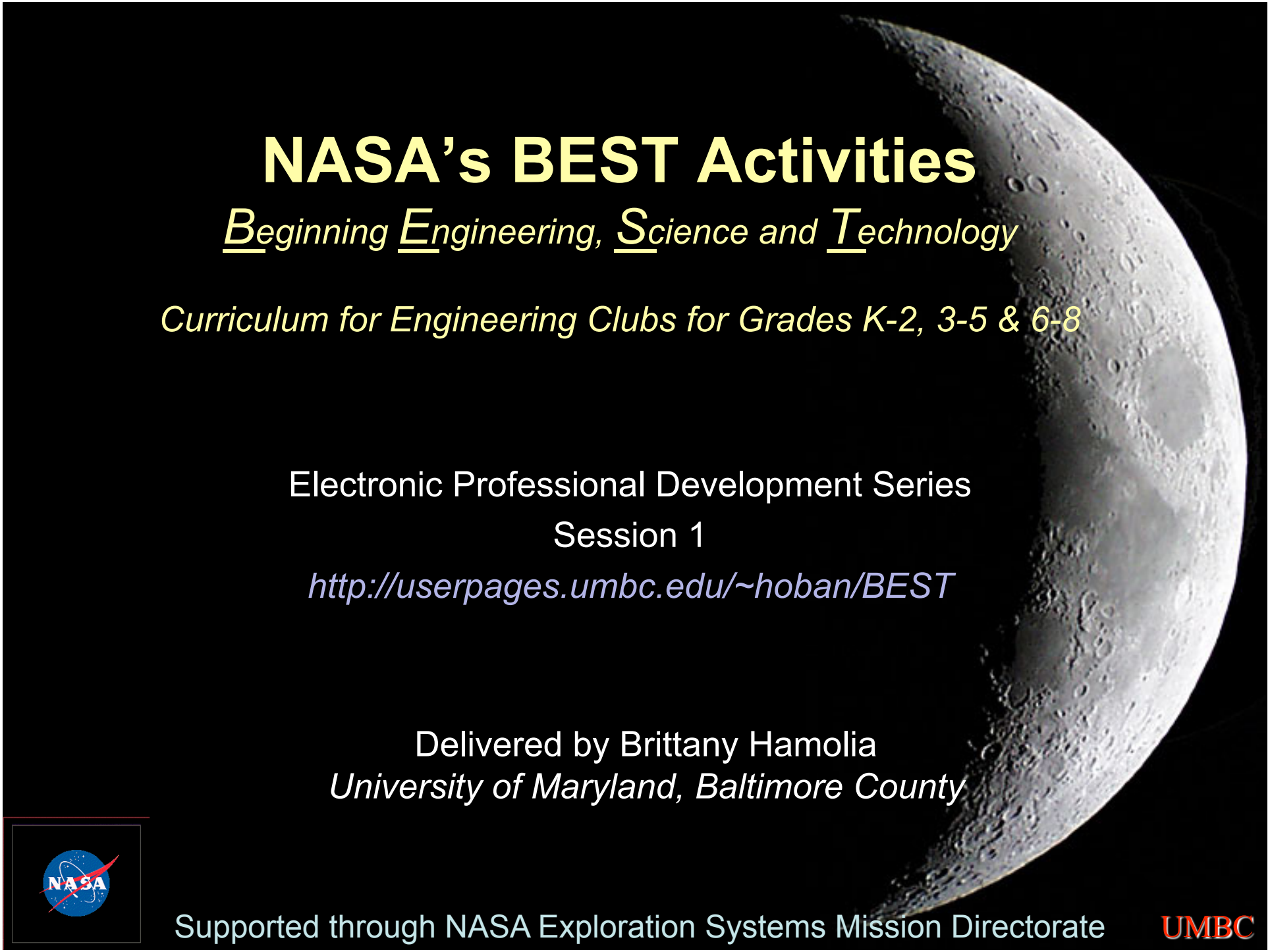

NASA's BEST Activities

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

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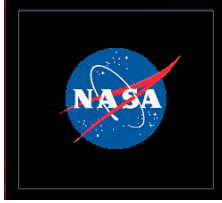
Today's Session

