brain

Sheep Brain Dissections

Polygraph

Sidewalk Illusions

Android App & Game Development

Prosthetics

Robotics

The prosperity and security of our nation depends on our youth learning science and technology

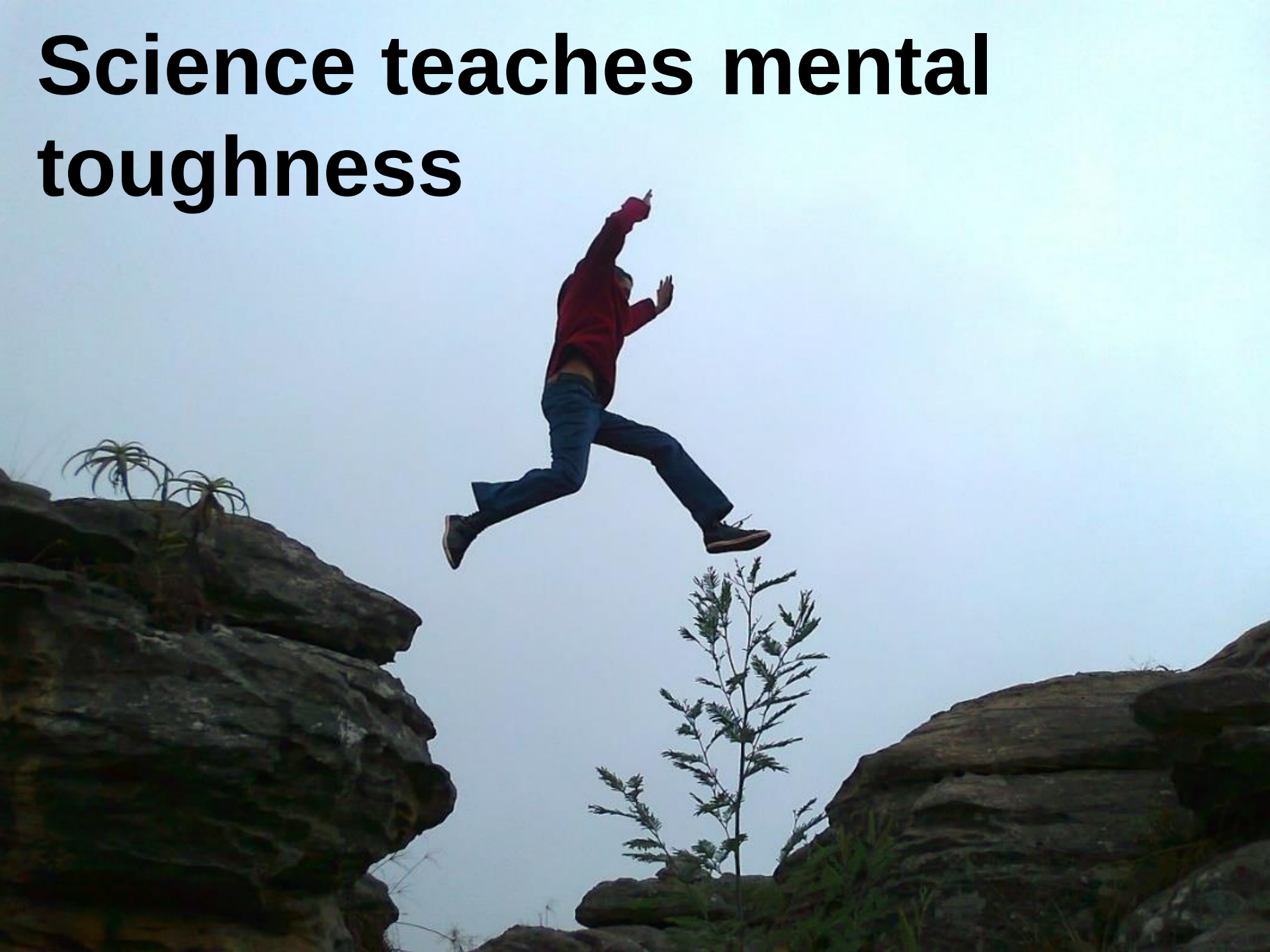
We want to change the way students think about science

