

NASA News

National Aeronautics and
Space Administration

Washington, D.C. 20546
AC 202-453-8400

For Release:

October 2, 1985

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(Phone: 202/453-8400)

RELEASE NO: 85-139

EDUCATIONAL PLANS FOR SHUTTLE MISSION 51-L ANNOUNCED

Live lessons to classrooms around the country and scientific demonstrations filmed for use in educational products are just some of the activities that will be involved with Shuttle Mission 51-L and the flight of the first Space Flight Participant.

Christa McAuliffe, the finalist in the NASA Teacher in Space Project, along with Barbara Morgan, the back-up candidate, reported to NASA's Johnson Space Center, Houston, on Sept. 9 to begin training which will continue until the flight of 51-L now set for launch no earlier than Jan. 22, 1986.

NASA is making plans for a direct satellite broadcast and schools will be able to observe lessons from space.

The first live lesson entitled "The Ultimate Field Trip" will allow students to compare daily life on the Shuttle with that on Earth. McAuliffe will take viewers on a tour of the Shuttle, explaining crewmembers' roles, showing the location of computers and controls and explaining experiments being conducted on the mission. She also will demonstrate how daily life in space is different from that on Earth in the preparation of food, movement, exercise, personal hygiene, sleep and the use of leisure time.

The second lesson called "Where We've Been, Where We're Going" will help the audience understand why people use and explore space by demonstrating the advantages of manufacturing in the micro-gravity environment, highlighting technological advances that evolve from the space program and projecting the future of humans in space.

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Also during the 51-L mission, McAuliffe will be involved in several activities which will be filmed and later used in educational products. Potential activities include:

- o Earth Magnetism - Photograph and observe the lines of magnetic force in three dimensions in a microgravity environment.
- o Newton's Law - Demonstrate Newton's first, second and third laws in microgravity.
- o Bubbles - Understand why products may or may not effervesce in a microgravity environment.
- o Space Expressions - Generate from students creative works that reflect their interpretation of the space program/experience.
- o Simple Machines/Tools - Understand the use of simple machines/tools and the similarities and differences between their uses in space and on Earth.
- o Hydroponics in Microgravity - Show the effect of microgravity on plant growth, growth of plants without soil (hydroponics) and capillary action.
- o Chromatographic Separation of Pigments - Demonstrate chromatography in a microgravity environment and show capillary action (the mechanism by which plants transport water and nutrients).

The educational emphasis on Shuttle Mission 51-L will be further enhanced with a program now in its 6th year at NASA. Three Shuttle Student Involvement Project experiments will fly onboard the Shuttle and McAuliffe will assist the mission specialists in conducting them. The experiments deal with using a semi-permeable membrane to direct crystal growth, studying chicken embryo development in space and the effect of weightlessness on grain formation and strength in metals.

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