EduTECH
21ST CENTURY EDUCATION FOR ALL IN THE PHILIPPINES

PHILIPPINE SCHOOLS OVERSEAS

The DOST COURSEWARE IN SCIENCE AND MATHEMATICS

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SCIENCE EDUCATION INSTITUTE
DEPARTMENT OF SCIENCE AND TECHNOLOGY

THE SCIENCE EDUCATION INSTITUTE - DOST

- An agency under the Department of Science and Technology
- Mandated to develop a scientifically and technologically literate Filipino citizens and accelerate the development of the country's S&T human resources by administering undergraduate, graduate scholarships; advanced specialized trainings; and to develop science education innovation programs
- The S&T education arm of DOST

THE DOST COURSEWARE – OUR MOTIVATION

- **2003 Results of the Trends in International Mathematics and Science Study (TIMSS) conducted by the International Association for the Evaluation of Educational Achievement (IEA) where the Philippines ranked 2nd and 3rd ….from the bottom**

International Association for the Evaluation of Educational Achievement

THE DOST COURSEWARE – OUR MOTIVATION

2004

DOST COURSEWARE

THE DOST COURSEWARE IN SCIENCE AND MATH

- **Conceptualized, produced and spearheaded by the Science Education Institute (SEI-DOST)**
- **In partnership with the Advanced Science and Technology Institute (ASTI-DOST) for module digitization**
- **In cooperation with the Department of Education (DepEd), Philippine Normal University (PNU) and University of the Philippines-National Institute for Science and Mathematics Education (UP-NISMED).**

THE DOST COURSEWARE IN SCIENCE AND MATH

- **A Filipino-developed, all-original, highly interactive, multimedia, educational resource packages in science and mathematics**

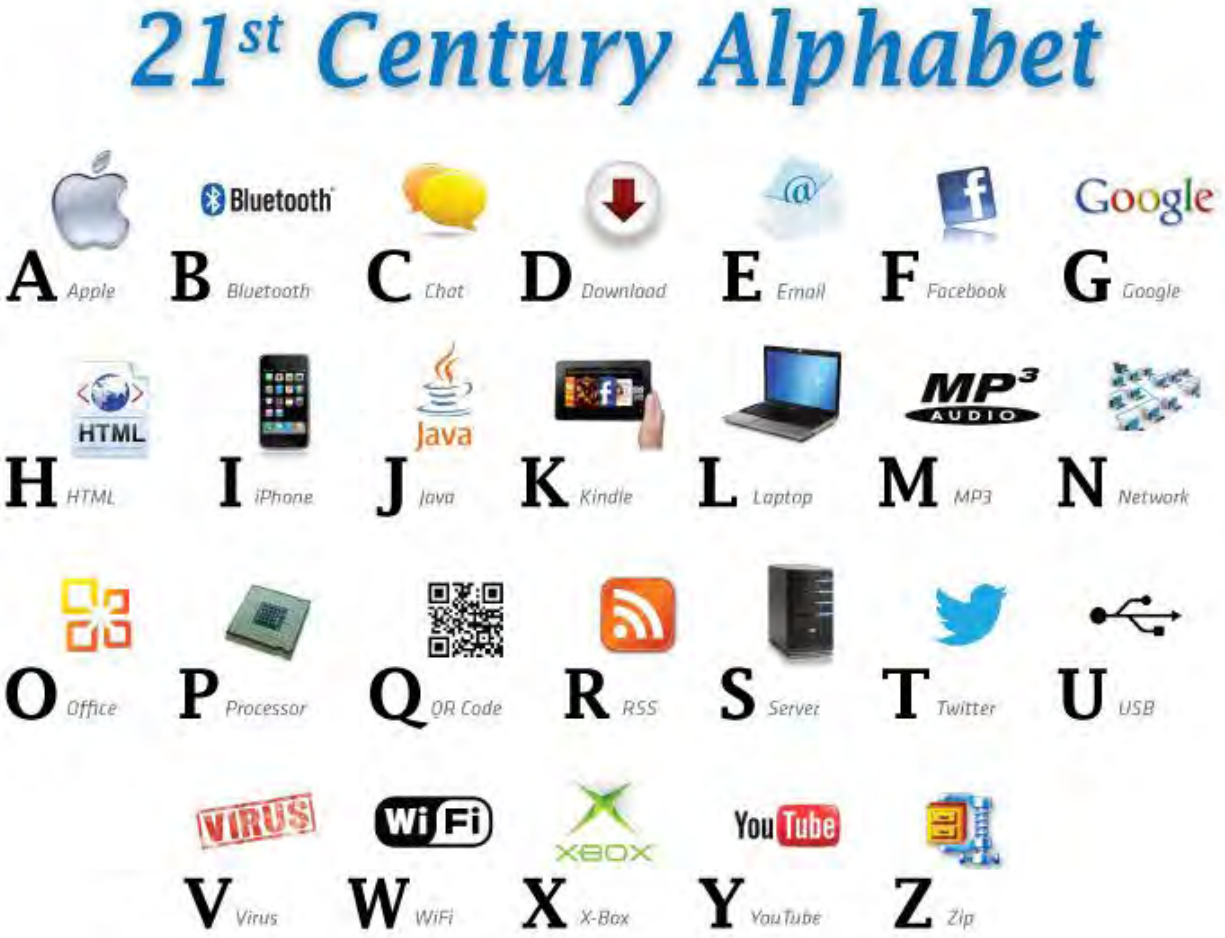
THE DOST COURSEWARE – OUR GOAL

- **Primary goal is to develop an education technology teaching and learning innovation and resources to support the upgrading and improvement of science and mathematics education in the country.**

THE DOST COURSEWARE INTENTIONS

- Aims to optimize, streamline and standardize lesson presentation in Science and Mathematics through the use of cost-effective and high quality education technology solutions
- Assist in developing competitive learners who can maximize and enhance learning through the use of ICT
- Equip teachers with supplemental tools and resources to assist them in lesson planning and blended-teaching on hard to teach and hard to learn topics