Science and technology is the most CERTAIN path to prosperity

Whatever your interest, you will do better if you know science and technology

Scientists
are not
chomps

Science teaches mental toughness



Science gives
us cool stuff

Science is something
friends do together

Science is for
everyone

Brain Hackers Online

Apply what the Internet has taught us

Community

Curiosity

Makers

Expression

Crowdsourcing

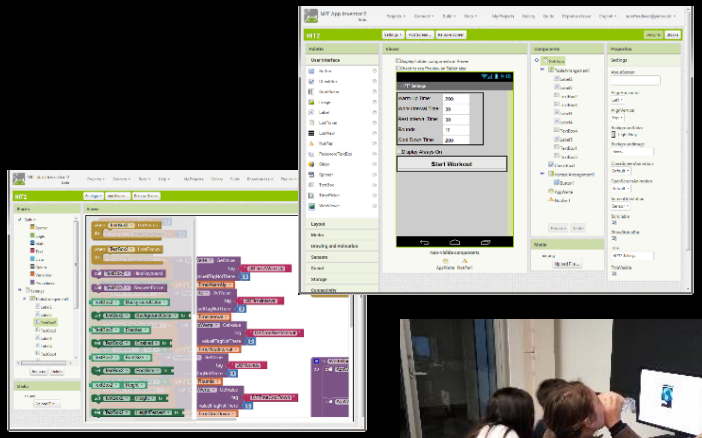
Competition

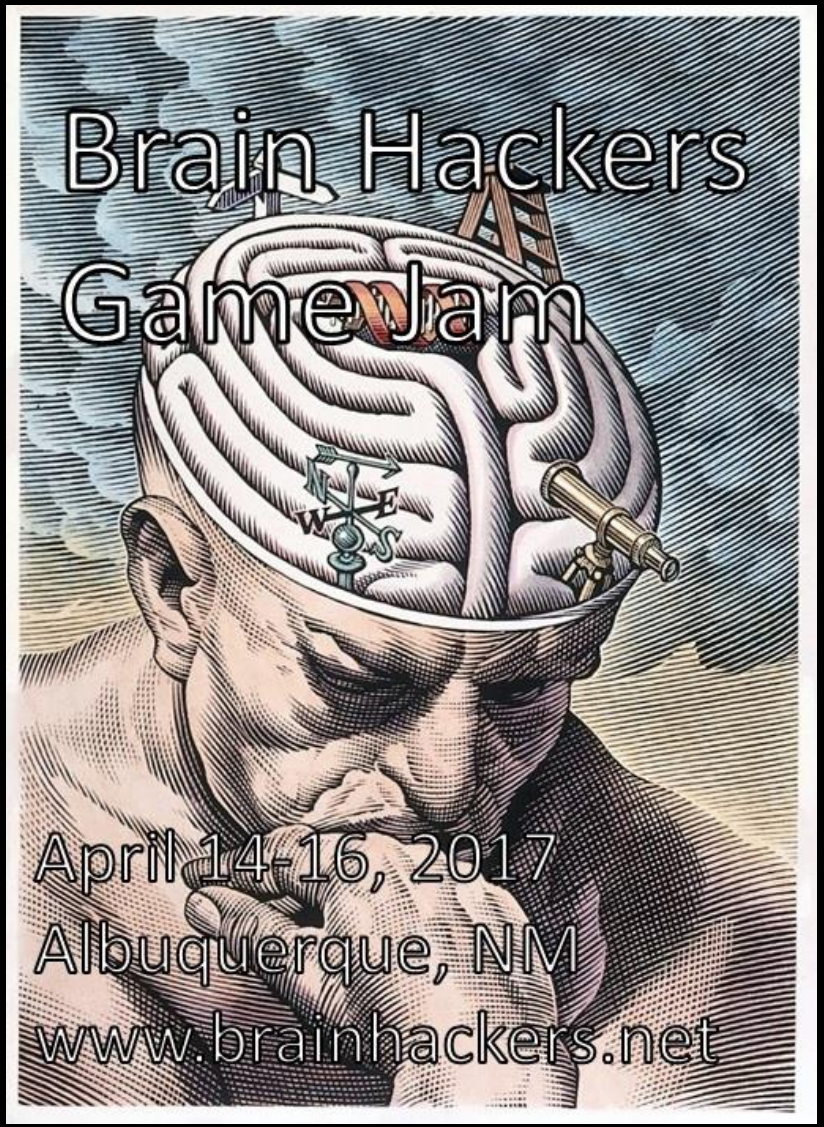
NeuroSleuth demonstrates the power of team competition

Team competition using Jeopardy-Inspired Game Engine

Students learn to use online 3-D Brain Connectivity Atlas

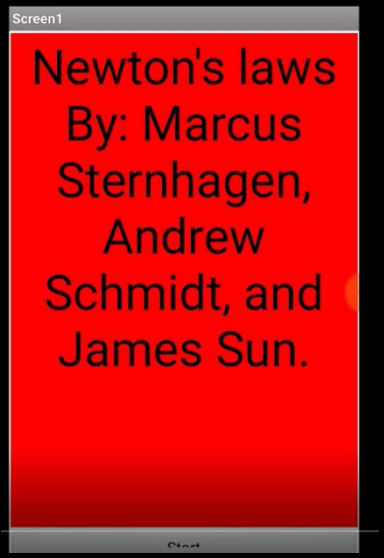
Hackathons allow students to be Makers



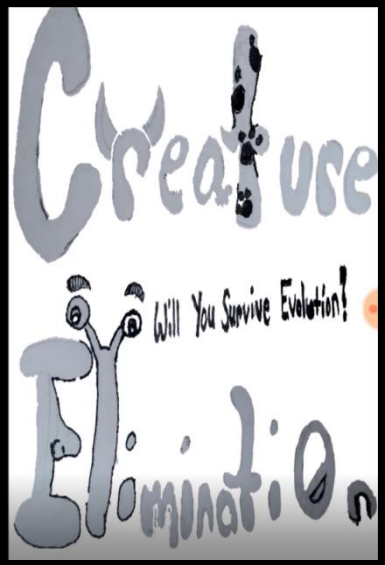


App/Game development reinforces and elaborates learning

Newton's Laws



Creature Elimination



Date with Water

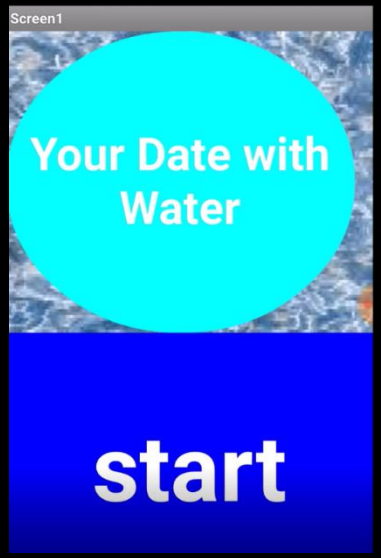
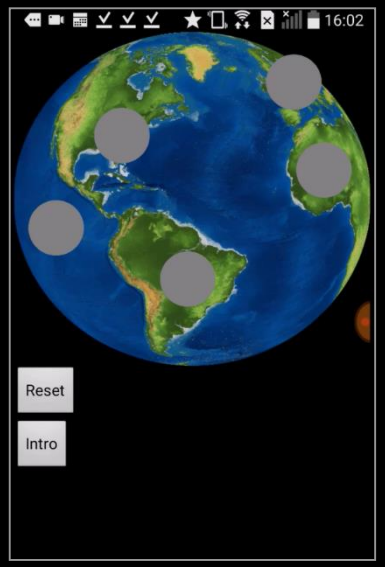


