

picture photography is one of Howard's chief hobbies, and he has completed a classroom film on "The Principles of the Cyclotron". He also enjoys hiking, mountain climbing and collecting minerals. At school Howard is president of the chemistry club and the Junior Statesmen of America. He's interested in the transmutation of elements, and has done research on viruses.

5 Edward Oakley Thorp, 16, of 25635 Pennsylvania Ave., LOMITA, ranks first in the senior class of 155 at Narbonne High School, from which he will be graduated in June. He's an aspiring physicist who in his essay reported on the mathematical methods he used to develop what he believes are two original formulas. One is to determine the relative positions of planets with relation to the earth and sun on given dates; the other is for finding the index of refraction of a prism. He has built a radio transmitter, a rocket car, developed increased power for model planes, and has shown mathematically that an average person could not jump six times as high on the moon as on the earth, as has been said, but only three times as high. Edward is a Boy Scout, and a member of the science, chess, philharmonic, and senior scholarship clubs at school. After graduation he will enroll at the University of California.

DISTRICT OF COLUMBIA

4 Walter Gilbert, 16, of 3309 35th St., N.W., WASHINGTON, is second in the senior class at Sidwell Friends School, and plans to go on to Harvard next fall to prepare for a career as a research chemist or physicist. He has been working to separate zirconium and hafnium in one step. This is a chemical problem that has not yet been solved. He points out that although the two metals are far apart with respect to atomic weights and numbers, their chemical properties are so similar that the only method of separation entails much time and several steps. Walter has built his own equipment for microphotography, and has also made excellent photos of sunspots seen through his own telescope.