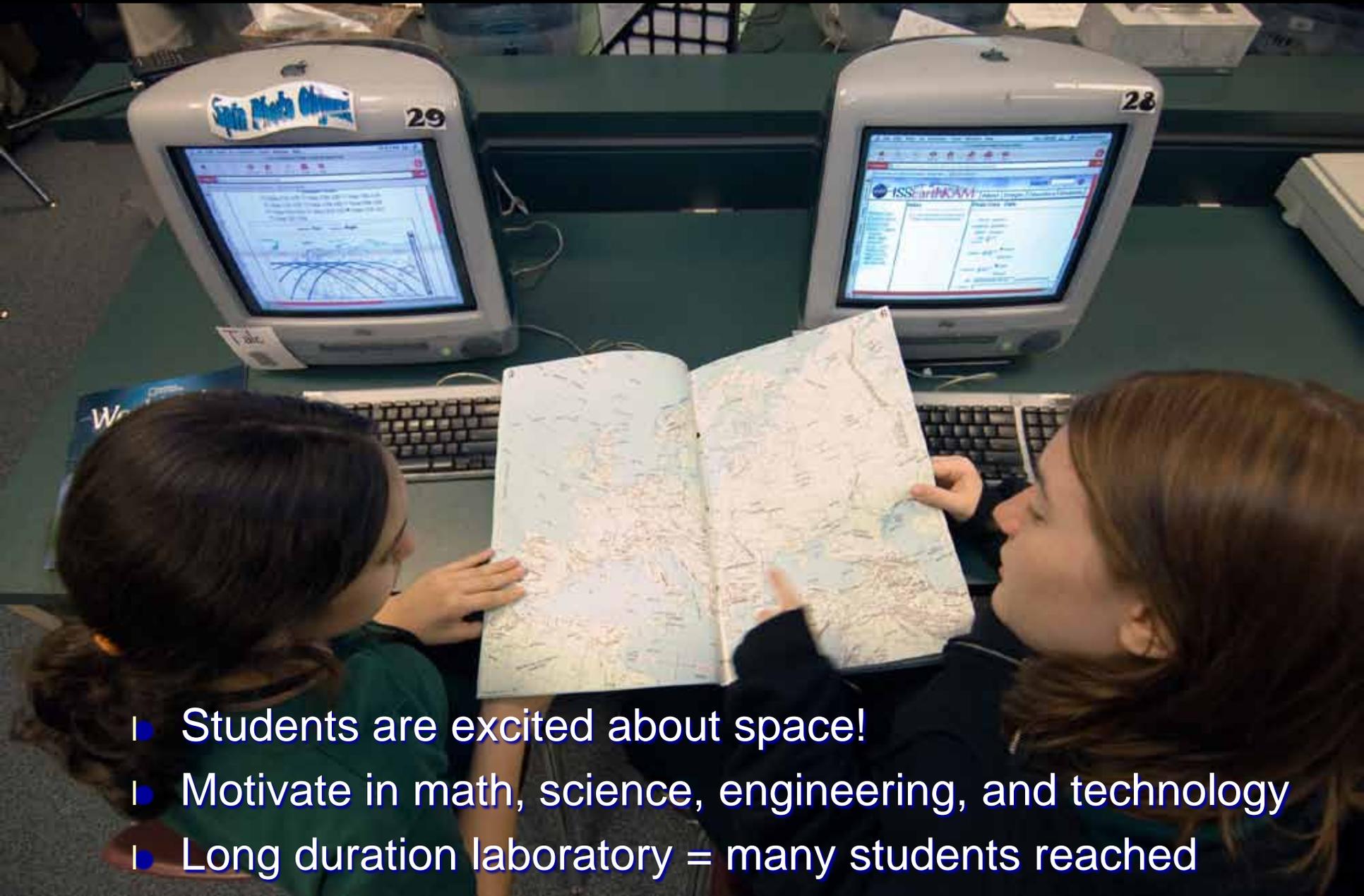


US Educational Activities on the International Space Station



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UN Expert Meeting
Human Space Technology, Malaysia
November 2011

