Open Source Physics @ Singapore (OSP@SG)

Laureates' Seminar of

UNESCO King Hamad Bin Isa Al-Khalifa

Prize for the Use of ICTs in Education

13 January 2016, UNESCO HQ, Paris

Introduction

In Singapore, we have:
- 365 public schools
- ~ 480,000 students
- ~ 33,000 teachers

Singapore

The Education Service's Mission is to *mould the future of the nation*.

MOE's vision:

"Thinking Schools, Learning Nation"
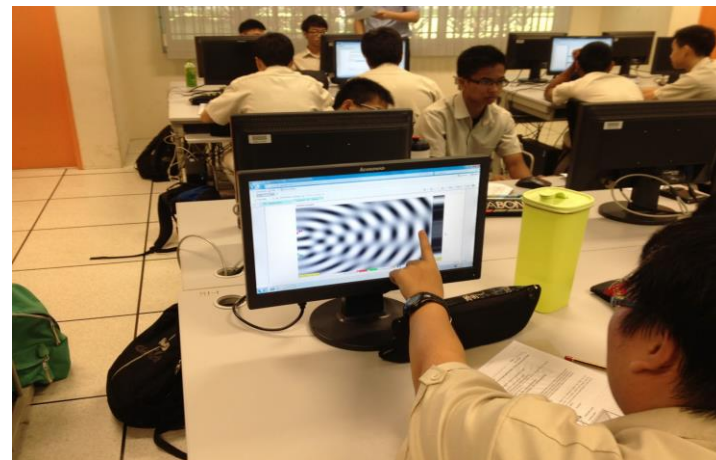
Ministry of Education
SINGAPORE

The Ministry Of Education, Singapore:

- **formulates and implements** education policies; and
- **oversees** the 365 Government and Government-aided primary schools, secondary schools, junior colleges, and a centralised institute.

ETD's Vision:
Harnessing ICT, Transforming Learners

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About OSP@SG
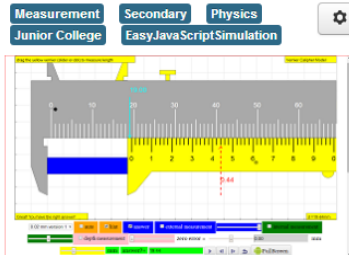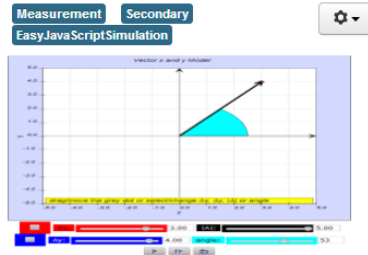
- OSP@SG is a digital library containing Java, JavaScript and Tracker resources.
- The open source codes are freely shared online to support the teaching and learning of Physics.
- Website:

  http://iwant2study.org/ospsg/

Development of OSP@SG

OSP@SG:
- Started in 2012
- Involvement:
  - 1 ETD specialist
  - 12 schools
  - ~ 100 teachers
  - ~ 9800 students
  - Open Source Physics Community

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Mathematical Modelling
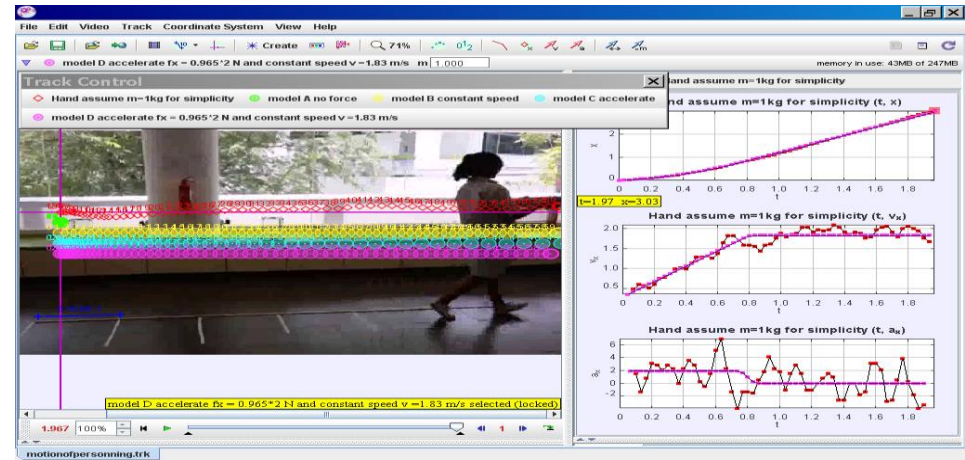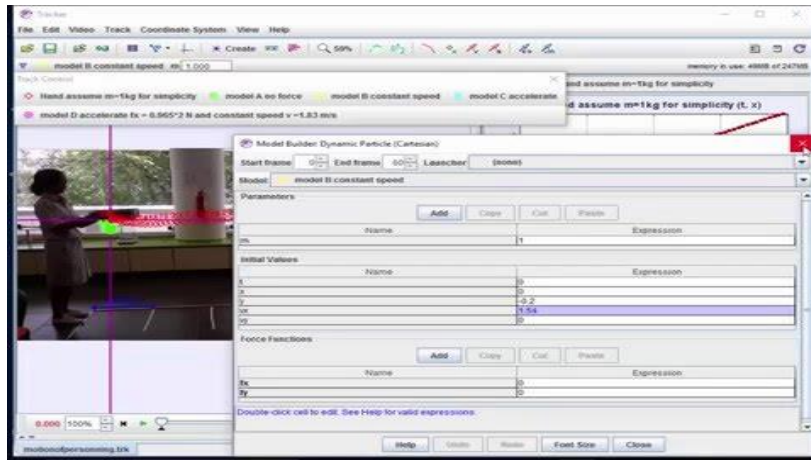
Students' proposed ideas can be modelled for comparison with the real life data.

