NASA’s BEST Activities

Beginning Engineering, Science and Technology

Curriculum for Engineering Clubs for Grades K-2, 3-5 & 6-8

Electronic Professional Development Series
Session 1
http://userpages.umbc.edu/~hoban/BEST

Delivered by Brittany Hamolia
University of Maryland, Baltimore County

Supported through NASA Exploration Systems Mission Directorate
Today’s Session

- Introduction to Elluminate
- Introduction to NASA’s BEST Activities
- Introduction to the Engineering Design Process (EDP)
- EDP Step 1: Ask

Materials required for today’s session may be found on the web at
http://userpages.umbc.edu/~hoban/BEST
# Introduction to Elluminate

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Name, Location, Grade

[Image of a dog with sunglasses]
NASA’s BEST Activities
Beginning Engineering, Science and Technology

“Did You Know?”
Please point your browser to this video presentation on YouTube:

http://www.youtube.com/watch?v=k-8DRPCJ86U
NASA’s BEST Activities

• For full release in 2009
• Lunar Exploration theme
• 12 activities, approximately 1 hour each
• Separate packets for grades K-2, 3-5, 6-8
NASA’s BEST Activities

• Stealth learning: students should have FUN!!
• Adopting “Engineering Design Process” from Boston Museum of Science
• Designed to be “cost-friendly”
  – For clubs with about 20 student
  – Cost of supplies <$500
Each activity includes...

- Teacher pages
  - Summary of objectives
  - List of materials needed
  - NASA context
Each activity includes...

- Student pages
  - Summary of objective
  - Student worksheets
  - Measurement activity
  - Fun with Engineering at Home
- Quality Assurance – optional
The Engineering Design Process

Video 1: Introduction
http://userpages.umbc.edu/~hoban/BEST/ePD/videos/1-introduction_caption.mov
Engineering Design Process: Ask

• We’re going to design and build a satellite that carries certain instruments and then launch the satellite to the Moon! (Refer to Activities 1 & 2)

• Video 2: Ask
  – http://userpages.umbc.edu/~hoban/BEST/ePD/videos/1-ask_caption.mov
  – Keep in mind that although the video talks about launching the satellite (Activity 2), you will also design and build it as in Activity 1.
Engineering Design Process: Ask

“Ask” Discussion

– What is your mission?
– What will you need to accomplish it?
– Important to engage the students in this discussion. Why?
Next Session

- EDP: Imagine & Plan
- Bring sketching materials
NASA’s BEST Activities

Beginning Engineering, Science and Technology

- Project Information
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- Electronic Professional Development
  - Brittany.L.Hamolia@nasa.gov

- BEST Materials
  - http://userpages.umbc.edu/~hoban/BEST