- 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*



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Introduction to Elluminate

16	21	19	24	22	27	25	___
★	▲	★	◔		▲	★	◔

Name, Location, Grade

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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

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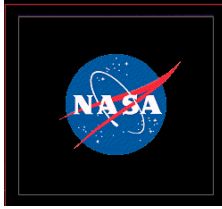
NASA's BEST Activities

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



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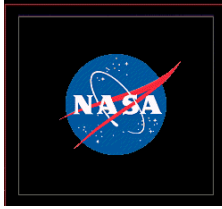
NASA's BEST Activities

- 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



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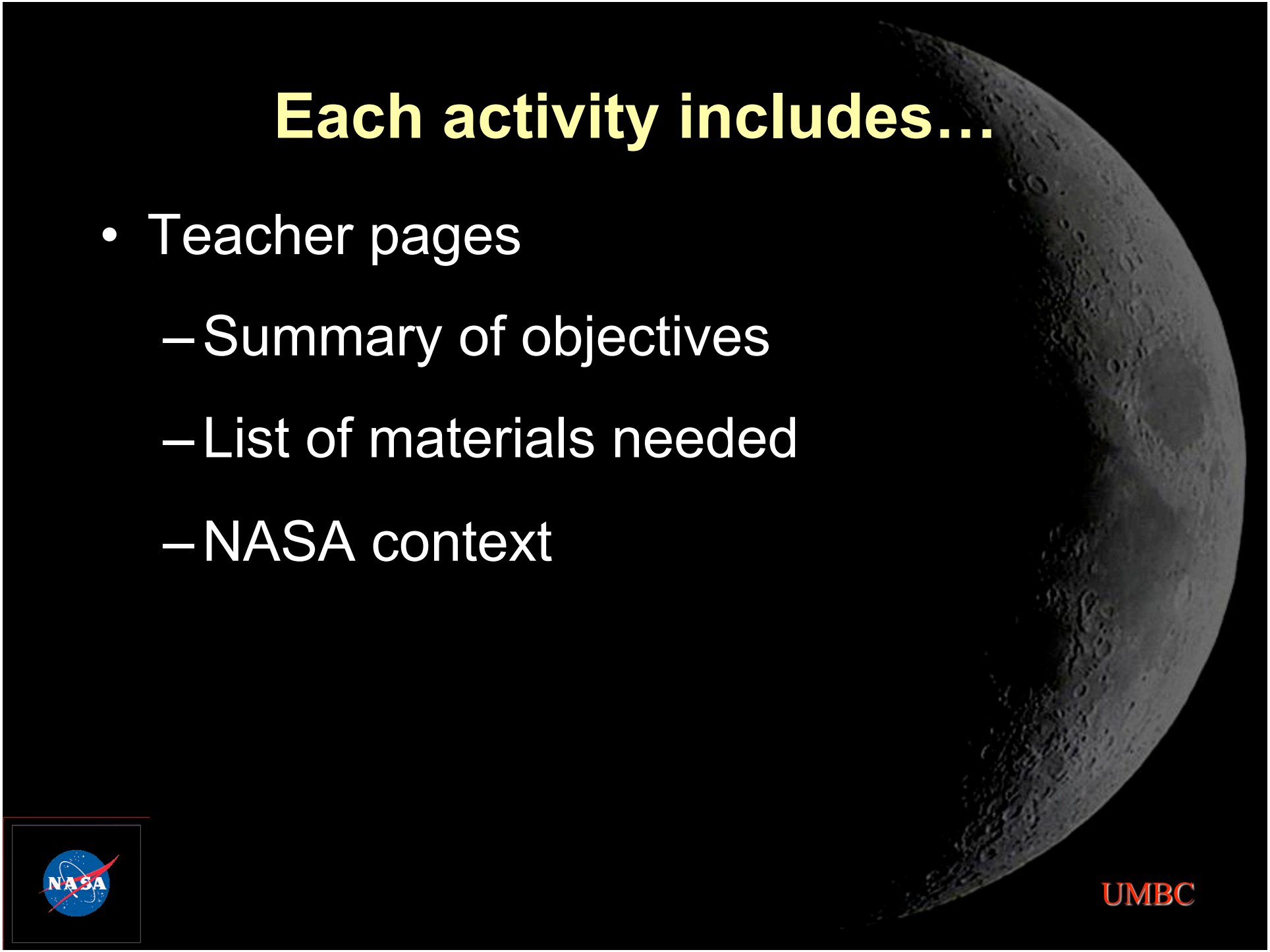
Each activity includes…