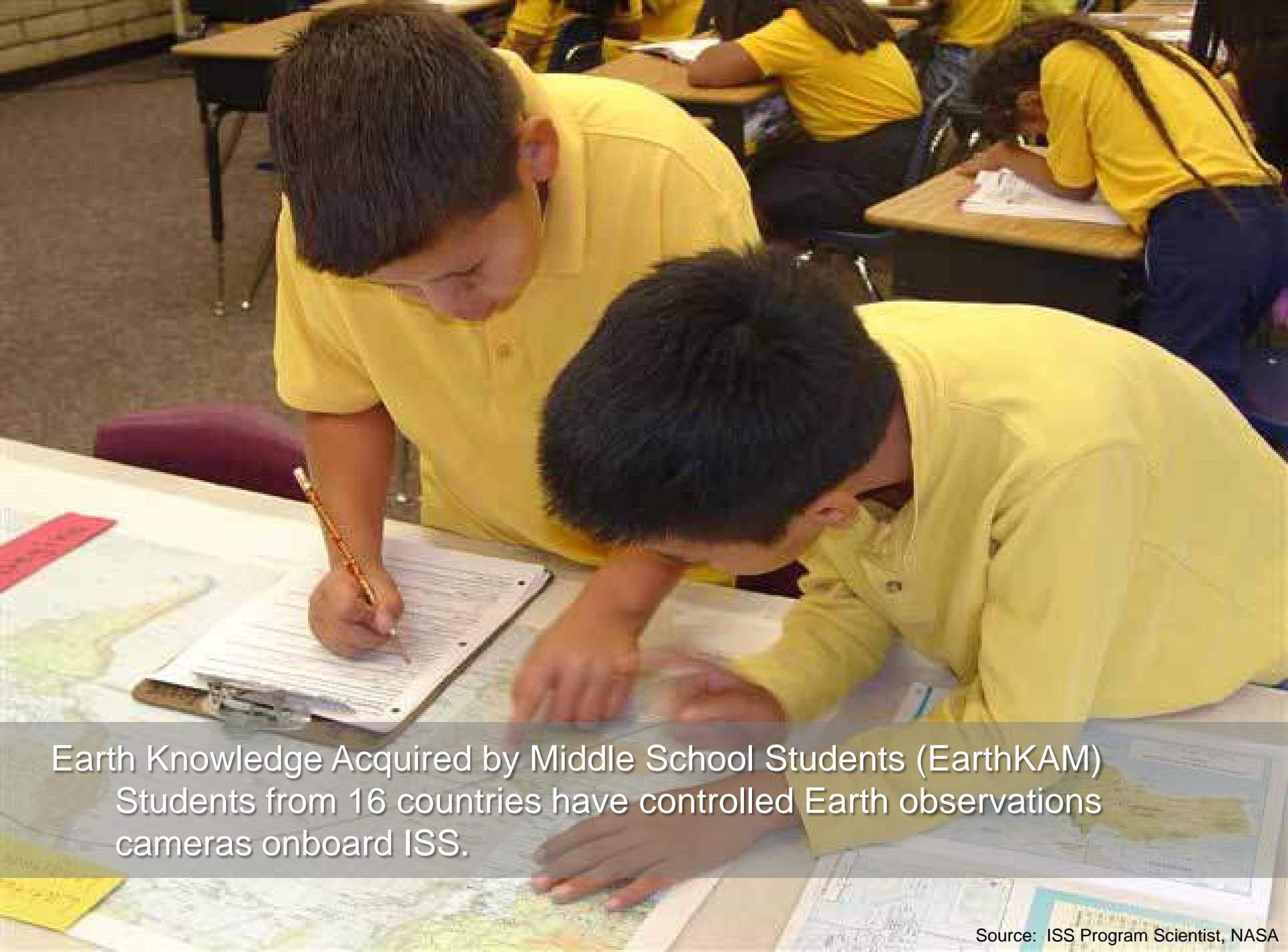
Importance of ISS as an Education Platform



- Students are excited about space!
- Motivate in math, science, engineering, and technology
- Long duration laboratory = many students reached

Educational Activities on ISS occur through partnerships

- 
- A photograph of four students in a classroom setting. They are gathered around a table, focused on a project involving several green plants in a black container. One student is holding a yellow ruler. The background features a large, colorful mural of a cityscape with a globe, a white basket on a table, and bookshelves filled with books.
- Student-developed experiments, including contests
 - Students perform classroom versions of ISS experiments
 - Students participate in actual experiments
 - Students participate in engineering, hardware development, and operations activities
 - Educational demonstrations by astronaut/cosmonauts



Earth Knowledge Acquired by Middle School Students (EarthKAM)
Students from 16 countries have controlled Earth observations
cameras onboard ISS.



“Amateur Radio on the International Space Station” program- a cooperative venture of NASA, the National Association for Amateur Radio, and AMSAT. Over 39 countries have had participants in over 550 sessions with the ISS crew

Source: ISS Program Scientist, NASA

Image courtesy of ARISS

Educational Media from ISS



- 1 In-flight Downlinks have also offered live audio/visual interaction between the ISS crew with students and the general public
- 1 Education Public Outreach (EPO) Demonstrations have provided a means of demonstrating the behavior of simple items in microgravity
- 1 Buzz Lightyear Mission Logs special feature video showcasing life on ISS developed in partnership with Disney-Pixar



US Museums and Universities Sponsor Activities



Education – Golden orb spiders living onboard the *International Space Station* captured the attention of over 400,000 students, who studied the spiders and learned about the scientific method using a curriculum developed by BioEd Online. The previous year, over 180,000 students observed the Monarch butterfly life cycle.

NASA Student-led Experiments



- Nanoracks/CubeLab: Self-contained cubesat form factor laboratory modules enabling student as well as professional grade experiments
- Synchronized Position Hold Engage and Reorient Experimental Satellite (SPHERES) internal satellites flying inside the ISS under the control of student developed software
- The Kids In Micro-g pathfinder for 2 years of outstanding results
- Transitioned to a YouTube-sponsored contest in 2011 (closes Dec 7)



Scenes from Kids in Micro-G 2010-2011. Completing two successful years of operation, the project will now be expanded through a partnership with Google/YouTube in 2012.

Source: ISS Program Scientist, NASA

62 Countries Have Participated in ISS Utilization through 2011



Most participation is through Educational Collaborations!



ISS Research & Technology

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ISS Research Blog "A Lab Aloft"

<http://go.usa.gov/atl>