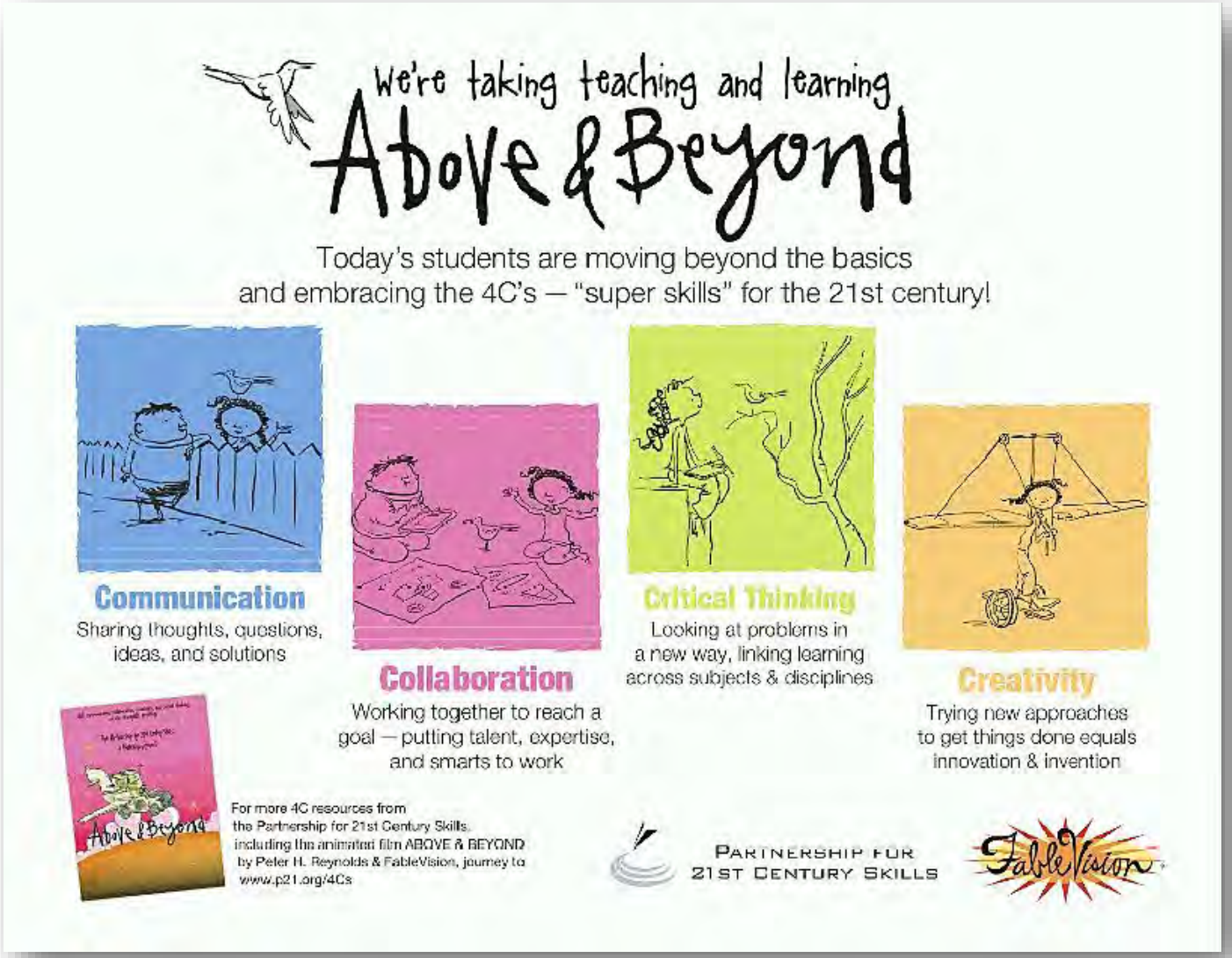
DOST COURSEWARE AND 21ST CENTURY EDUCATION



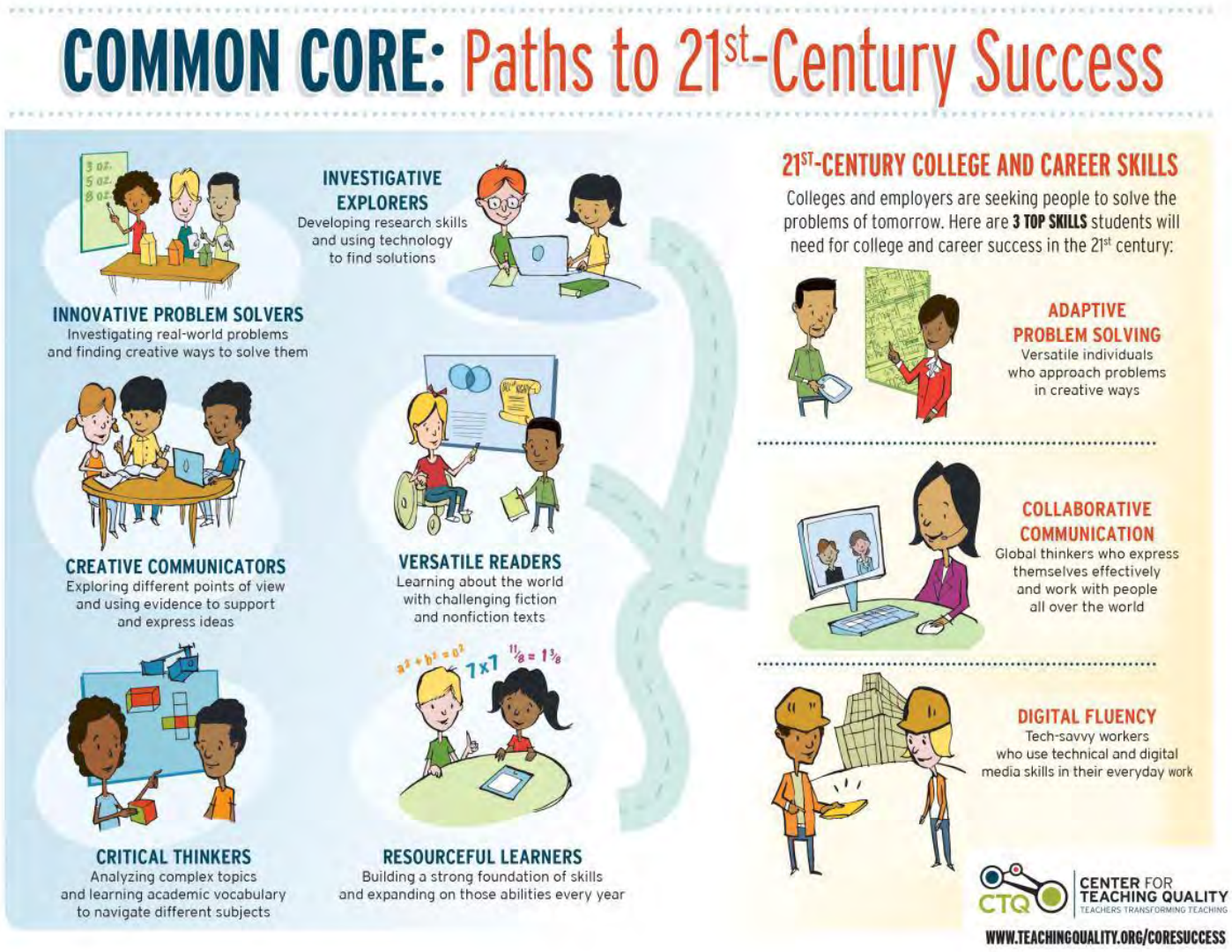
BY-NC-SA

DOST COURSEWARE AND 21ST CENTURY EDUCATION

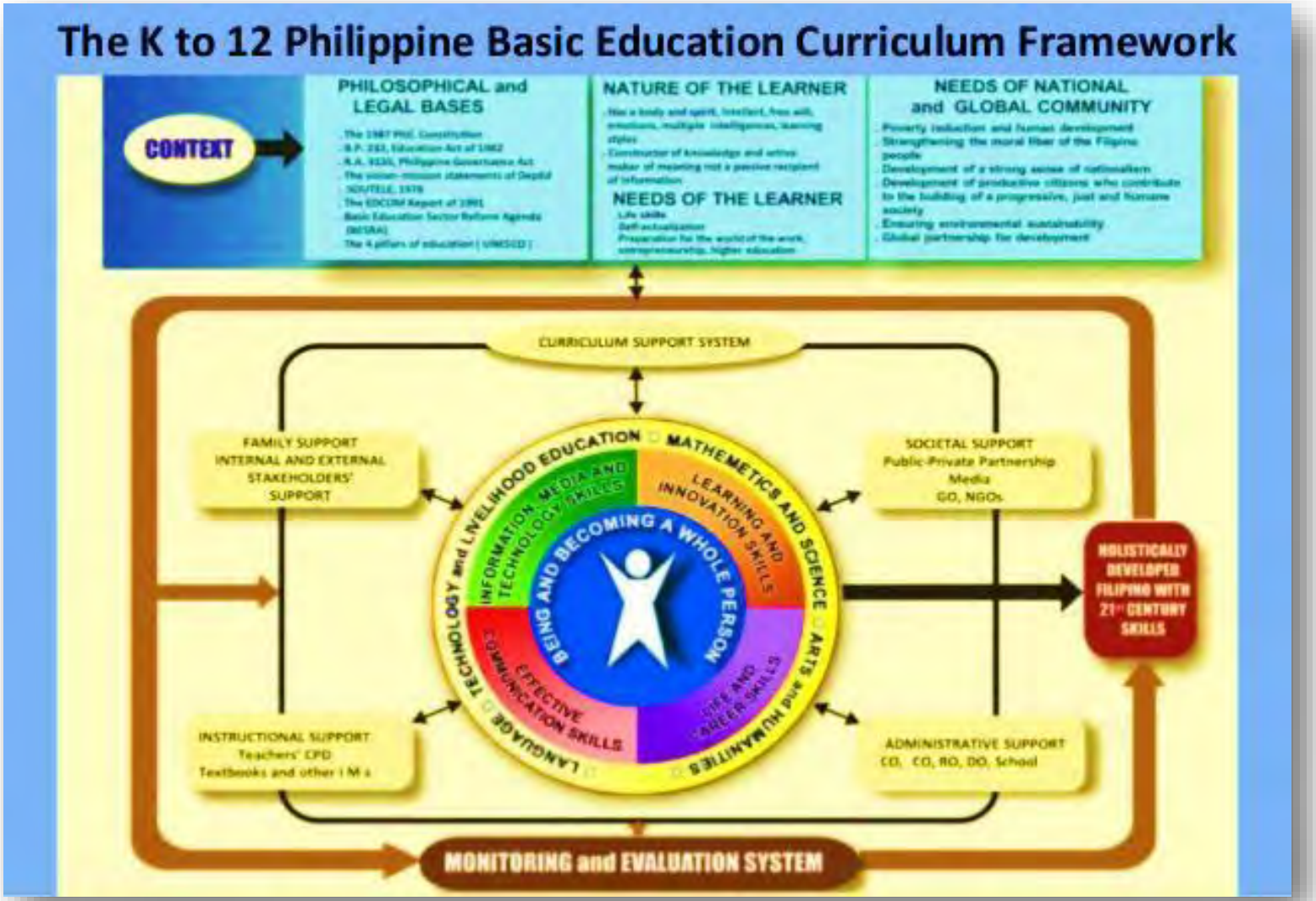
DOST COURSEWARE AND 21ST CENTURY EDUCATION



DOST COURSEWARE AND 21ST CENTURY EDUCATION



THE DOST COURSEWARE AND THE K12 CURRICULUM



DOST COURSEWARE AND 21ST CENTURY EDUCATION

Figure 6. The K to 12 Graduate

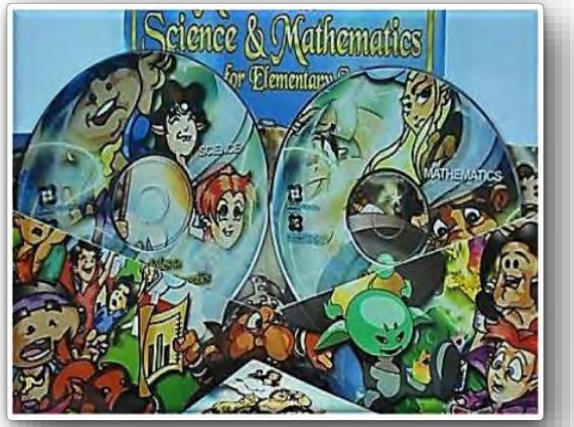
THE DOST COURSEWARE PLATFORMS

Laptop, Desktop PC
Content Mgt. Server

Smartphone, Tablet

THE DOST COURSEWARE - MS WINDOWS

- Modules in Science and Mathematics for Elementary Schools (1st Edition)
- Grades 1-6 Mathematics (2nd Edition)
- Grade 7 Science and Mathematics
- Grade 8 Science and Mathematics



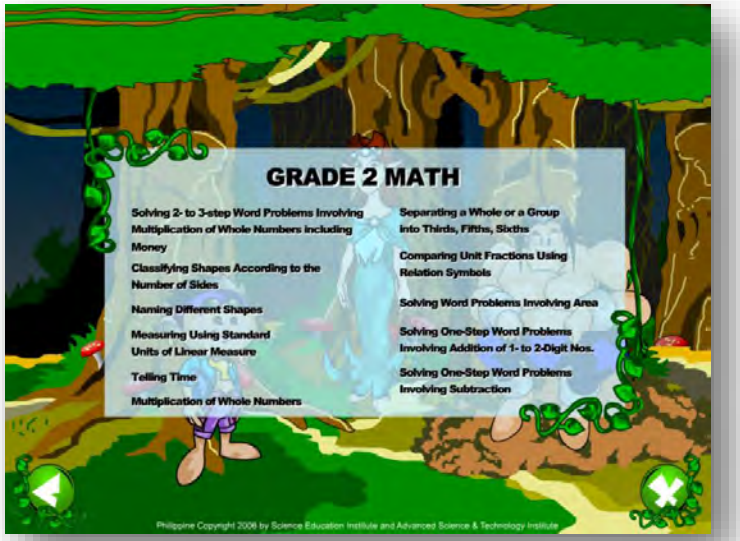
Microsoft Windows

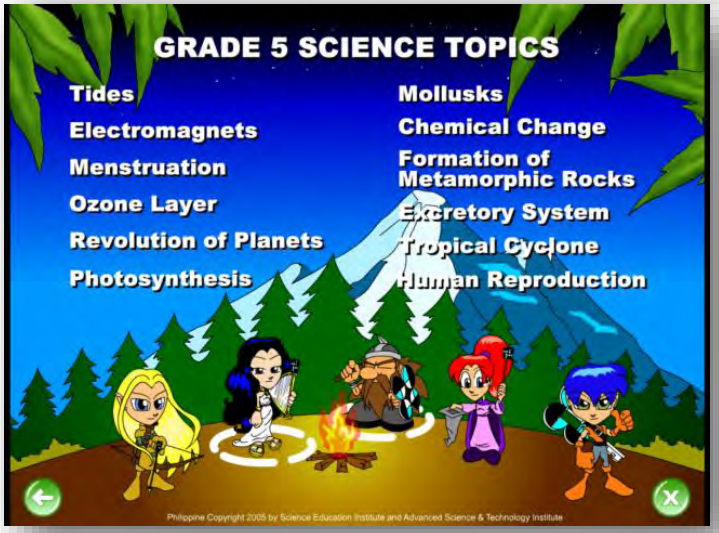
THE DOST COURSEWARE - MS WINDOWS

- **Modules in Science and Mathematics for Elementary Schools (1st Edition)**
  - **Released in 2006**
  - **MS Windows**

