Empowering Students with Sugar

Bernie Innocenti  
Sugar Labs Foundation  
bernie@sugarlabs.org

Adam Holt  
OLPC Foundation  
holt@laptop.org

Craig Perue  
Ministry of Education, Jamaica  
craig.perue@moey.gov.jm
4y olds at Providence Basic
OLPC XO-1.75, 2011

- 800MHz ARM Sheeva
- 1200x900 LCD
- 256MB RAM
- 4GB to 8GB flash disk
- 802.11s mesh wifi
- 640x480 camera
- Protected keyboard
- Optional touch screen
- Low-power operation

sugar labs
3G broadband, Paraguay & Uruguay
Sugar reinvents the use of computers in education.
Sugar's pedagogical base

- John Dewey
- Jean Piaget
- Paulo Freire
- Seymour Papert
- Lev Vygotsky
- Alan Kay
- Walter Bender
Hello everyone!
Sharks

by Nittaya, Jaruwan, Yupin, Viroj

In some form, sharks have been around for about 400 million years. Even before dinosaurs roamed the earth, sharks hunted through the oceans! They’re such good survivors that they’ve had little need to evolve in the last 150 million years. These ancient predators fascinate adults and children alike. Sharks have the most powerful jaws on the planet. Unlike most animals’ jaws, both the sharks’ upper and lower jaws move.

A shark bites with its lower jaw first and then its upper. It tosses its head back and forth to tear loose a piece of meat which it swallows whole. Each type of shark has a different shaped tooth depending on their diet. (The shark in the photo is a great white—you can tell he’s a carnivore just by looking at those sharp, pointy teeth!)

A shark may grow and use over 20,000 teeth in its lifetime! Sharks never run out of teeth. If one is lost, another spins forward from the rows and rows of backup teeth. Normally, sharks eat alone. But sometimes one feeding shark attracts others. They swim up as quickly as possible and all begin to try to get a piece of the prey. They bite wildly at anything that gets in their way—even each other.

The great white shark rarely partakes in feeding frenzies. Almost all sharks are “carnivores” or meat eaters. They live on a diet of fish and sea mammals (like dolphins and seals) and even such prey as turtles and seagulls. Sharks even eat other sharks. For example, a tiger shark might eat a bull shark, a bull shark might eat a blacktip shark and a blacktip shark might eat a dogfish shark!
IDB report
“Technology and Child Development: Evidence from the OLPC Program”

- Published in Feb 2012
- Large-scale randomized evaluation
- 15 months of implementation
- 319 primary schools in rural Peru
improvements in cognitive skills

“students in the treatment group surpass students in the control group by between 0.09 and 0.13 standard deviations”

“verbal fluency measure represents the progression expected in 6 months for a child”
Technology in education today

- Contractionist learning made easy
- 2 millions of students are using Sugar today
- Free and open to everyone
OLPC in Jamaica

- Providence Methodist Basic School
- 70 laptops in the hands of 4 and 5 year olds
- Results: 50% improvement in scores
OLPC in Jamaica

- August Town Primary
- 35 laptops for 70 grade 4 children
- Improvement in scores from 47% to 61%
5yo explains Pippy
Who is creating Sugar?

- Large community of world-wide volunteers:
  - Germany, India, Italy, Nepal, Portugal, Paraguay,
  - Peru, Russia, Uruguay, UK, USA, ...
- OLPC's engineering team
- Local engineering teams
Engaging grade 5 students
School Computer Clubs
Laptop repairs
Together: teachers and technologists

• Haiti’s weekly lesson planning sessions
• OLPC Teacher Corps
• Developmental Officers and Education Officers leading zone/cluster training
Deployment Guide

- Developmental & Education Officers
- Principals
- Teachers
- Parents
- 4 year olds, 6 year olds