- Teacher pages
  - Summary of objectives
  - List of materials needed
  - NASA context



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Each activity includes…

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

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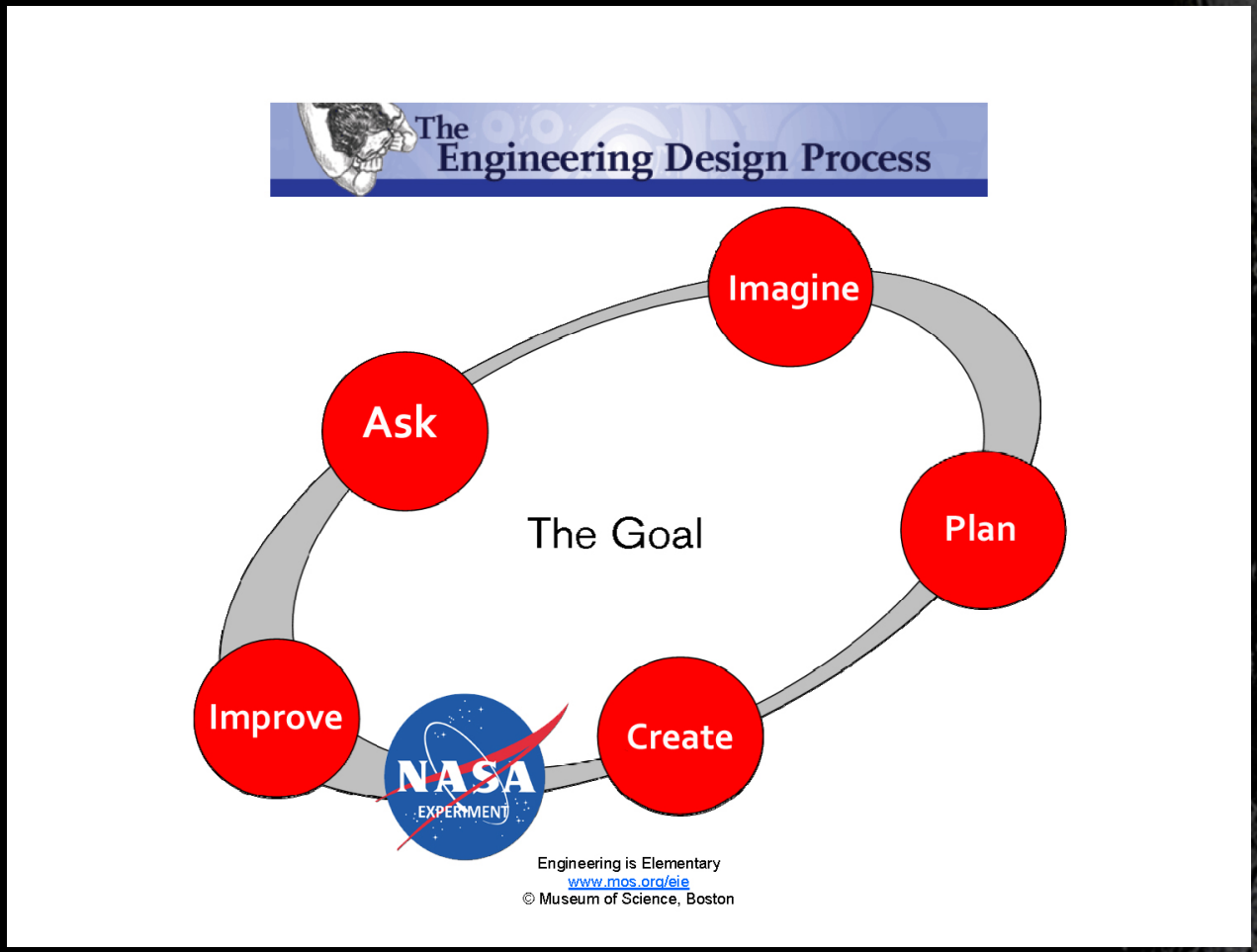
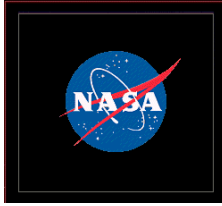
The Engineering Design Process



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.