THE DOST COURSEWARE - MS WINDOWS

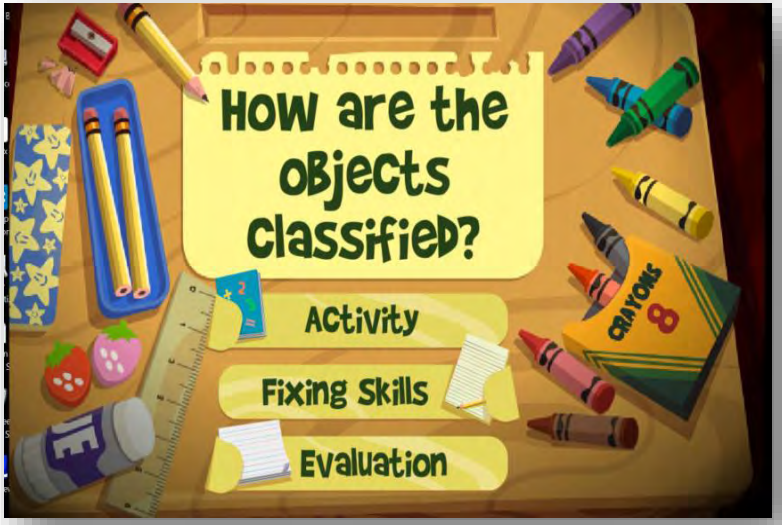
- Modules in Science and Mathematics for Elementary Schools (1st Edition)
  - Total modules = 102
    - Science Gr 3-6 = 42
    - Math Gr 1- 6 = 60

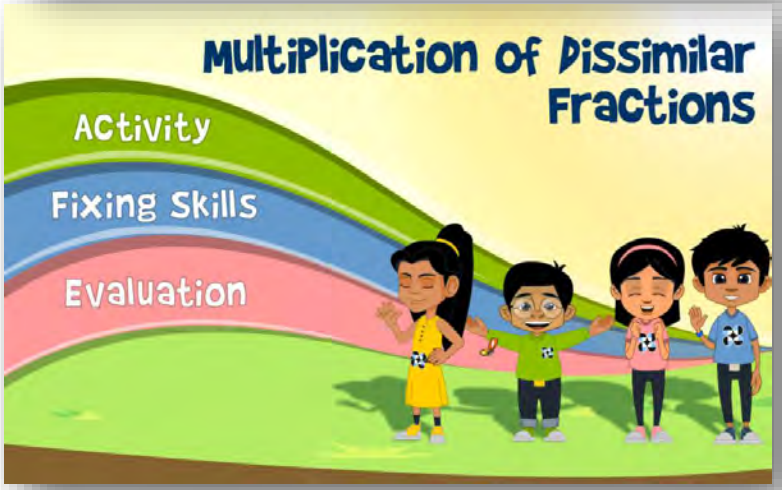




THE DOST COURSEWARE - MS WINDOWS

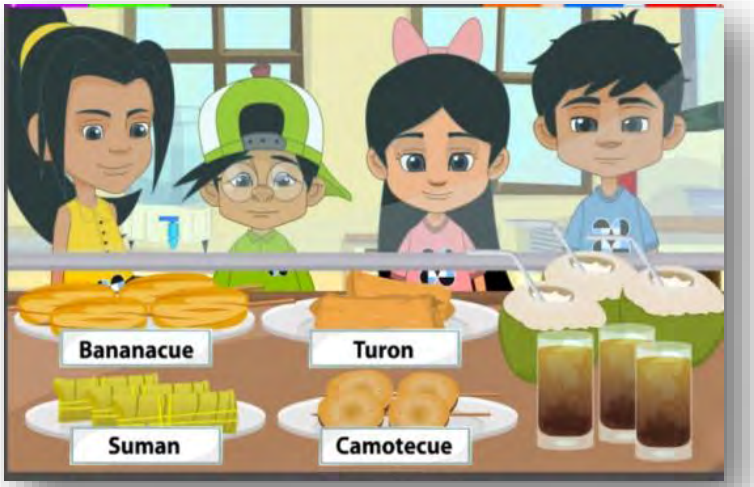
- **Courseware for Grades 1-6 Math (2nd edition)**
  - **Released in 2014**
  - **MS Windows**
  - **The K-12 aligned modules are divided into three parts: Activity, Fixing Skills and Evaluation**





THE DOST COURSEWARE - MS WINDOWS

- Courseware for Grades 1-6 Math (2nd edition)
  - Total modules = 60
    - Grade 1 = 16
    - Grade 2 = 8
    - Grade 3 = 7
    - Grade 4 = 10
    - Grade 5 = 7
    - Grade 6 = 12



THE DOST COURSEWARE - MS WINDOWS

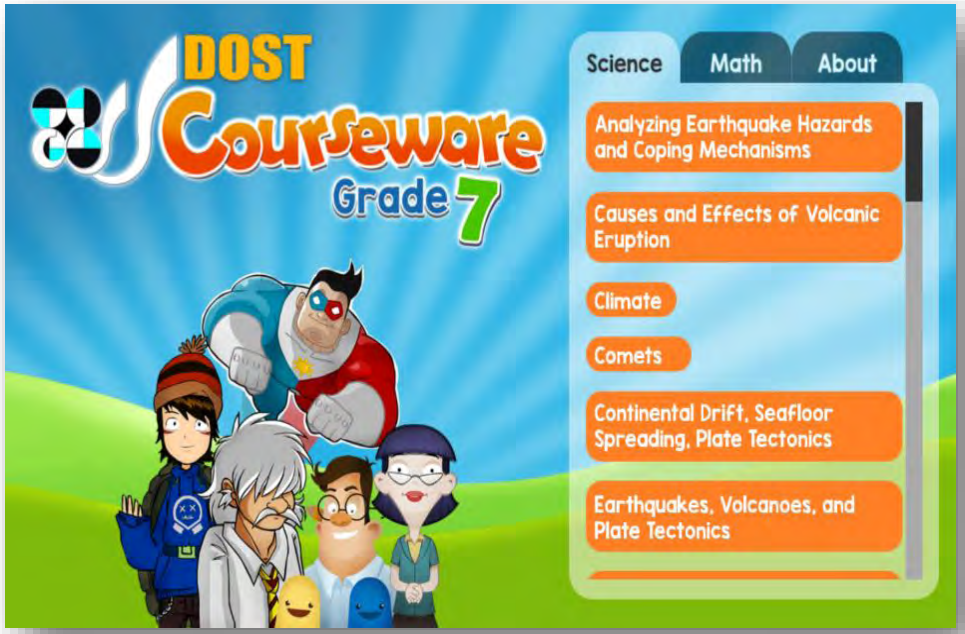
- **Courseware for Grade 7 Science & Mathematics**
  - **Released in 2014**
  - **Topic presentation structure: Concept, Activity and Evaluation**
  - **Topics are still applicable to higher grade levels**

THE DOST COURSEWARE - MS WINDOWS

- **Courseware for Grade 7 Science & Mathematics**
  - **Total modules = 133**
    - **Science = 73**
    - **Mathematics = 60**

THE DOST COURSEWARE - MS WINDOWS

- **Courseware for Grade 7 Science domains**
  - **Earth and Space**
  - **Force, Motion and Energy**
  - **Living Things and Their Environment**
  - **Matter**



THE DOST COURSEWARE - MS WINDOWS

- **Courseware for Grade 7 Mathematics domains**
  - **Geometry**
  - **Numbers and Number Sense Patterns and Algebra**

THE DOST COURSEWARE - MS WINDOWS

- **Courseware for Grade 8 Science & Mathematics**
  - **Released in 2014**
  - **Topic presentation structure: Concept, Activity and Evaluation**
  - **Topics are still applicable to higher grade levels**
  - **Character and setting themes**
    - **Magicademy**
    - **D'nayao**
    - **Freddy's Lab**

THE DOST COURSEWARE - MS WINDOWS

- Courseware for Grade 8 Science & Mathematics
  - Total modules = 118
    - Science = 61
    - Mathematics = 57

THE DOST COURSEWARE - MS WINDOWS

- **Courseware for Grade 8 Science domains**
  - **Biodiversity, and Evolution**
  - **Ecosystems**
  - **Heredity: Inheritance and Variation of Traits**
  - **Parts and Functions**
  - **Structures and Functions**

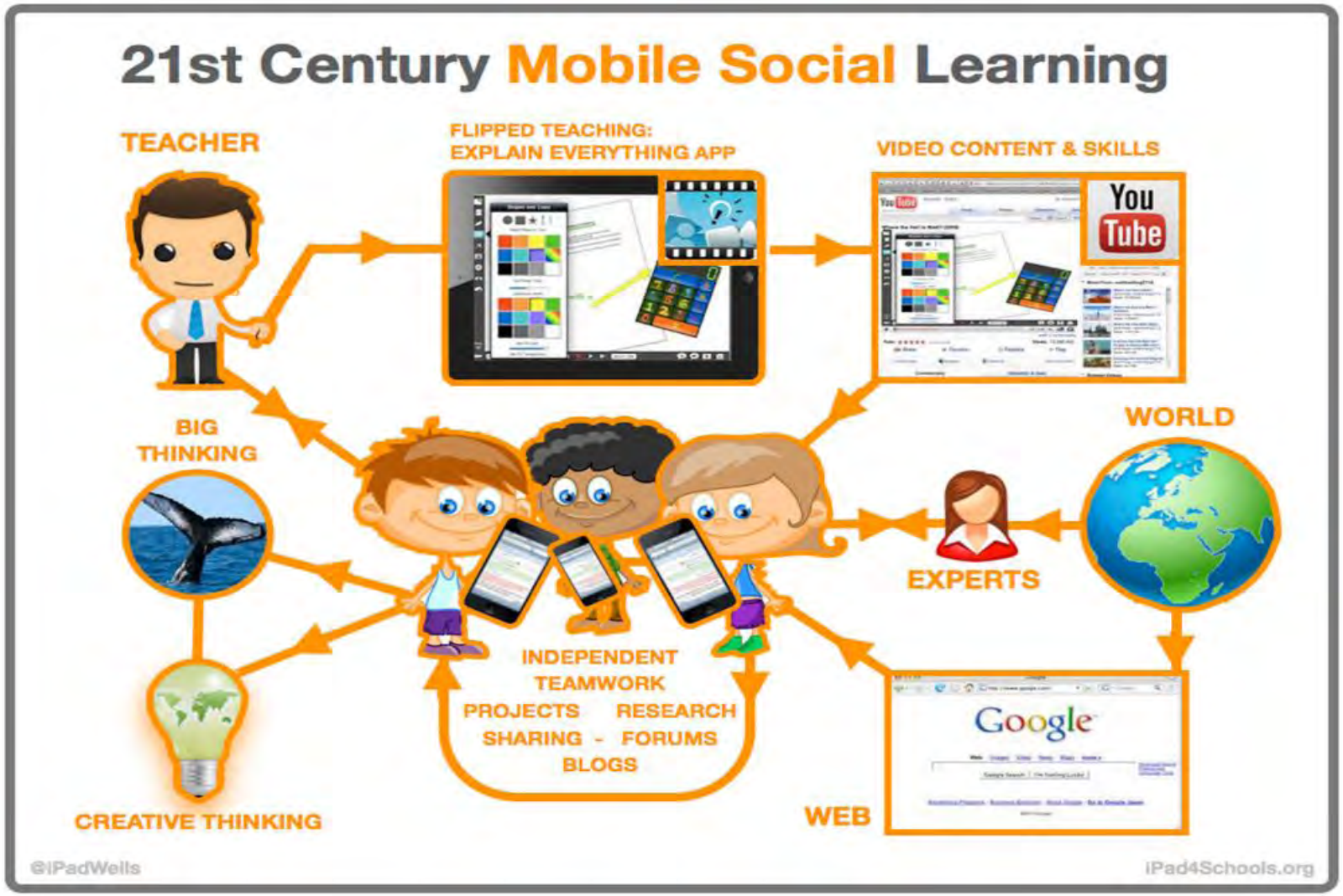
THE DOST COURSEWARE - MS WINDOWS

- **Courseware for Grade 8 Math domains**
  - Arithmetic Sequence
  - Geometric Sequence
  - Integral Exponents
  - Linear Equations,
  - Quadratic Equations
  - Radicals
  - Rational Algebraic Equations

