**Education Outreach Presentation “Nutrition and Exercise in Space and on Earth”**

**Age Range:** K-12

**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)