Plate Tectonics



Brain Hackers Online

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Brain Hackers Online is a social media platform that applies what we have learned from the Internet to engage students in science

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Creature Eliminatio

Create your own species of animal

Imagine a

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The brain of a Time Lord

A Time Lord relies on superior intelligence to save the day. But what could be the underlying scientific properties of

Elements of success

Brain Hackers Online

Ubiquitous Access

Skills Development

Mapping Science Curriculum

Sharing Repository

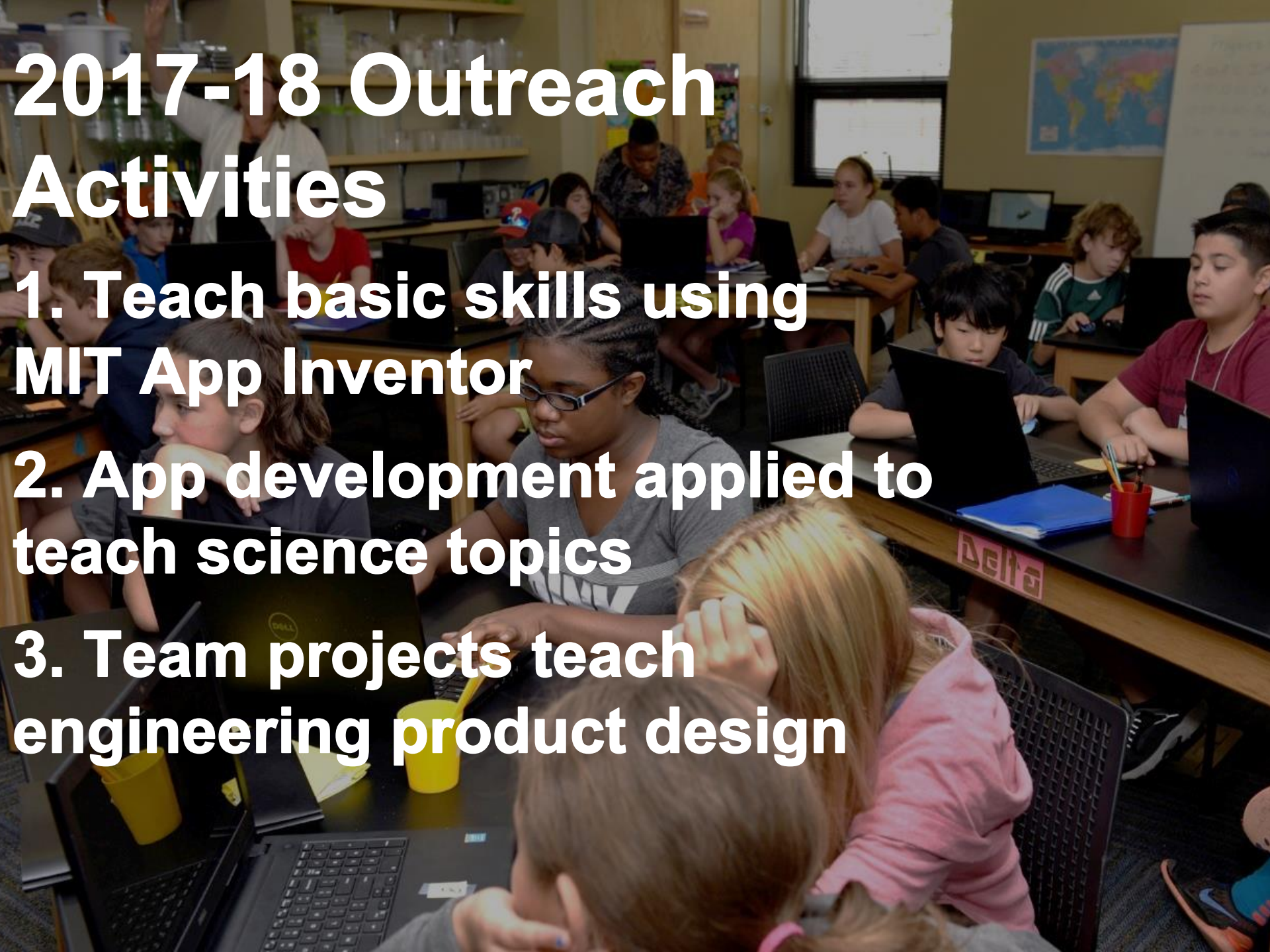
Community of Peers

Creative Design

Competitive Event

Incentive Structure

2017-18 Outreach Activities



2017-18 Outreach Activities

1. Teach basic skills using MIT App Inventor
2. App development applied to teach science topics
3. Team projects teach engineering product design

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Articles are light-hearted, often silly, but rooted in an understanding of science