DOST COURSEWARE AND MOBILE LEARNING

http://vinyardm12.blogspot.com/2012/09/21st-century-learner-reflections-normal.html

DOST COURSEWARE AND MOBILE LEARNING



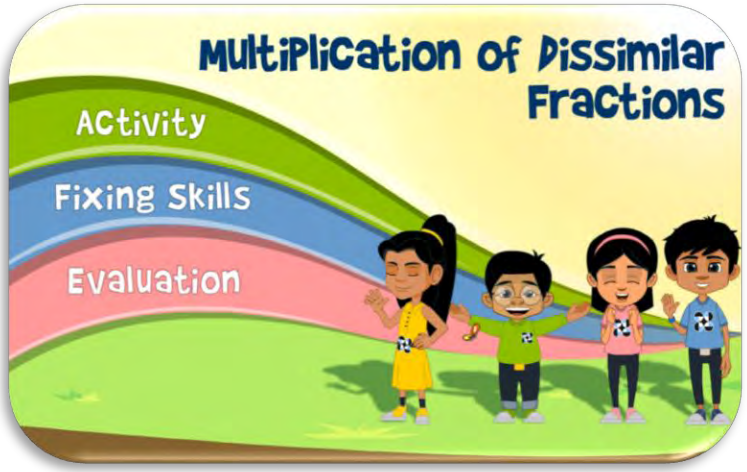
THE DOST COURSEWARE - ANDROID

2016

DOST COURSEWARE MOBILE APPLICATION (DOST CMAPP)

DOST COURSEWARE MOBILE APPLICATION (DOST CMAPP)

- Grades 1-6 Mathematics (2nd Edition) – 60
- Grades 7 Science and Mathematics - 10
- Grade 8 Science and Mathematics - 10



DOST COURSEWARE MOBILE APPLICATION (DOST CMAPP)

Search DOST Courseware

Google play

DOST COURSEWARE MOBILE APPLICATION (DOST CMAPP)

- **Android additional modules**
  - 10 Grade 7 Science and Math Modules
  - 10 Grade 8 Science and Math Modules
- **Apple IOS Version**
  - First batch of 10 Grade 7 and 10 Grade 8 Science and Math Modules

In November 2018

Google play

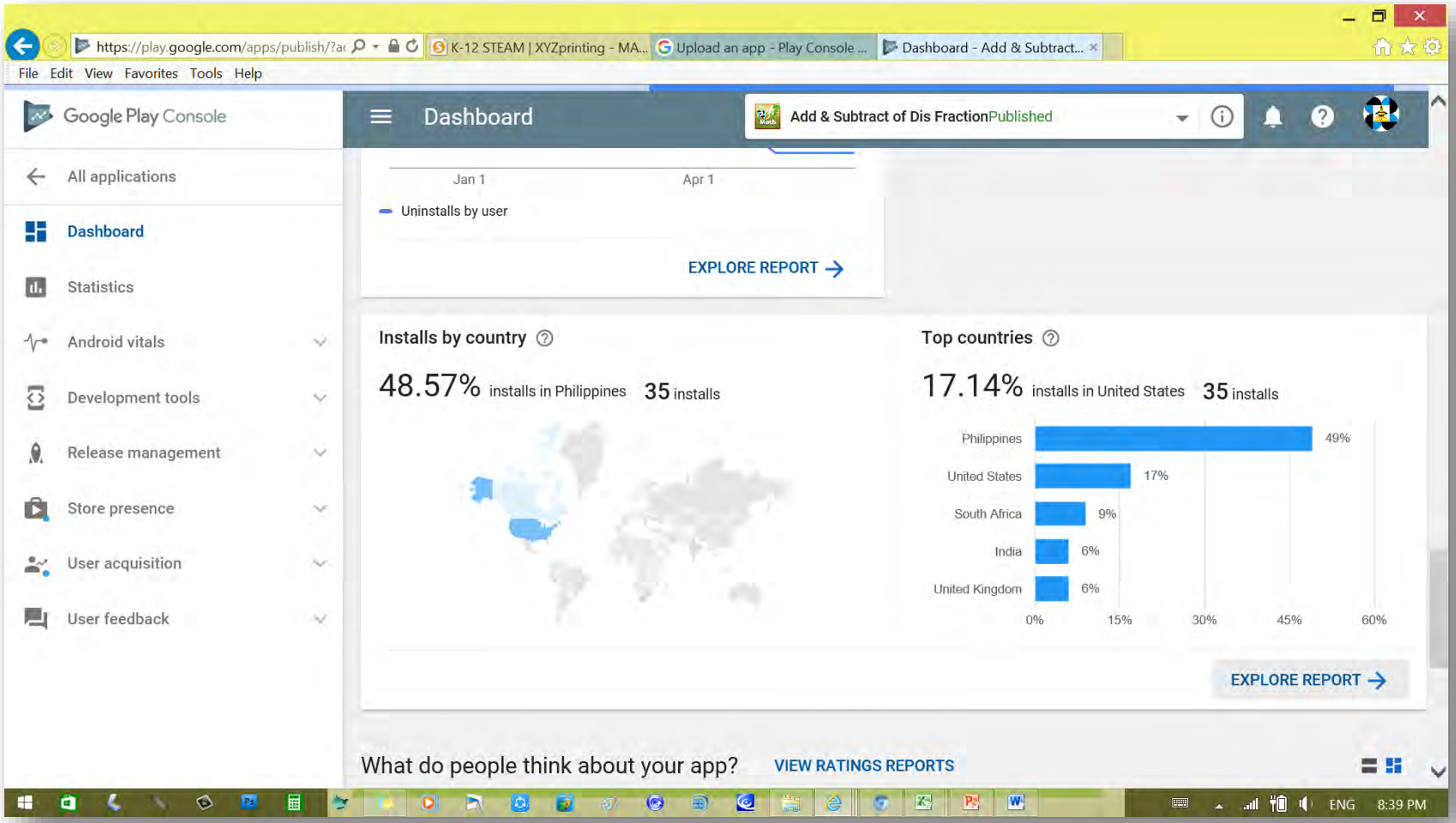
DOST COURSEWARE MOBILE APPLICATION

Android Version of DOST CMApp Installs from Google Play as of June 12, 2018

Grade/Subject	No. of Installs
Grade 7 - Science	1,835
Grade 7 – Mathematics	1,868
Grade 8 - Science	3,617
Grade 8 – Mathematics	2,681
Grade 1-6 Mathematics	4,413
Total	14,414

