**Education Outreach Presentation "Nutrition and Exercise in Space and on Earth"**

**Age Range:** K-12

Source of Acquisition
NASA Johnson Space Center

**Presented To:** Various area schools/organizations

**Presentation Outline:**
Introduction: Food Montage Video (video prepared by NASA Distance Learning of astronauts eating in space set to catchy music)

- Types of Space Foods
- Constraints of eating in space
- Importance of specific foods for astronaut health
  - — Calcium and Vitamin D for healthy bones
  - — Sodium (preserver and impact on nutrition)
- Importance of specific foods for good health
  - — Calcium (strong bones and prevention of osteoporosis)
  - — Vitamin D
  - — Sodium
  - — Fiber
  - — Fat
- Nutrition and Exercise – role in good Health
- Energy Balance – Input vs. Output
- Importance of exercise in the Space program (Bones, Muscle, Cardiovascular Health)
- Challenges in doing exercise in space (crew time, power, mass, space; demo video of astronauts using various exercise equipment)
- Importance of exercise on Earth
- Question and Answer

**Materials Displayed/Used as Teaching Resources:**
Food Guide Pyramid (USDA)
Vitamin D Nutrition Poster (Nutritional Biochemistry Laboratory)
"What's up with Jose?" and "Cecilia's Story" (NSBRI)
"Who added the micro to gravity", "Rocket to the stars", "Better health from space to Earth", "Good stress for building better bones" (NASA Connect)
Biomedical science for space travelers (NSBRI)
Learning about the human body (NSBRI)
Food models – fat, salt, fiber, added sugar (NASCO/Nutritional Biochemistry Laboratory)
Space Foods (Foods Laboratory/SF)
Healthy/Unhealthy Bone Model (NASCO/Nutritional Biochemistry Laboratory)
Healthy/Unhealthy Food Poster (NASCO/Nutritional Biochemistry Laboratory)
Free Weights

**Materials Distributed:**
Mini Food Guide Pyramids
NASA web-site information
STS-107 book marks
Pencils and rulers
"Who added the micro to gravity", "Rocket to the stars", "Better health from space to Earth", "Good stress for building better bones" (NASA Connect)