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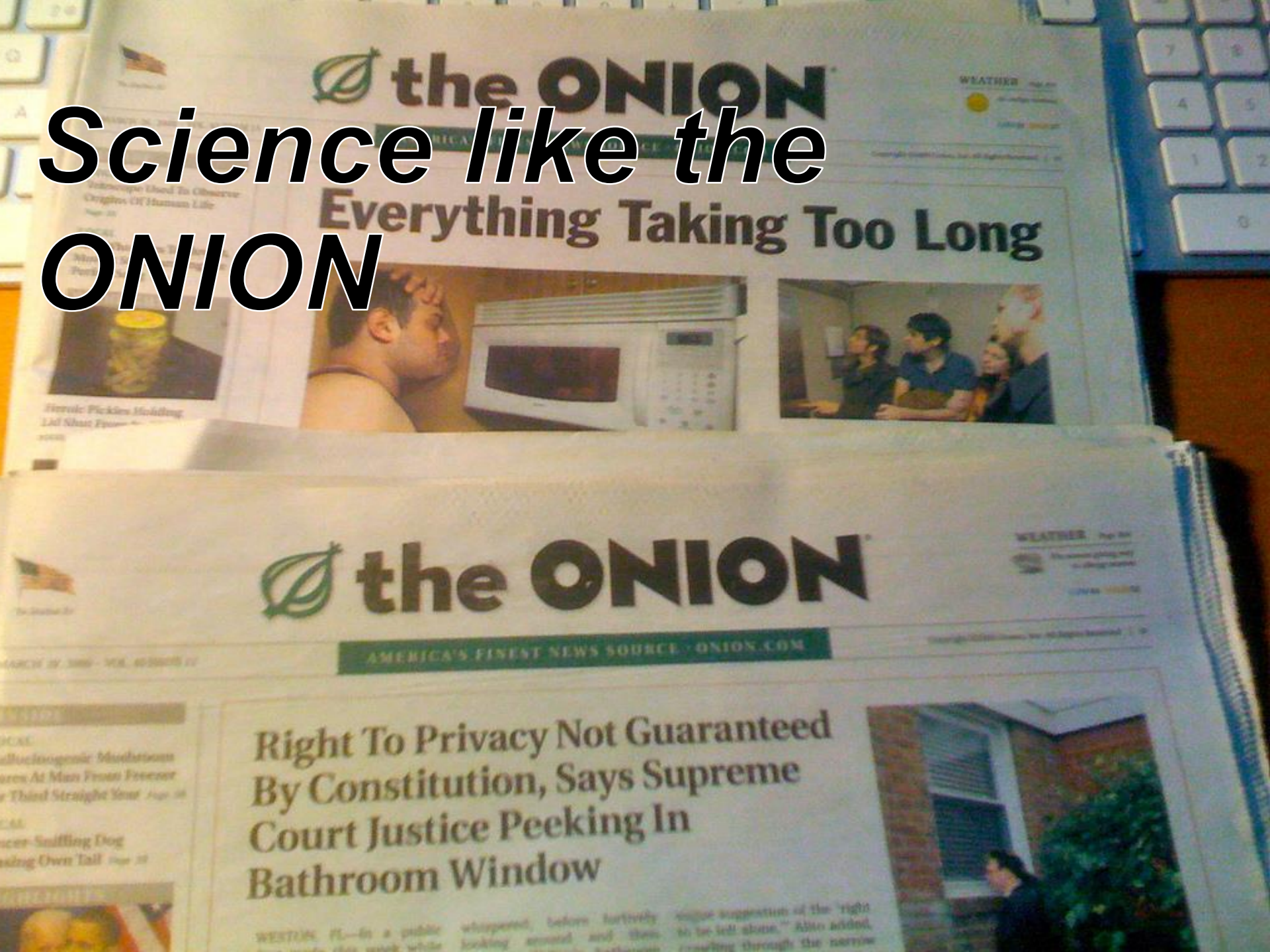
Science like the ONION



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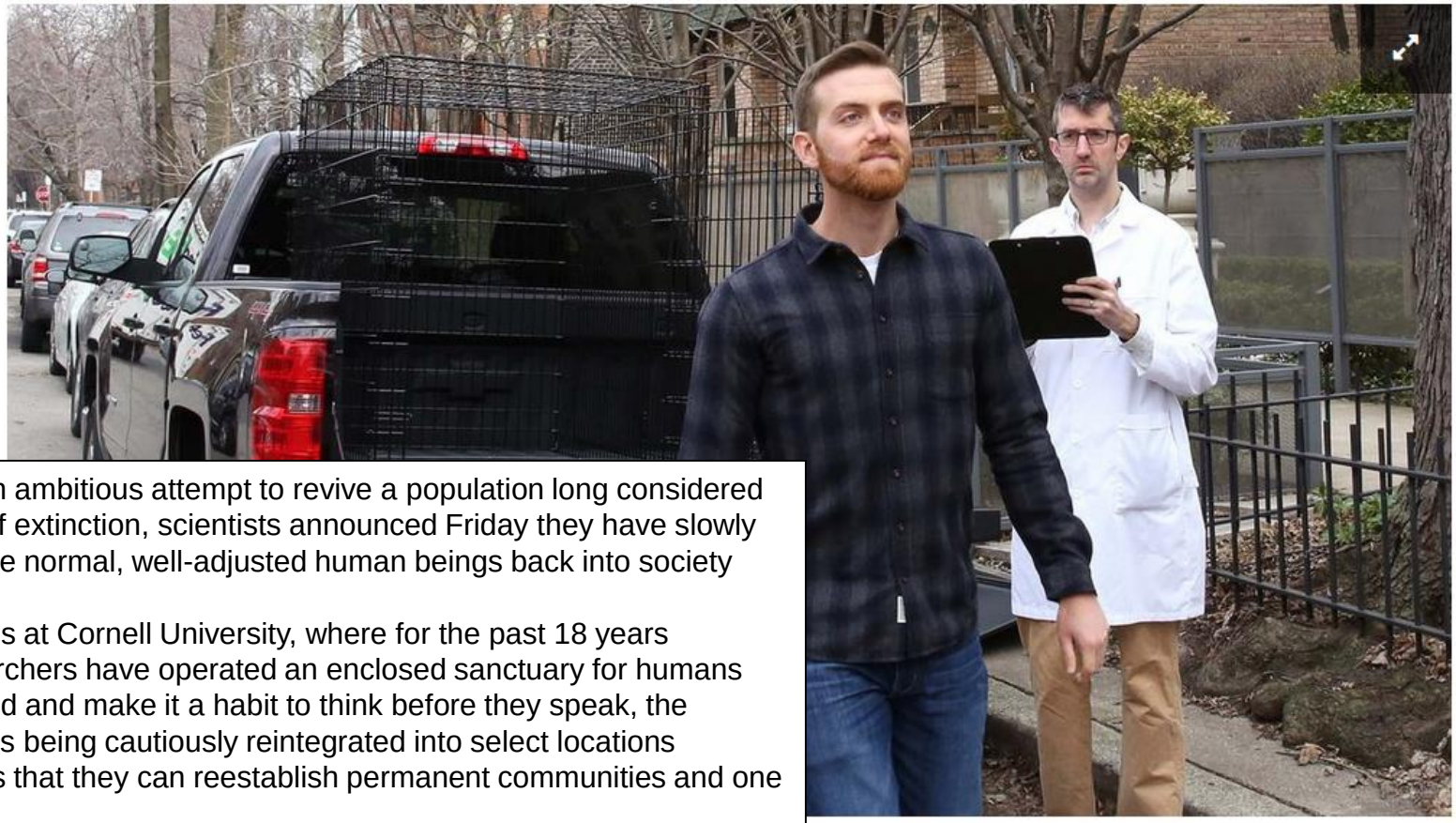
NEWS · 3.25.16 VOL 52 / ISSUE 11

