

Education Assistance Program for Students

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Space Shuttle *Endeavour* shuttle flight 118, flown on August 8–21, 2007, was the first for an Educator Astronaut – a full-time astronaut who has experience teaching K-12 classrooms. In support of this flight, NASA Education put together a comprehensive education plan designed to engage students in the mission through an engineering design challenge to design, build, and assess plant growth chambers for future missions to the Moon and Mars. The challenge ties directly to these two education activities: Education Payload Operations (EPO) Kit C and EPO Educator, designed to support the NASA mission to inspire the next generation of explorers.

Generally, these activities focus on demonstrating science, mathematics, technology, engineering, or geography principles. Goals and objectives are met by capturing video and still images of the crew operating EPO hardware. The images are used to support NASA education products and services. The overall goal for every mission is to facilitate education opportunities that use the unique environment of spaceflight.



EPO Kit C

EPO Kit C launched on shuttle flight 118/International Space Station (ISS) Assembly Mission 13A.1 on August 3, 2007, and manifested to return on Space Shuttle *Discovery*, shuttle flight 120/ISS Assembly Mission 10A. This kit consists of two small, collapsible plant growth chambers and the associated hardware to conduct a 20-day plant germination investigation. During the investigation, crew members maintain the plants and capture still images of plant growth. All images will be incorporated into a comprehensive set of education activities planned in association with shuttle flight 118 and Increment 15 (Soyuz 14 vehicle: launched April 7, 2007, landed August 21, 2007).

EPO Educator

Also launched on shuttle flight 118/ISS Assembly Mission 13A.1, EPO Educator consisted of approximately 10 million basil seeds. The seeds launched in SPACEHAB, one of the ISS modules, remained on the shuttle, and returned on the same flight on August 21, 2007. After the mission, the seeds were distributed to students and educators as part of the comprehensive education plan. On-orbit operations included capturing still images of the seeds in a microgravity environment. These images will be incorporated into a set of education activities.

All of these investigations and related activities are designed to encourage students to pursue studies and careers in science, technology, engineering, and mathematics. Education activities associated with shuttle flight 118 and Increment 15 can be found at www.nasa.gov/sts118.

STS-118 mission specialist Barbara Morgan floats with millions of basil seeds she carried to space as part of the Engineering Design Challenge.