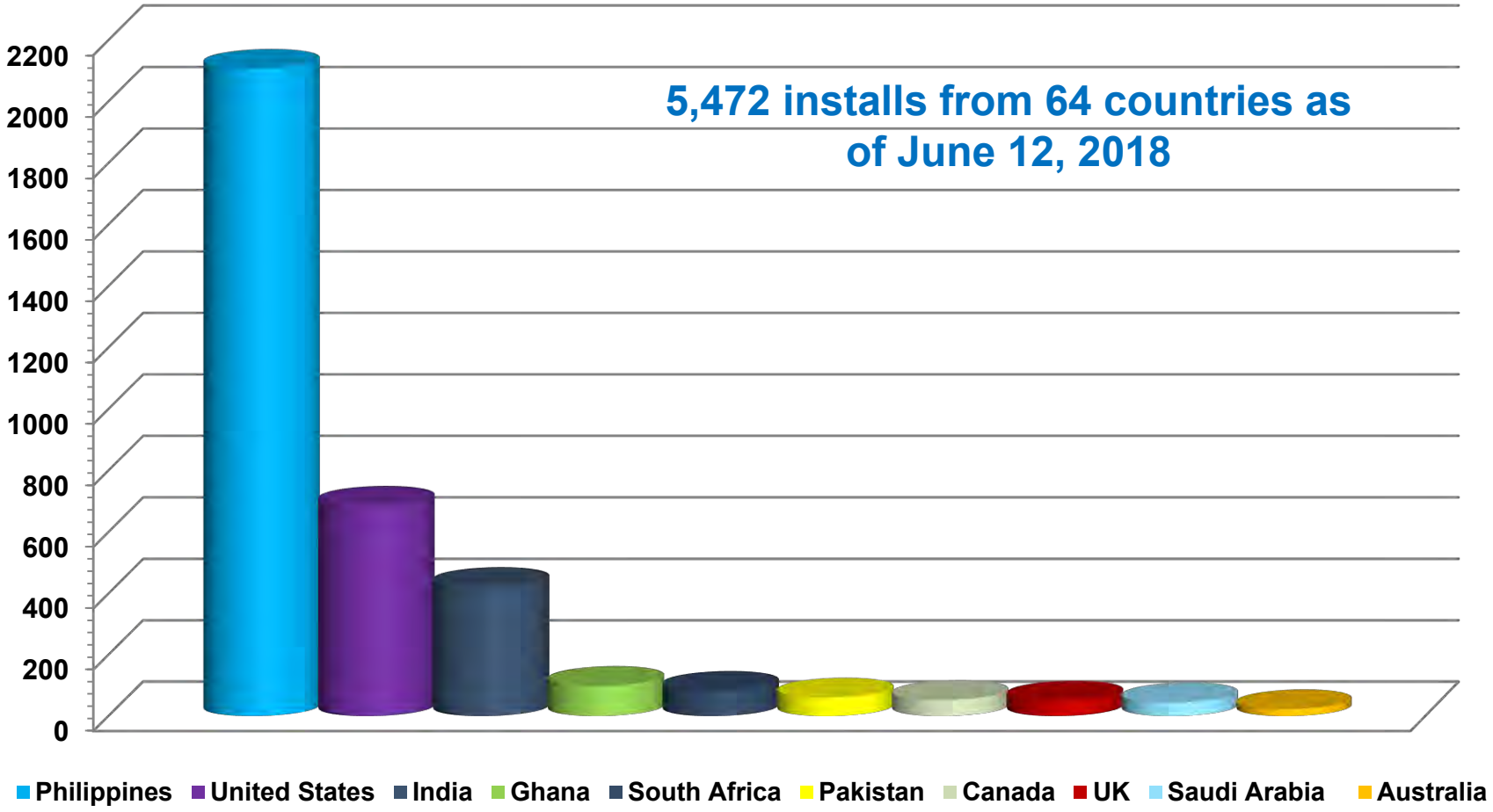
Google play

DOST COURSEWARE MOBILE APPLICATION WORLDWIDE



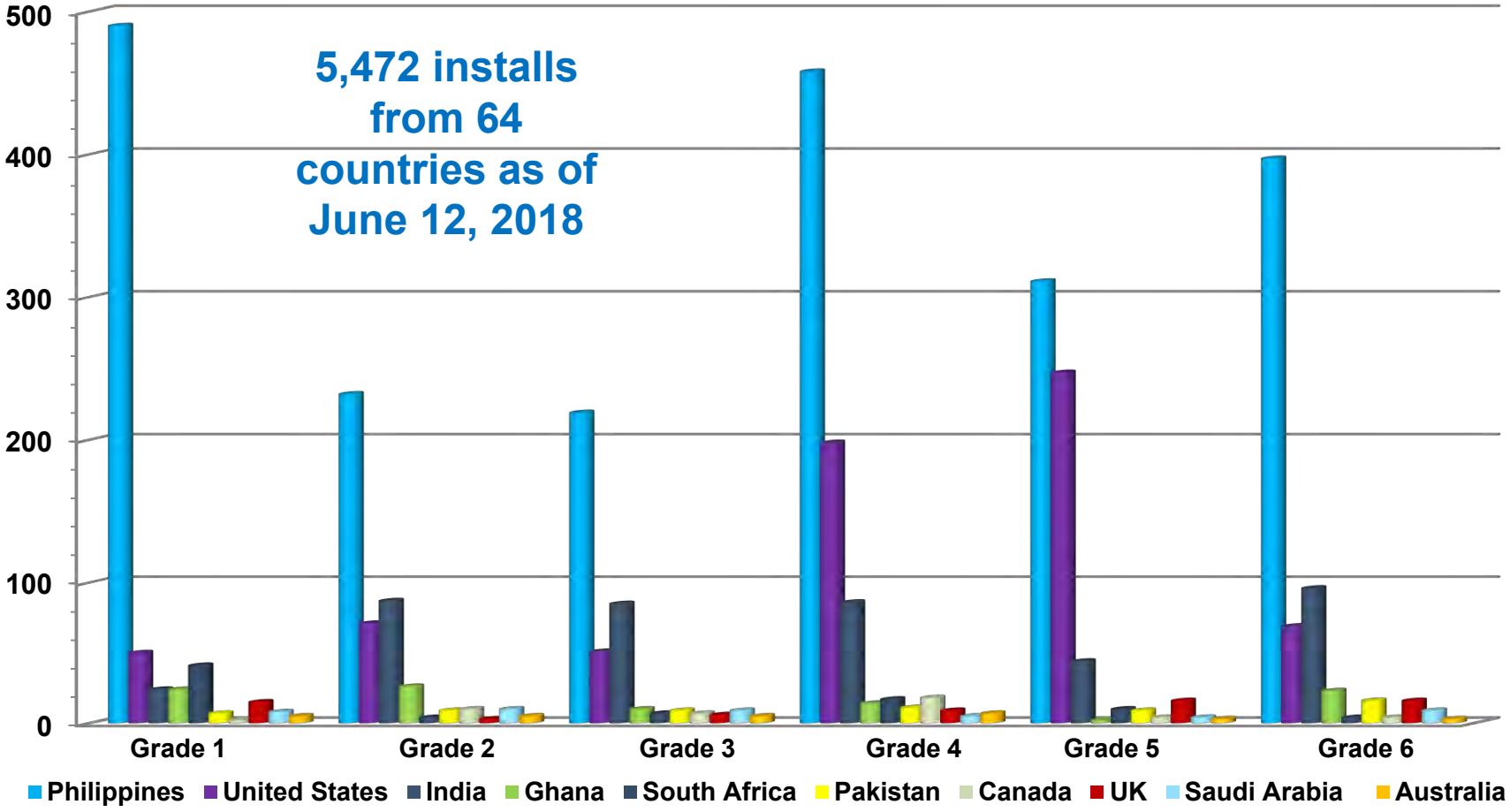
DOST COURSEWARE MOBILE APPLICATION WORLDWIDE

Installs Grade 1-6 Mathematics
April 2017 to June 2018 by Country (Top Ten)



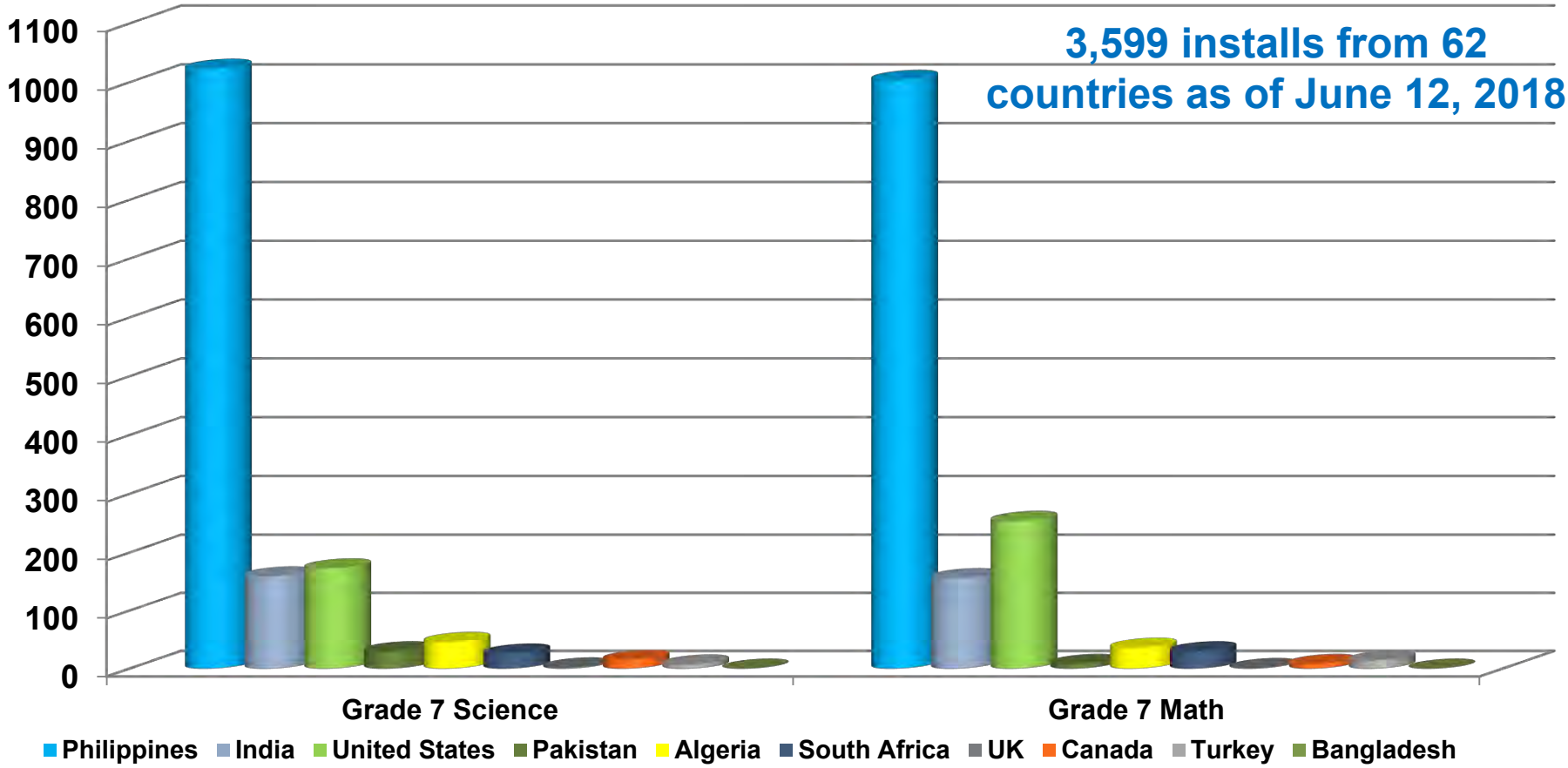
DOST COURSEWARE MOBILE APPLICATION WORLDWIDE

Installs Grade 1-6 Mathematics by Grade Level
April 2017 to June 2018 by Country (Top Ten)



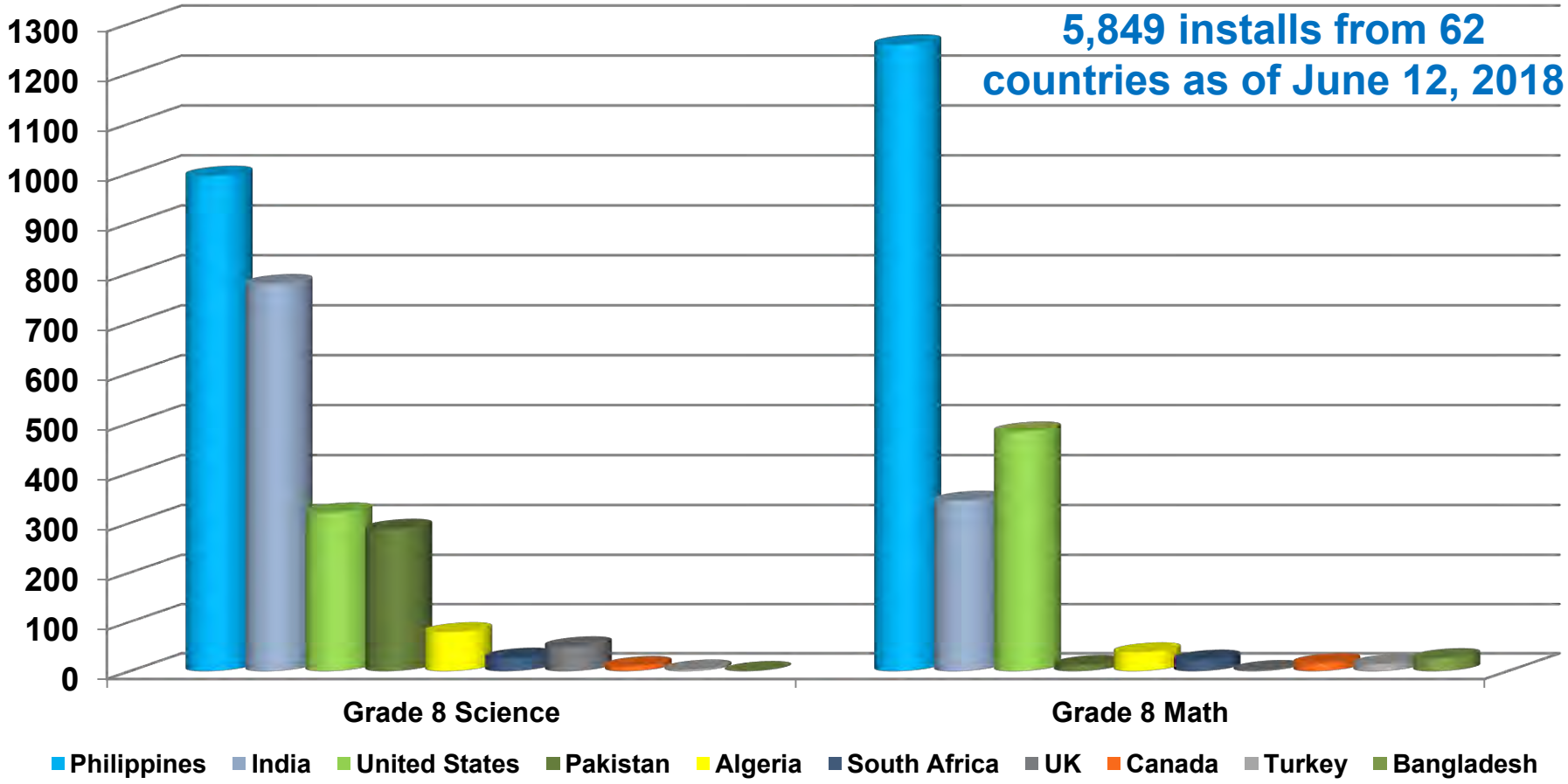
DOST COURSEWARE MOBILE APPLICATION WORLDWIDE

Installs Grade 7 Science and Mathematics January 2016 - June 2018 by Country (Top Ten)