Scientists Slowly Reintroducing Small Group Of Normal, Well-Adjusted Humans Into Society



ITHACA, NY—In an ambitious attempt to revive a population long considered to be on the brink of extinction, scientists announced Friday they have slowly begun to reintroduce normal, well-adjusted human beings back into society

According to officials at Cornell University, where for the past 18 years conservation researchers have operated an enclosed sanctuary for humans who are levelheaded and make it a habit to think before they speak, the endangered group is being cautiously reintegrated into select locations nationwide in hopes that they can reestablish permanent communities and one day thrive again.

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NEWS IN BRIEF • 4.17.17 VOL 53 / ISSUE 15

CERN Researchers Apologize For Destruction Of 5 Parallel Universes In Recent Experiment

GENEVA—Expressing deep regret over the catastrophic incident that occurred within the Large Hadron Collider, officials from the European Organization for Nuclear Research, also known as CERN, held a press conference Monday to apologize for the destruction of five parallel universes in a recent experiment. “We are sorry to report that in conducting research involving high-powered proton-proton collisions, we inadvertently caused the implosion of five universes nearly identical to our own,” said CERN Director-General Fabiola Gianotti, adding that billions of people worldwide might have experienced momentary vertigo around 9:45 a.m. as a result of several of their alternate identities being wiped from existence.

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Downloadable Android apps and games demonstrate and teach concepts from science

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The brain of a Time Lord

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Demonstration

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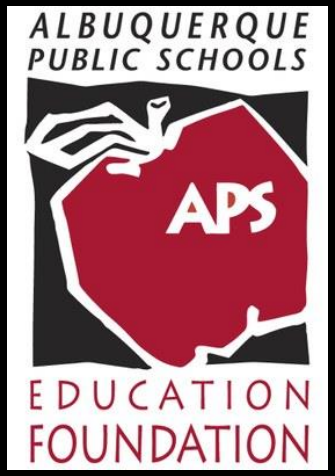

LET
THOUGHT
FLOW

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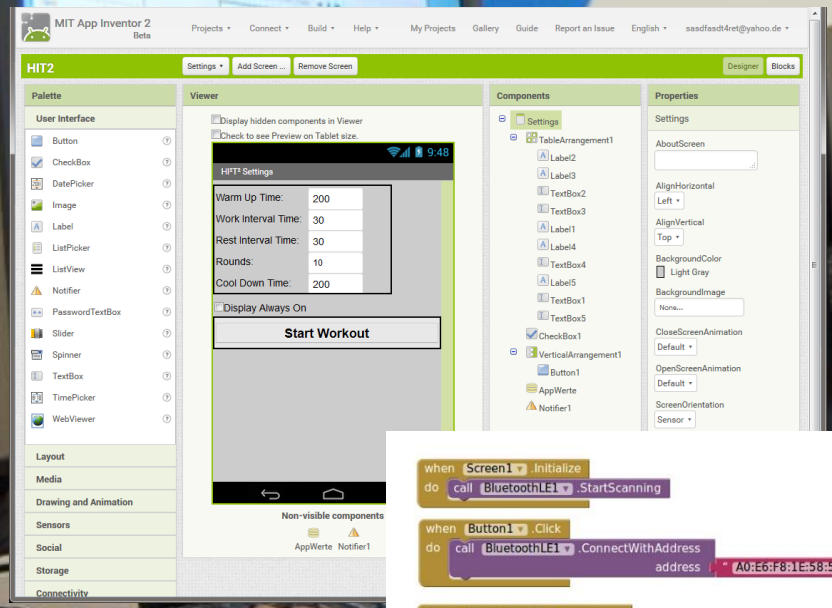
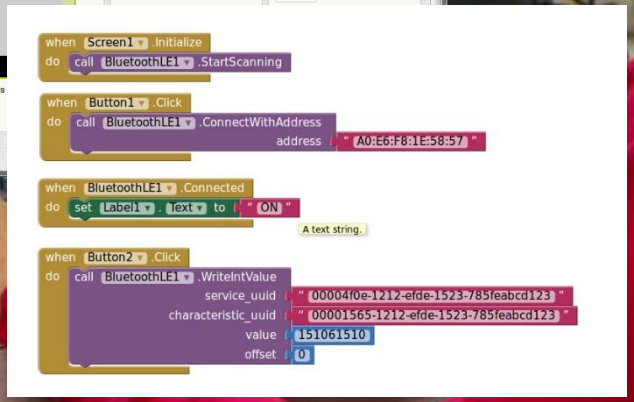
Teach basic skills using MIT App Inventor

