

## Introduction



Title : STEM Workshop for secondary school students  
Community Partner : Hong Kong True Light College  
STEM activities based on science curriculum

Enhance students' **interest** in science through interactive and innovative STEM activities  
Expect students' **logical** and **critical thinking** skills will be nurtured after STEM activities

## Workshop II

### Center of GRAVITY

Date: 25/03/2014

#### Learning Objectives

Understanding

- 1) Relation between C.G. and;
- 2) Characteristics of C.G.

#### Main Activities

DISCUSSING theory behind  
Balancing Bird

Finding center of gravity  
by EXPERIMENT

APPLYING the  
knowledge on  
Flip Bottle Challenge

## Reflection

As being a science and mathematics teacher, we reckon the importance of cultivating the **scientific exploratory spirit** of our students that STEM education is not just about learning and teaching but also to apply and discover the knowledge cross different disciplines.

Also thanks to Dennis who gave unlimited support and guidance to us ! <3

Special thanks to Mr. Tim Chun in True Light College. Thanks for providing us such great learning opportunity

THANK YOU!

## Workshop I

Date: 28/02/2014



### STEM Components

#### Maths

Concept of fraction approximation and percentage error

#### Engineering

do hands-on design and build their own 'Diving fish' model for trial and error

#### Science

concept of density  
scientific investigation steps :  
asking a question, making hypothesis, doing observation, tests and analysis

### Learning Objectives

To learn about the concept of density ( what factors determine an object to sink or float )

To enable students to apply the knowledge across different disciplines

Bella Dennis Cindy Tommy Sabrina  
Shirley Kim Lung  
U STEMist  
True-Lighters

## Workshop III

### Colourless X

Date: 01/04/2014

#### Objectives:

1. Learn about purification methods(sedimentation,filtration, distillation)
2. Understand that colourless solution may have impurities

Students tried some colourless drinks and guessed what they are

Students sedimented and filtrated the brown sugar bubble milk

Teammates distilled the brown sugar bubble milk and demonstrated how to produce colourless tea by distillation