

EDUCATION

Need Education Reforms

National standards for scholastic competence are suggested as part of reforms necessary if the United States is to compete with Russia and Europe.

► A COMPLETE overhaul of education in the United States to make it qualitatively competitive with Russia and Europe was urged by Rear Adm. H. G. Rickover, chief of the Atomic Energy Commission's Naval Reactor Branch and assistant chief of the Navy's Bureau of Ships.

In a powerful indictment of the present educational system from grade school through college and graduate training, Adm. Rickover called for quality, not quantity, of graduates.

Launching of Soviet satellites, he told a conference on scientific education sponsored by the Thomas Alva Edison Foundation, Inc., meeting in Detroit, was "triumph of Russian education." The propaganda victory thus won by the U.S.S.R. should spark "drastic and long overdue reforms in utilizing the nation's intellectual capacities."

As Pearl Harbor showed that the U. S. could perform industrial miracles in a national emergency, so the Soviet's sputniks show the need for "educational miracles."

The successful Russian satellite program illustrates important facts. A modern totali-

tarian state can raise a limited sector of its economy to as high a standard as any country in the world. It can also devise an educational system shaped to the interests of the state and at the same time, induce all students to stretch their intellectual capacities to the utmost.

At present, Adm. Rickover charged, few American students at the age of 21 or 22 know as much after a four-year college course as most European secondary school graduates know at 18 or 19.

To remedy this, he urged establishment of uniform educational standards throughout the country. Since education is within the province of the states under our constitution, he suggested a private agency financed by all institutions of higher learning be set up to establish the standards.

National standards for the high school diploma, as well as for the scholastic competence of teachers, would be set by this agency. In this way, parents and local groups could tell whether or not schools were giving them a good return for their tax dollar.

Adm. Rickover also called for shortening the "general education" system to 14 years at most, and 12 to 13 years for brilliant children.

He said the Russians have built in record time an educational system that produces the trained professionals and technologists needed to achieve technological supremacy "day after tomorrow." The U. S. must be awakened to the dangers of its present educational system, and the prestige and material reward of professionals must be raised before this country can produce scientifically trained manpower competitive with the Russians.

"The rate of progress or decline of a country is so closely tied to the education" of its children that this rate depends on education, Adm. Rickover concluded.

Science News Letter, December 7, 1957

ASTRONOMY

Record Number Of Sunspots Seen

► THE HIGHEST number of sunspots in recorded history has been seen on the sun's face during 1957, the National Bureau of Standards has reported.

Experts at the NBS station at Fort Belvoir, Va., are betting the outbreak of dark areas on the solar disk will continue to rise, putting the peak of the current sunspot cycle into November or December, 1957. (See SNL, Nov. 2, p. 275.)

Still little understood, sunspots appear dark only in contrast to the sun's visible surface, and vary greatly in size from giants as much as 50,000 miles in diameter to very small specks only 500 miles across.

As far as can be learned, sputnik observations are yielding no direct information on sunspots.

The first sunspot of the current cycle, which takes about 11 years for completion, was seen in August, 1953. It was then expected that the maximum would be reached sometime after July 1, 1957, and this factor determined to a large degree the choice of this date as the start of the 18-month International Geophysical Year, or IGY.

The provisional sunspot count for October was 269.2, up from September's 244.

The "smoothed" sunspot number, the running mean for the middle of a yearly period, shows the total was still rising and had reached 181.4.

One of the first results of studies preparatory to the IGY was finding an increase in the number of cosmic rays after one of these flares. Also found for the first time was a relation between ionospheric physics and cosmic rays. The ionosphere is the layer of earth's atmosphere, some 50 to 300 miles in height, that reflects radio waves, making possible long-distance communications.

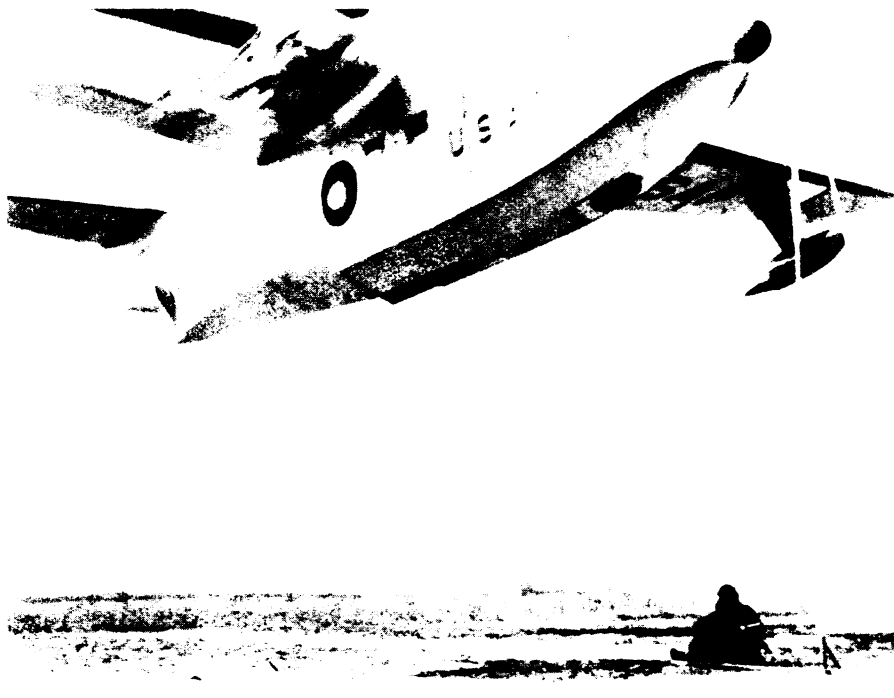
Science News Letter, December 7, 1957

● RADIO

Saturday, Dec. 14, 1957 1:45-2:00 p.m. EST

"Adventures in Science" with Watson Davis, director of Science Service, over the CBS Radio network. Check your local CBS station.

Dr. Martin Cummings, director of research service, Veterans Administration, will discuss "Mass Research in Medicine."



AIR RESCUE—A twin-engine Grumman amphibious aircraft, traveling more than 150 miles per hour at an altitude of 30 feet is shown as it snatches a man from the ground in a test of the rescue technique. The rescue kit, developed and designed by All American Engineering Co., Wilmington, Del., consists of a portable ground station and a winch, plus an engaging mechanism on the aircraft. A reel of nylon rope and a retractable arm with a hook retainer, which swings below the plane's tail, comprise the airborne unit.