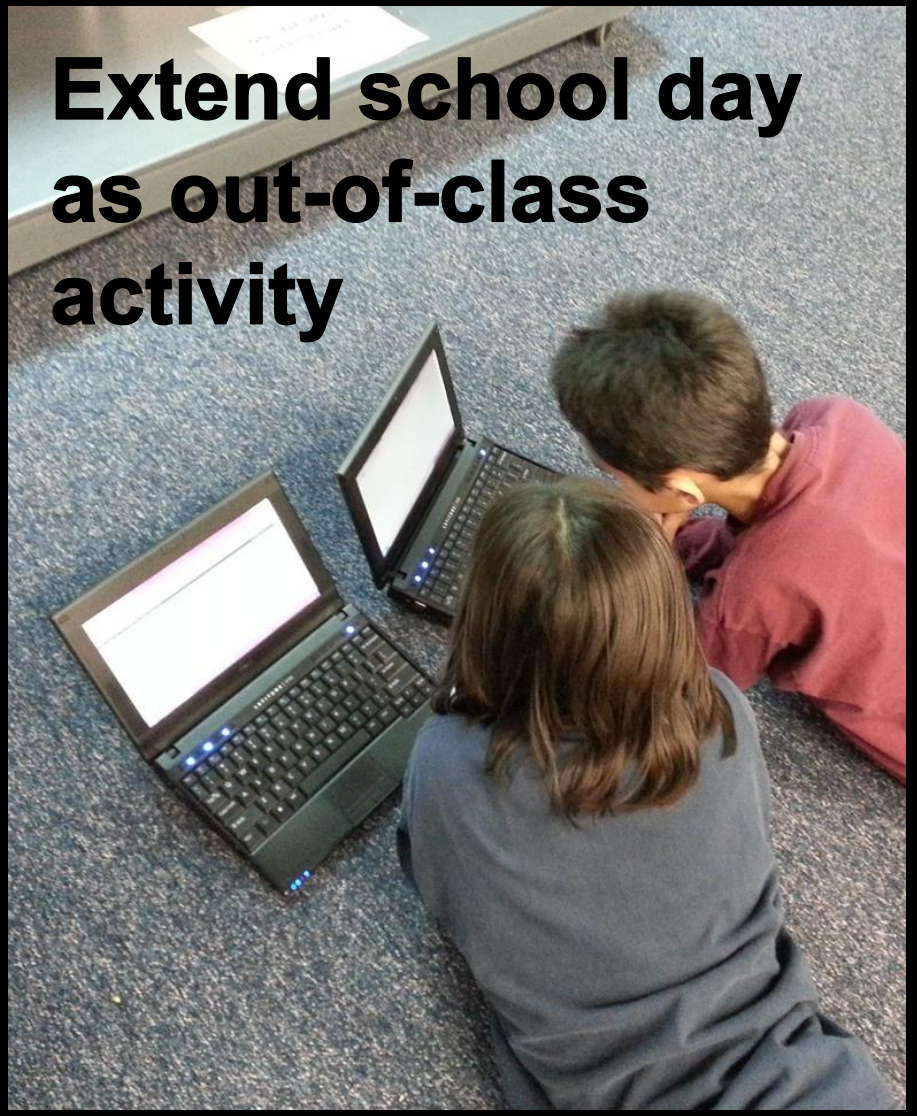




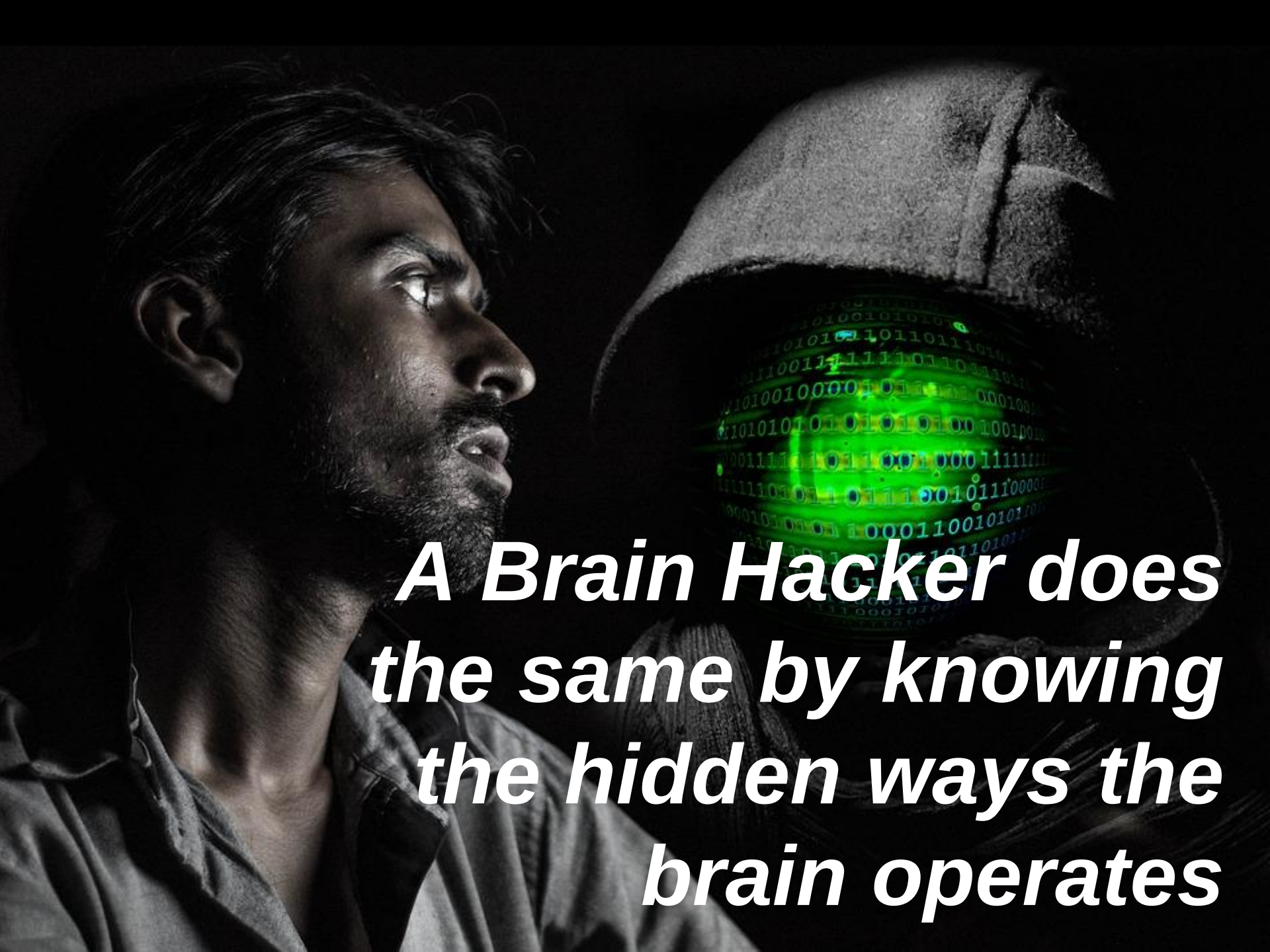
App development applied to teach science topics

Team projects teach engineering design
Echo
Delta