Mathematical Modelling

- **Simulated data**

- **Student's proposed model**

Key Feature: Source codes can be edited directly

Resources can be customised to suit the needs of the curriculum.

Key Feature: Resources are translatable

Translation (sort by Region) Testing, a new script many languages as possible

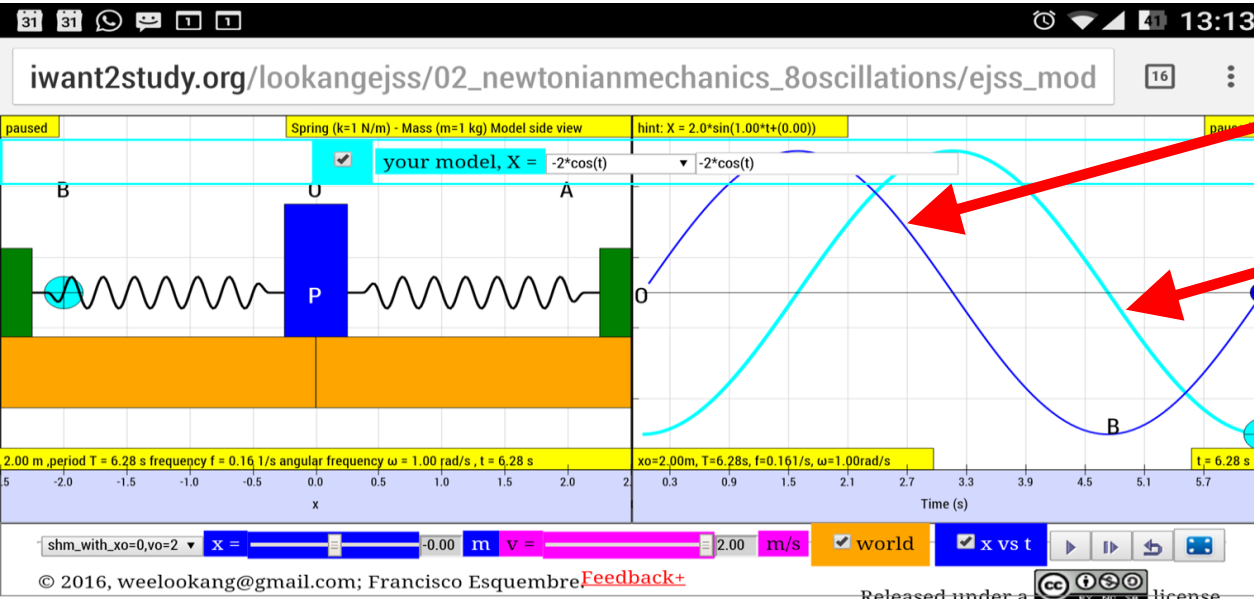| Code	Language	Translator	Run	All sims in th
zh	中文 (ZH)	Google	▶	All sims in C
zh ??	中文 (台灣)	Google	▶	All sims in C
id	Bahasa Indonesia (IN)	Nianti Ibrahim	▶	A
ms	Bahasa Maleyu (MS)	Google	▶	A
es	Spanish (ES)	Google	▶	
th	Thai (TH)	Google	▶	
ta	Tamil (TA)	Google	▶	
tl	Tagalog (TL)	Alwielland Q. Bello	▶	

Example: Translation to French (By Google)

faites glisser le vernier jaune pour mesurer la longueur

répondre?

tire moi

Vernier Caliper Modèle

☑ !   ☑ ?   ☑ objet   erreur de zéro =   0.00   ▶ ◀◀ ▶▶ ↶ ⊗

d=0.00+0.00-(0.00)

There is potential for the resources to be translated to many other languages.

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Key Feature: Resources are exportable

Simple Harmonic Motion

Loo Kang Lawrence WEE

This book is available for download with iBooks on your Mac or iOS device, and with iTunes on your comp
with iBooks on your Mac or iOS device.

Description

this is a prototype epub3 interactive text-chapter made using EJSS.
many thanks to the
Open Source Physics Project for making Easy JavaScript Simulation toolkit.
Yishun Junior College for the notes.
Photo by Leong Tze Kwang.
Licensed Creative Commons Attribution ShareALike CC-BY-SA

View in iTunes

Free
Available on iPhone, iPad,
iPod touch, and Mac.
Category: Physics
Published: Feb 12, 2015
Publisher: Loo Kang Wee
Seller: loo kang wee
Print Length: 217 Pages
Language: English

Requirements: To view this
book, you must have an iOS
device with iBooks 1.5 or later
and iOS 4.3.3 or later, or a Mac
with iBooks 1.0 or later and
OS X 10.9 or later.

Customer Ratings

We have not received enough
ratings to display an average for
this book.

Screenshots

E.g. Resources can be embedded within interactive textbooks (iBook and Google Book).

Gravity Advanced Level Physics GCE

Loo Kang Lawrence Wee - June 26, 2015
Loo Kang WEE Lawrence - Publisher

Read

Interactive chapter-textbooks on Gravity and Simple Harmonic Motion are currently being tested in 4 schools.

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The OSP@SG project is
accessible, adaptable & affordable.

'*[OSP@SG]* provides education stakeholders with opportunities to improve the quality of, and expand access to, textbooks and other forms of learning content, to catalyse the innovative use of content, and to foster knowledge creation.' (Qingdao Declaration, 2015)

Thank You

Twitter: @lookang
Email: Lawrence_Wee@moe.gov.sg
Slides: http://iwant2study.org/ospsg/index.php/awards/329-unesco

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