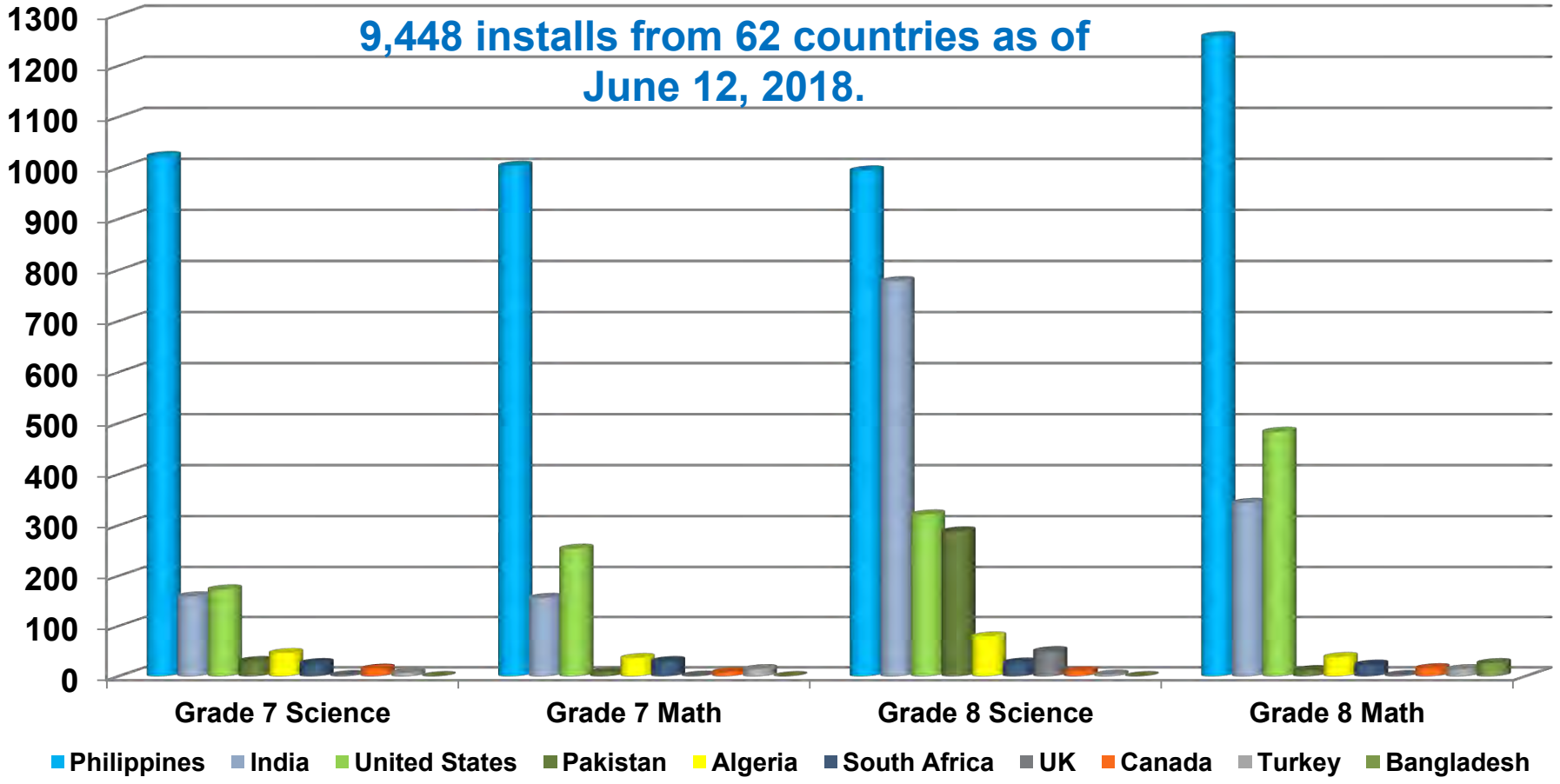
DOST COURSEWARE MOBILE APPLICATION WORLDWIDE

Installs Grade 8 Science and Mathematics January 2016 - June 2018 by Country (Top Ten)



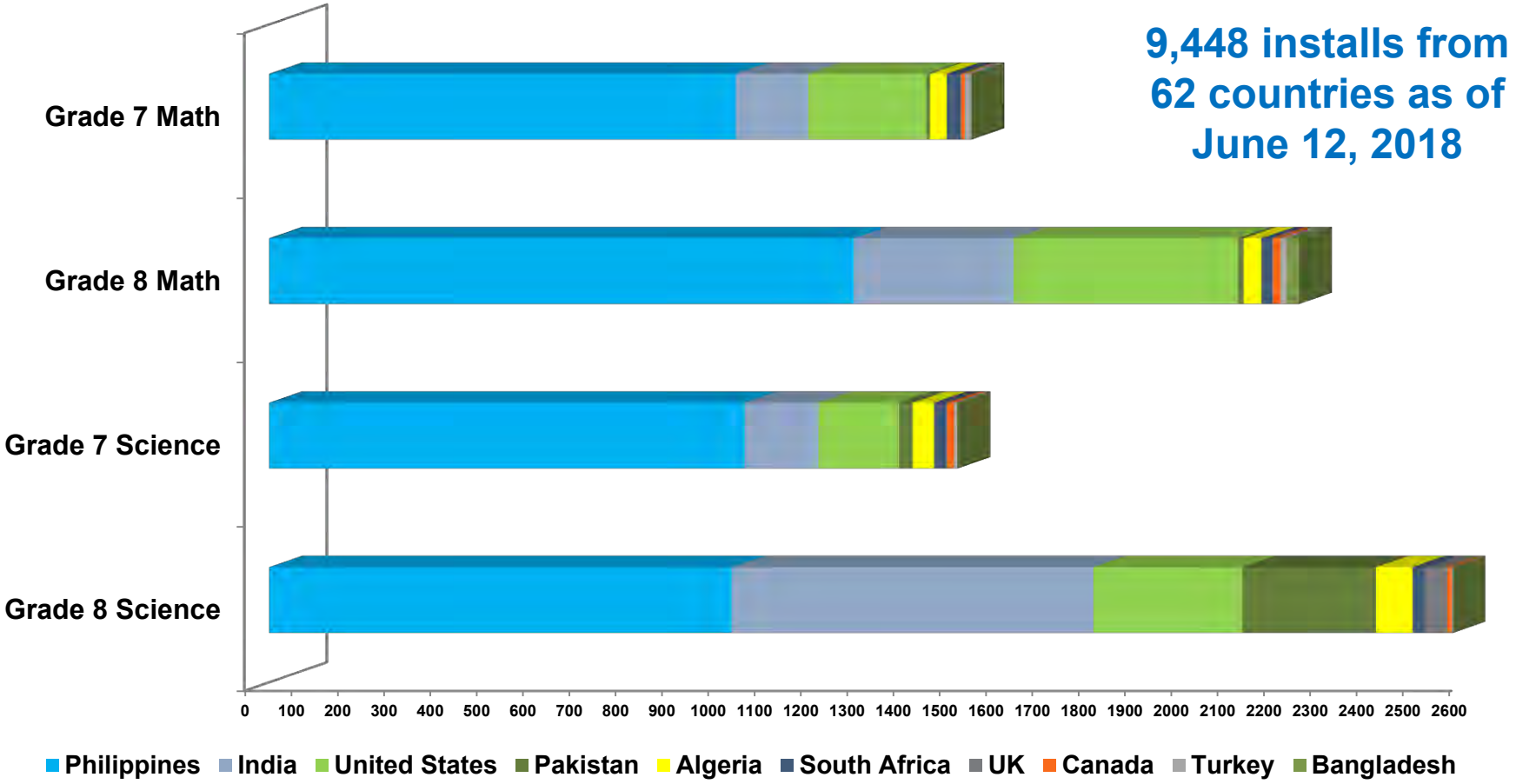
DOST COURSEWARE MOBILE APPLICATION WORLDWIDE

Installs Grade 7-8 Science and Mathematics January 2016 - June 2018 by Country (Top Ten)