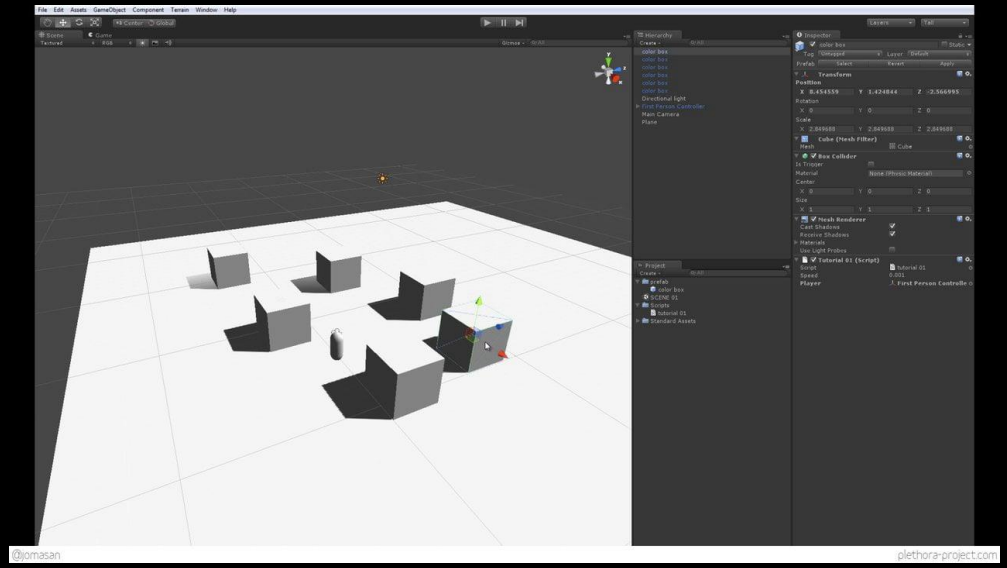
Parallel goals

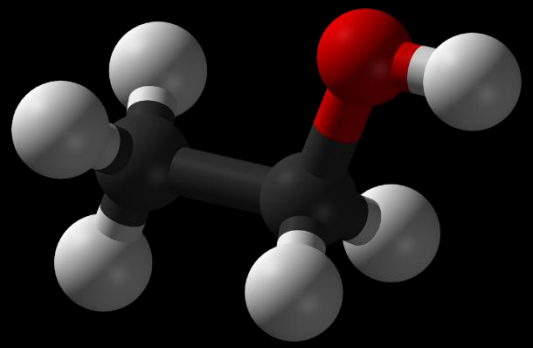


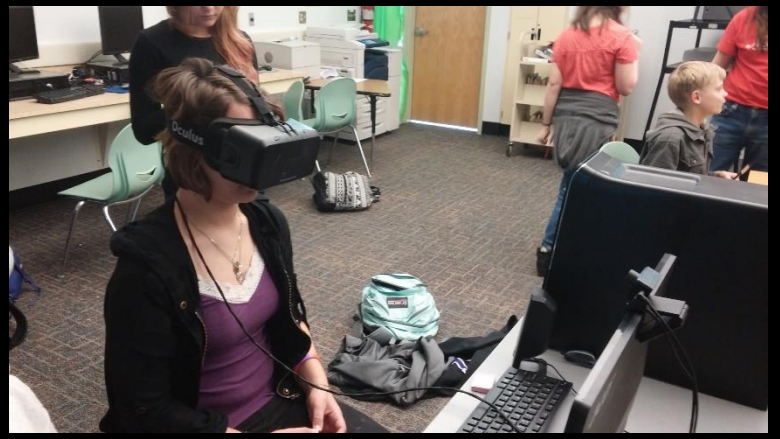
Hackers study computers to find backdoors and vulnerabilities they can exploit