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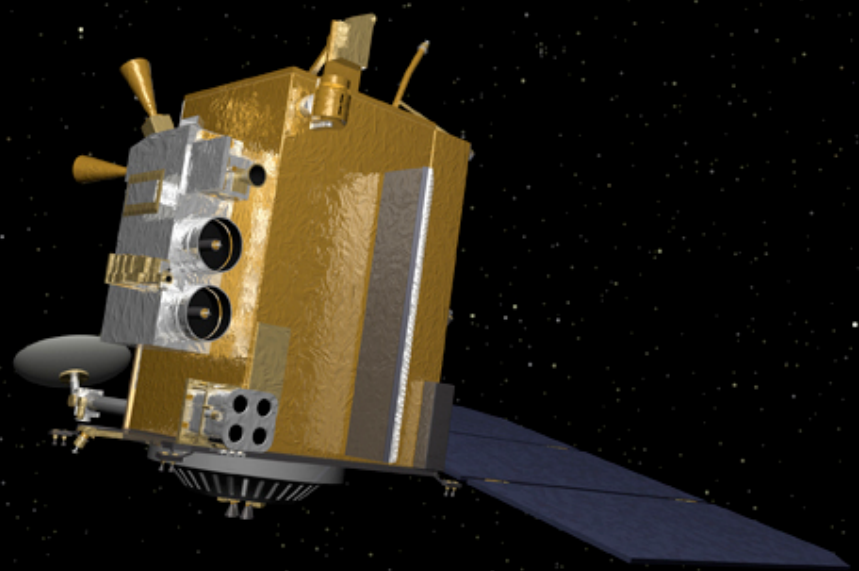
LRO: Lunar Reconnaissance Orbiter



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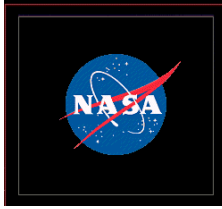
Engineering Design Process: Ask

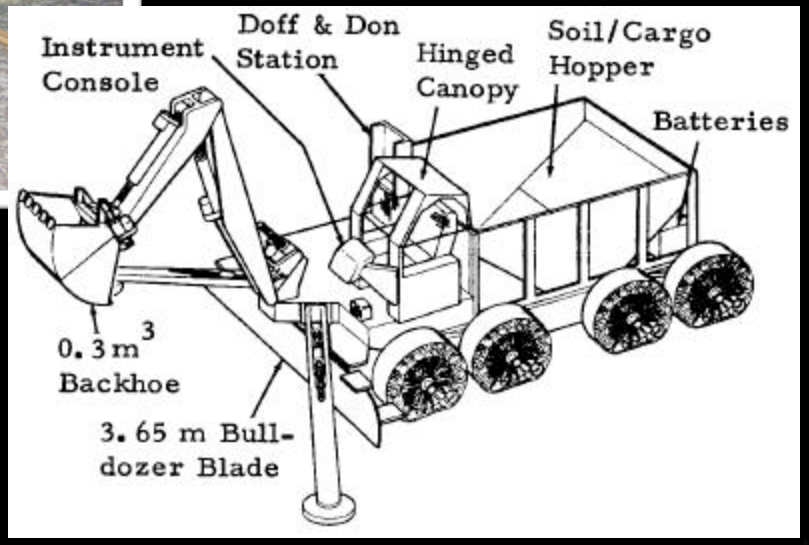
"Ask" Discussion

- 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



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NASA's BEST Activities

Beginning Engineering, Science and Technology

- Project Information
  - susan.hoban@nasa.gov
- Electronic Professional Development
  - Brittany.L.Hamolia@nasa.gov
- BEST Materials
  - http://userpages.umbc.edu/~hoban/BEST

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