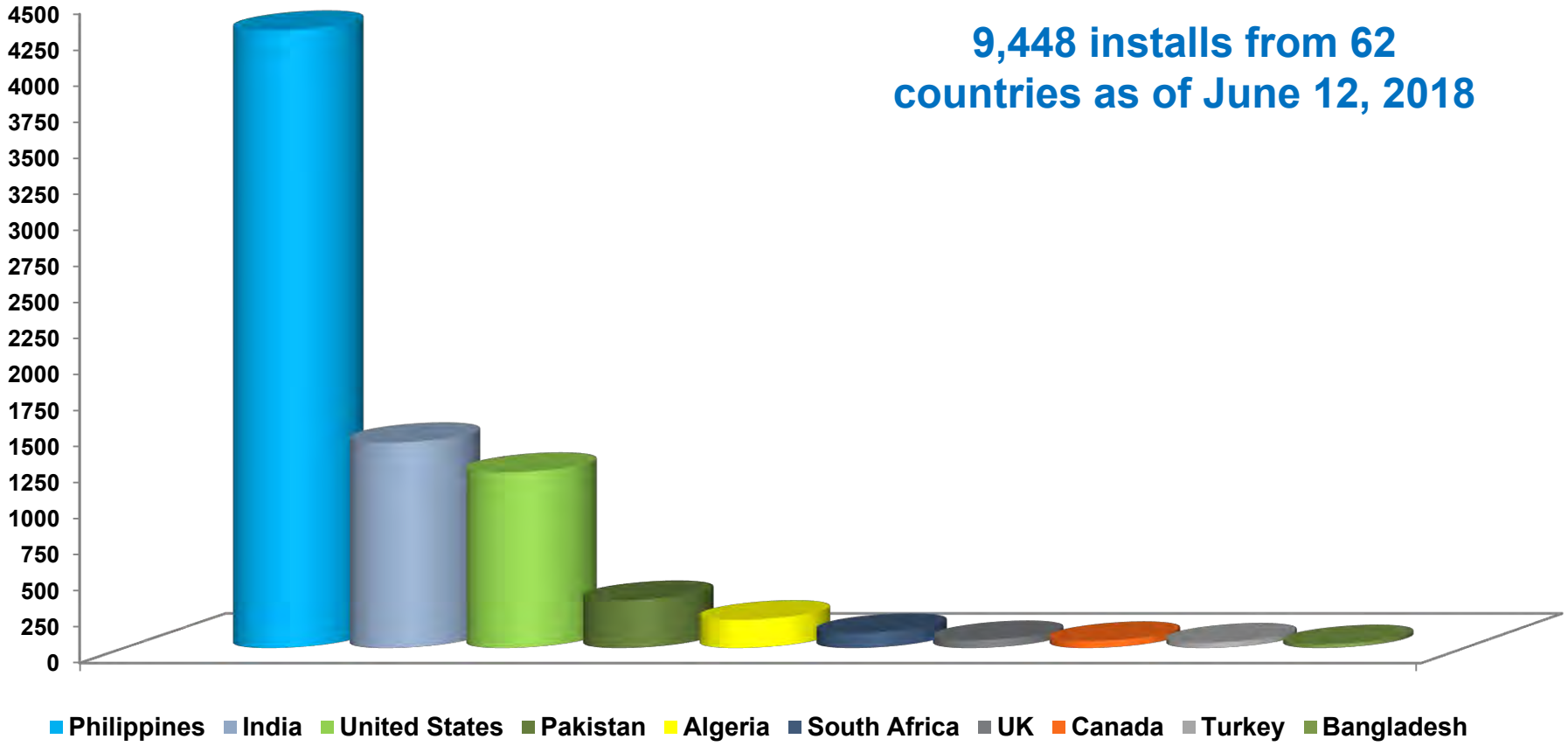
DOST COURSEWARE MOBILE APPLICATION WORLDWIDE

Installs Grade 7-8 Science and Mathematics January 2016 - June 2018 by Country (Top Ten)



DOST COURSEWARE MOBILE APPLICATION WORLDWIDE

Installs Grade 7-8 Science and Mathematics January 2016 - June 2018 by Country (Top Ten)



DOST COURSEWARE – HOW TO MAXIMIZE THE USE

- In the classroom
  - Use the projector if laptops or PCs are not available for everyone
  - If 1:1 laptop:learner, install the Courseware in each
  - Provide headset or earphone
  - Install in Content Management Server or in each PC unit in computer lab

DOST COURSEWARE – HOW TO MAXIMIZE THE USE

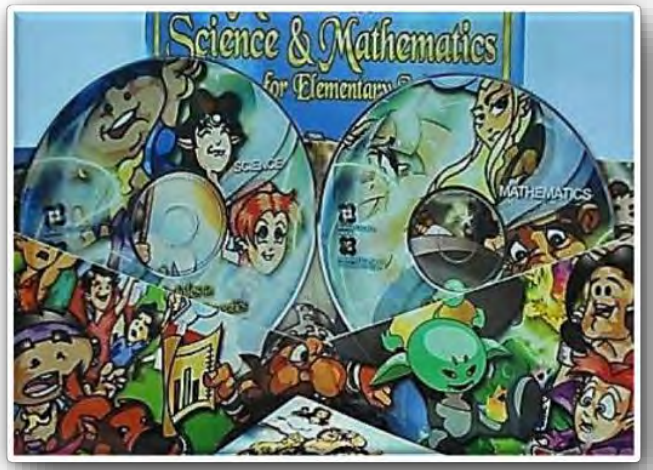
- In the classroom
  - May be used in motivation, discussion, or processing as blended-learning tool
  - Integrate in DLL, Lesson Plan
  - As intervention resource material
  - As a review or advanced topic study-material

DOST COURSEWARE – HOW TO MAXIMIZE THE USE

- In the classroom
  - If 1:1 tablet:learner, install the Courseware in each
  - Provide headset or earphone
- Use at home or anywhere

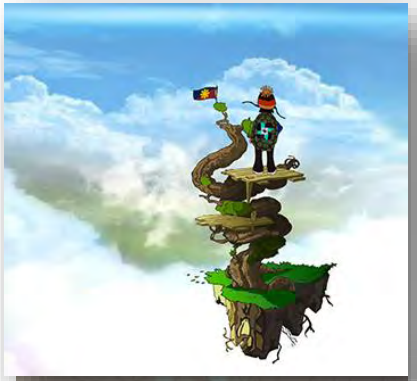
DOST COURSEWARE DISTRIBUTION

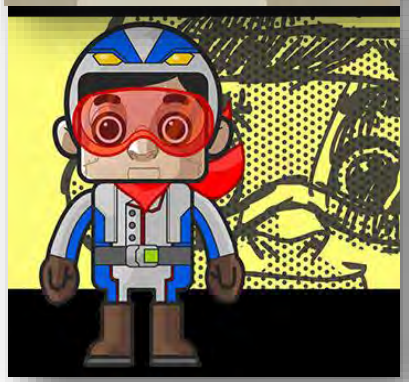
- For Windows Version
  - CD Packages – per request basis
  - Copy and share with fellow educators, learners, family and friends
    - 10,000 copies for 1st edition Science & Math
    - 1,800 copies 2nd edition Gr 1-6 Math
    - 1,200 copies Grades 7&8



HOW TO AVAIL?

- THE DOST COURSEWARE ALL VERSIONS ARE FOR FREE

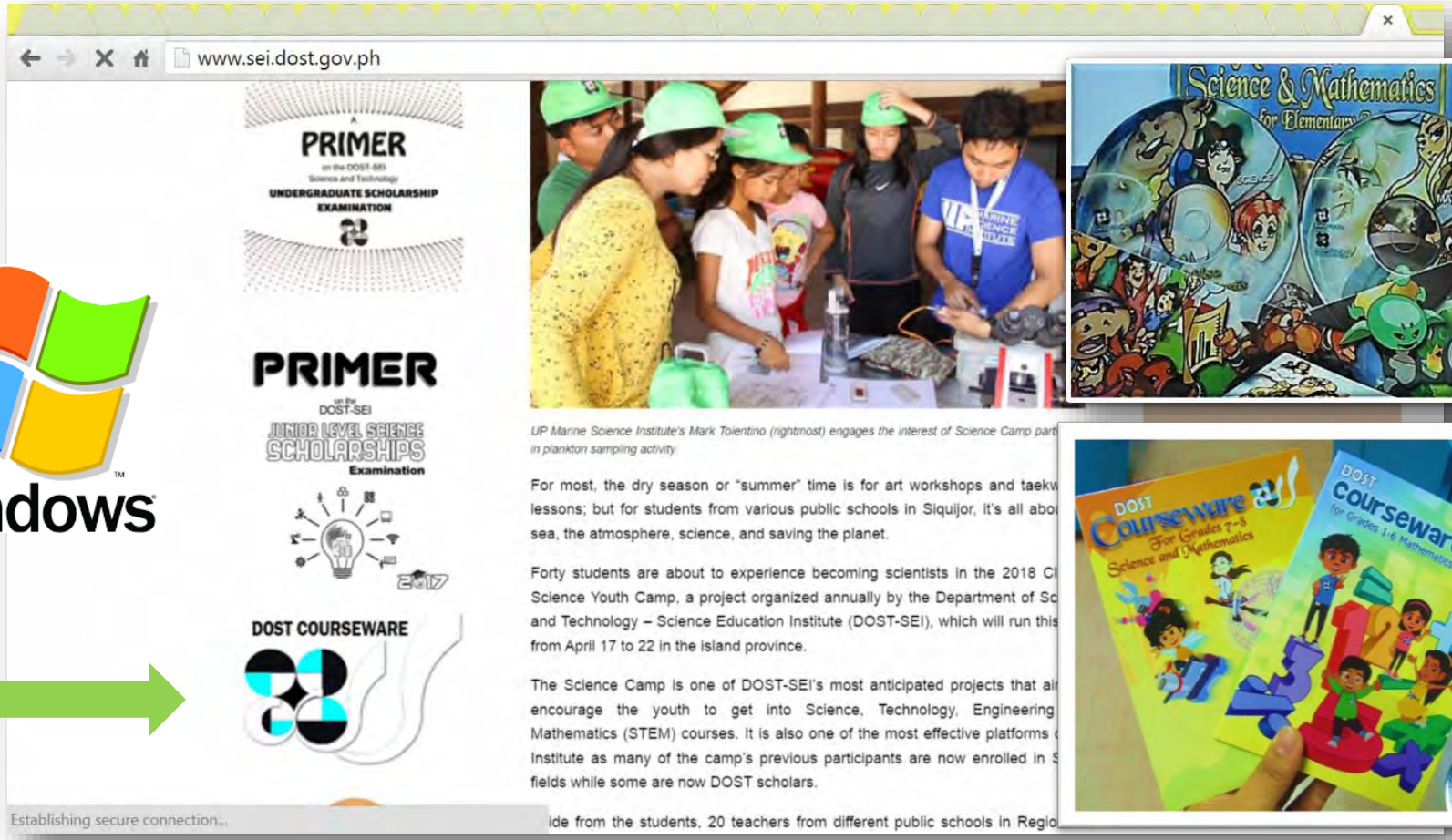




WHERE TO ACCESS THE DOST COURSEWARE

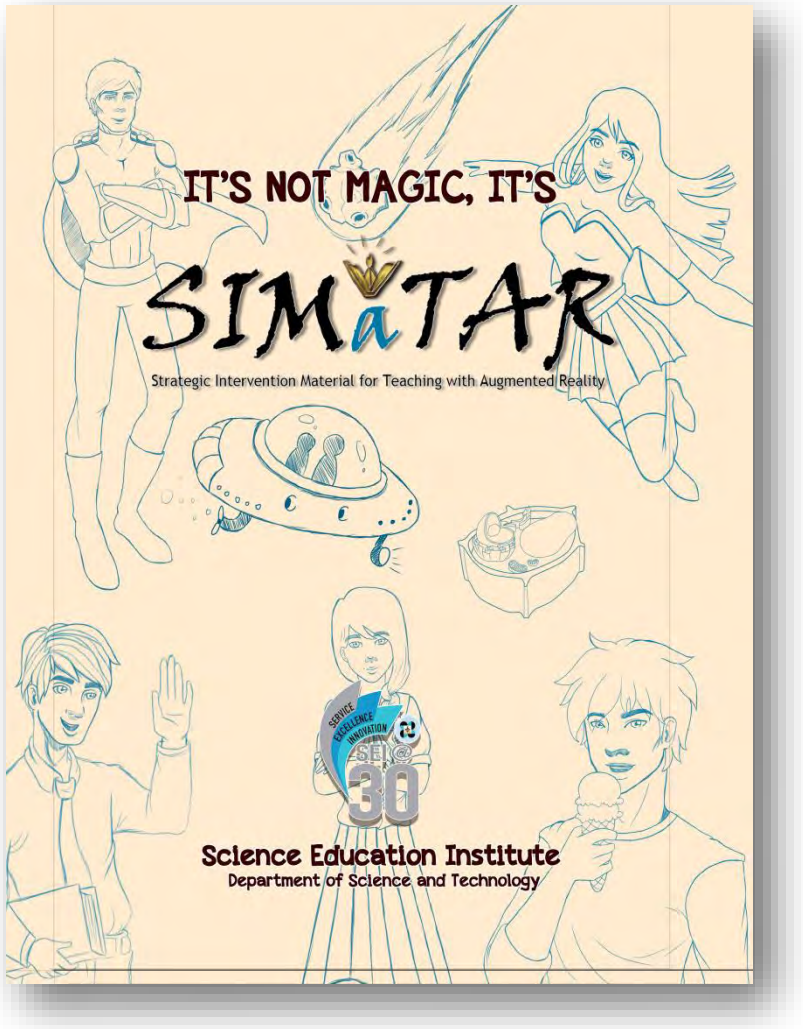
www.sei.dost.gov.ph

http://www.sei.dost.gov.ph/index.php/programs-and-projects/innovations/83-courseware