A Brain Hacker does the same by knowing the hidden ways the brain operates

Unity to create 3-D models for printing and Virtual Reality







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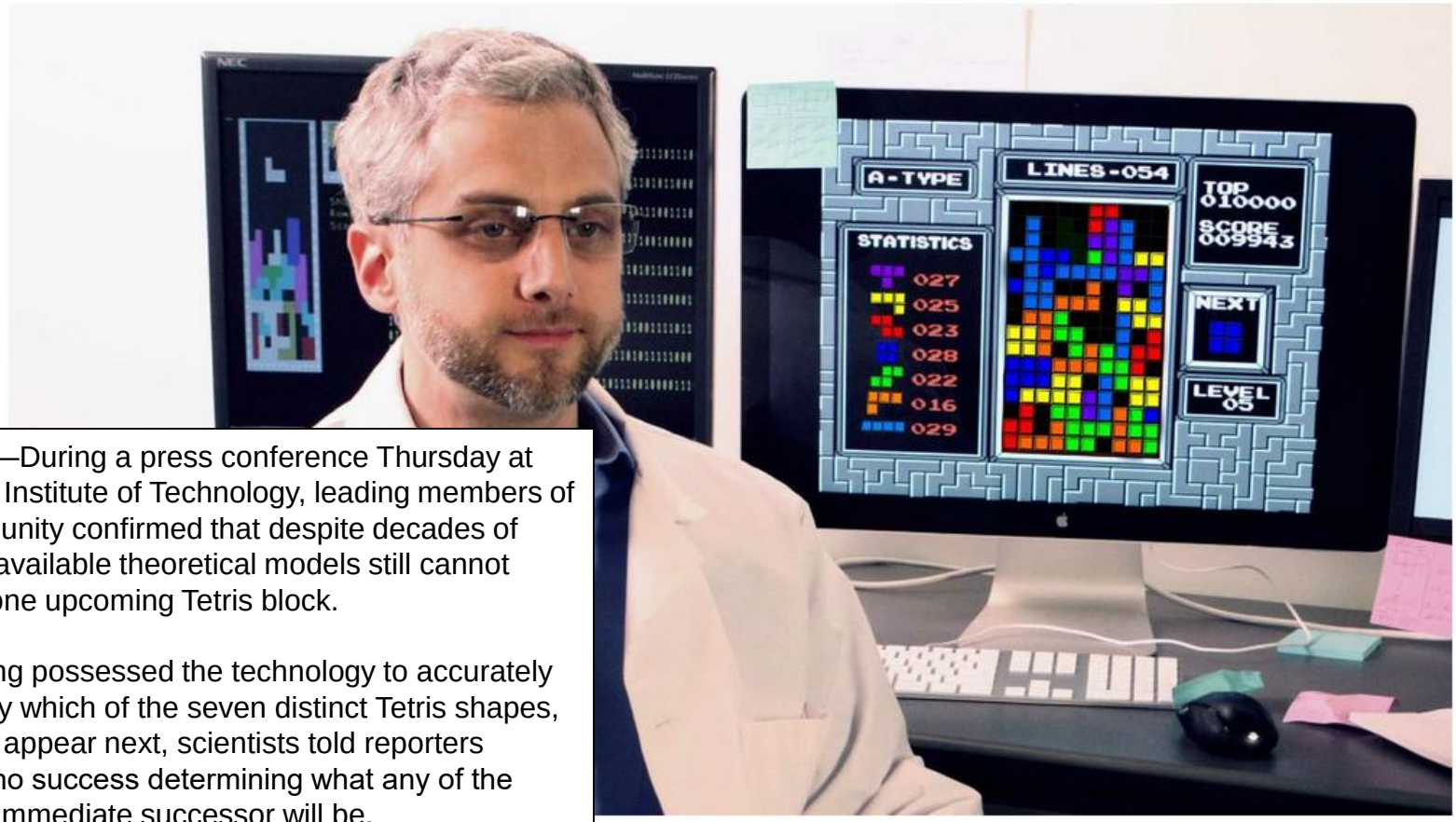
NEWS · 2.27.14 VOL 50 / ISSUE 08

Modern Science Still Only Able To Predict One Upcoming Tetris Block



CAMBRIDGE, MA—During a press conference Thursday at the Massachusetts Institute of Technology, leading members of the scientific community confirmed that despite decades of research, the best available theoretical models still cannot predict more than one upcoming Tetris block.

While they have long possessed the technology to accurately forecast and display which of the seven distinct Tetris shapes, or tetrominoes, will appear next, scientists told reporters they've so far had no success determining what any of the blocks beyond the immediate successor will be.

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NEWS · 10.27.16 VOL 52 / ISSUE 42

Psychologists Say It Perfectly Natural To Fantasize About Sandwiches Other Than One Currently In Hand

BOULDER, CO—Saying such feelings of desire were observed in nearly every individual they studied, psychologists from the University of Colorado released a report Thursday concluding that it is perfectly natural for people to fantasize about sandwiches other than the one presently in their hands.

The study, which surveyed more than 500 adults from a variety of socioeconomic and ethnic backgrounds, determined that 89 percent of subjects had, at least once during the previous six months, vividly imagined a different sandwich while sitting down at the table with their current hero, hoagie, or po' boy.