

# **OSU/NASA Education Projects: Aerospace Education Services Program (AESP) Archive**

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**In the Beginning by Cal Weiss. Written 2001.**

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by Cal Weiss

In 1957, when NASA was established, I had had 10 years of service at the NACA Propulsion Laboratory, Cleveland, Ohio...today the John Glenn Research Center. There was neither a Public Relations nor Educational Services Office at any of the three NACA centers – Langley, Ames, or Lewis. All such activities were conducted out of Headquarters by one man, Walter Bonney.

NACA was a relatively small government agency established in 1915 to "supervise and direct the scientific study of the problems of flight with a view to their practical solution," and also to "direct and conduct research and experiments in aeronautics." They came into being as a rider to the Navy Appropriation Bill with funding of \$5,000 per year for five years. Once established, its value became known and backing and funding increased accordingly.

NACA didn't need a Public Relations Office because its "customers" were the aircraft industry who soon learned to rely upon the results of research programs as published in technical reports. These findings were used, as seen fit, in the production of aircraft for safe, economic air transportation. This partnership helped to make the United States the world leader in the manufacture, production, and sales of transport aircraft. Throughout the world, the public flew in Boeing, Douglas, Lockheed, etc. aircraft without the knowledge of NACA's contribution. But to go back a few years – then came the war.

NACA had to turn its attention to the development of aircraft for the military. Work was centered on the improvement of specific aircraft and their problems. Between December 1941 and December 1944, NACA had made studies and tests on 115 types of aircraft. In July 1944, there were 78 different types simultaneously under investigation. In 1943, Secretary of the Navy, Frank Knox stated that the United States was the first nation capable of vertical dive bombing, made possible through NACA research and that the Corsair, Wildcat, and Hellcat were possible only because they were based on fundamentals developed by NACA.

Following the war NACA continued its research with progress, in both the commercial and military fields, being directed greatly to the new jet propelled aircraft. Work was also being conducted in the field of rocket propulsion. Then came 1957 and Sputnik! There was a quantum change in the interest factor of the nation. Something was circling the earth every 90 or so minutes, going "beep, beep," We were taken totally by surprise! We learned that it was Russian and this carried with it a good bit of uneasiness. Congress established a new agency, the National Aeronautics and Space Administration, using the Headquarters and the three research centers of the NACA as the nucleus.

Public Affairs Offices were now established at the three centers. At Lewis, a person was hired to handle the press and I volunteered to handle the general interest and educational requests. Headquarters geared up too and in 1960, James Bernardo became Director, Educational Program Division. Considered the "Dean" of the Aerospace Education Workshop,

he brought to the NASA education program experience with the Civil Aviation Administration and the Federal Aviation Agency. We now had Headquarters leadership for educational programs and activities throughout the agency.

One of Jim's first actions was the establishment of the Spacemobile Program. As I recall, initially there were two lectures per vehicle. They were assigned presentation by Headquarters and in many cases, there were large distances to be driven in between. I am sure that some felt that they were more truck drivers than professional lecturers.

As interest and demand increased and as new centers were established some lecturers left the field and became Center Educational Programs Officers (CEPO's). I, too, became one; however, not having been a professional educator I was the one "unwashed" of the group. No problems came of this. We all had the drive and spirit of working together.

I had two ongoing struggles with Headquarters – one of which I never won. First, to my success – or "I don't care what you say, at Lewis my people will do it my way."

The vehicles used to carry a duwar of liquid oxygen, LOX, which was used to demonstrate the properties of cryogenics and the increased energy resulting from added LOX to burning fuel. When one of my vehicles would come to the Center for supplies and a fill of the duwar, the duwar was removed at the entrance gate and placed back aboard when the vehicle left the Center. The Safety Office refused to have that LOX in the vehicle and educated me as to the potential dangers of driving around with it. Should the vehicle be involved in an accident and the LOX be spilled – should LOX accidentally be spilled on asphalt say in a school year – and on and on, the results of which were not pretty, and LOUD! Chemists stated that we should substitute liquid nitrogen (LN2). Its great asset was that it was inert. Certainly, it could be used for cryo demonstrations because of its low boiling point, if an empty test tube was placed in a small beaker of LN2, in a short time enough LOX would be generated to do the LOX-fuel demonstration. We did just that. I told Headquarters what my demonstration teams were doing without LOX. Thinking back, the Good Lord was with us during the LOX period.

The second struggle, which I never won, involved the number of units assigned each Center. My seven state area, Ohio through Iowa, contained the largest student and teacher population of the Center's area. Yet, Manned Spacecraft, Houston had more vehicles than Lewis – I believe I had five. I compiled figures, I drew graphs, I made presentations based on the premise that our purpose and direction was to inform students, educators, and the general public. Assigned units should be on a per capita basis, not on the fact that one Center has a larger area to travel to meet a fewer number of people. I never won perhaps because even with fewer units we were able to reach more students, teachers, and the public throughout the years. We really scored high with summer workshops.