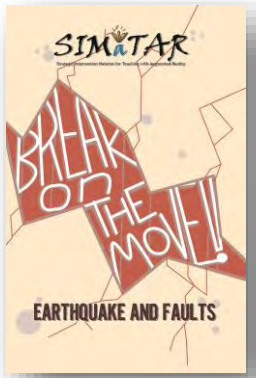
UPCOMING DOST MOBILE APPLICATION - SIMATAR

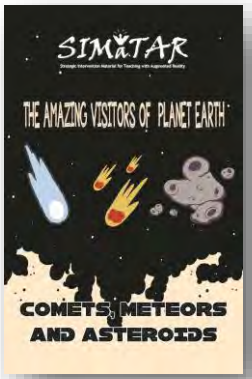
- **STRATEGIC INTERVENTION MATERIAL FOR TEACHING WITH AUGMENTED REALITY (SIMATAR)**
  - **Strategic Intervention Materials for Teaching with Augmented Reality (SIMaTAR) is a collection of teaching and learning materials in Science Grade 8 using augmented reality technology to produce information, increase knowledge, explore new spaces and places and greatly improve experience through digital immersion in different 3D and 4D worlds.**

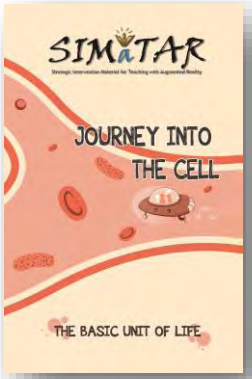


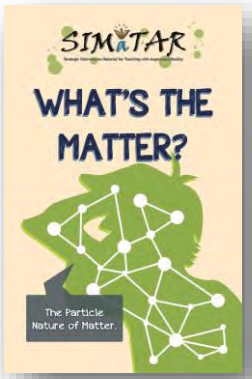
UPCOMING DOST MOBILE APPLICATION - SIMATAR

- **SIMATAR topics**
  - **A Storm is Born: Understanding Formation of Typhoon**
  - **Break on the Move: Earthquake and Faults**
  - **Journey Into the Cell: The Basic Unit of Life**
  - **The Amazing Visitors of Planet Earth: Comets, Meteors and Asteroids**
  - **What's the Matter: The Particle Nature of Matter**



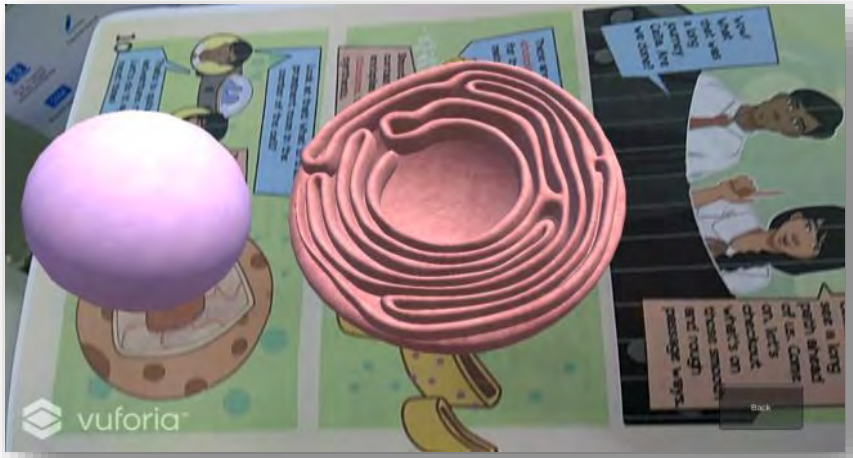


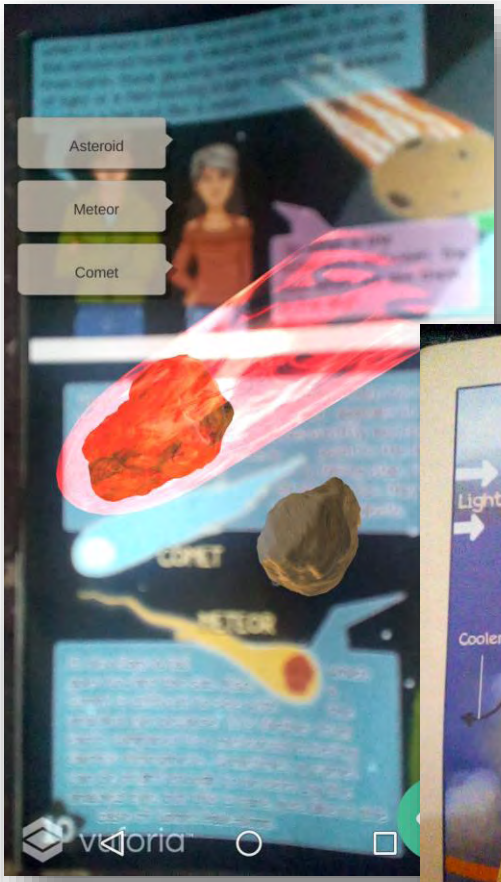




UPCOMING DOST MOBILE APPLICATION - SIMATAR

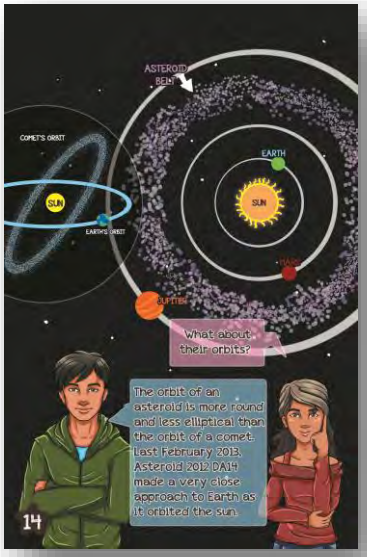
- **SIMATAR**
  - **When augmented, it will show 3D simulation of the drawings**
  - **Interactive, engaging and immerses student into virtual simulations**

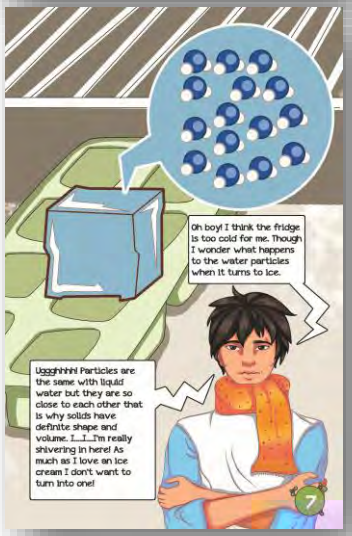


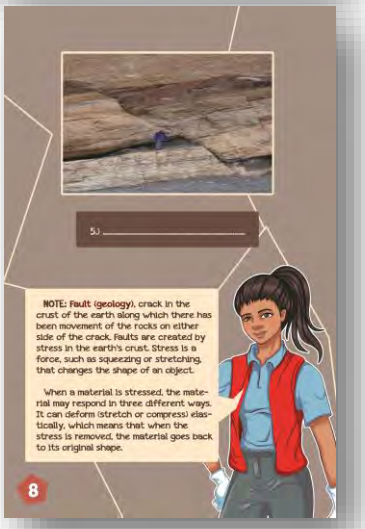


UPCOMING DOST MOBILE APPLICATION - SIMATAR

- **SIMATAR**
  - **The print and mobile application will be pilot-tested to select schools in July 2018**
  - **Will be available in Google Play and Apple Stores in November 2018**





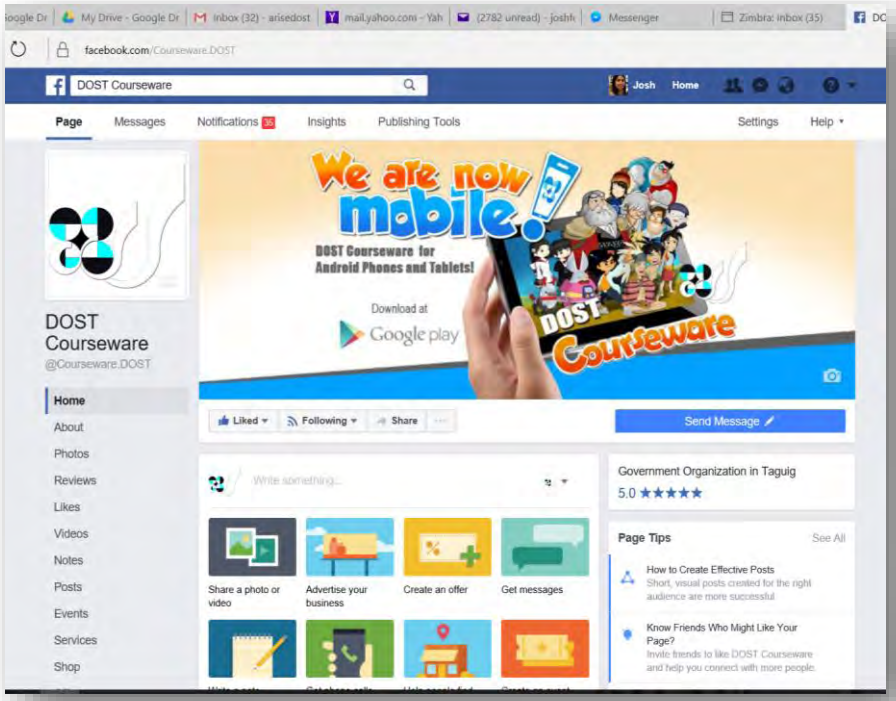


DOST COURSEWARE RESEARCHES

- We encourage studies on the use of DOST Courseware
  - Action Research
  - Research Project
  - Thesis
  - Dissertation
- Kindly provide us a copy of the result

DOST COURSEWARE SOCIAL MEDIA SITES

DOST Courseware



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8