A TYPICAL LAUNCH. Mike Gortych (left) presses launch-control switch while Jerry and George Wagner watch the model lift off. All three boys are members of the Wayne Skyhawks, and George is the club's vice president.

All Systems Are GO for Wayne Skyhawks

"Children have been toying with the principles of aerodynamics without knowing it ever since they learned to fold and fly a paper airplane," says Henry D. Hoogmoed, Passaic County 4-H agent.

A more ambitious and scientific approach to this seemingly universal pleasure is model rocketry, the new aerospace project now

Skyhawks Continued from page 2

one girl, begin by assembling simple commercially prefabricated single-engine models that can be completed in a few hours or days. After a while many are spending weeks or even months designing original rockets or customizing multistaged commercial ones which they test, revise, and retest until they check out "stable" in homemade wind tunnels.

First Astronaut

Some youngsters trace rockets with transmitters and others keep rocket-powered gliders aloft for 5 minutes at a time. The group launched its first astronaut recently — a white mouse who returned from an altitude of 3,500 feet without ill effects.

Some commercial rockets carry specially built still and movie cameras. The latter expose 10 feet of color film good for 50 seconds. "Enough," Montanye explains, "to see one whole flight."

All launching systems and pads are home built. The only cost to 4-H'ers is the engine. Rocket engines, which are ignited electrically, cost between 25 cents and $6. Larger engines and engine clusters can lift a model well over a mile.

Although the launches are spectacular and exciting — the club's exhibitions have drawn huge crowds at the last two 4-H fairs — "the speed and height of a successfully launched rocket is not the ultimate goal of the program," says Ken Montanye. "We begin by teaching youngsters how to construct and fly model rockets. However, we hope they will progress to the point where the can design and build models on their own."

"Safety is also an important factor," adc Mr. Hoogmoed. Youngsters in the 4- program are closely supervised by competen knowledgeable adult leaders who incorporat the rules of safety with subject-matte instruction to ensure a satisfying, informative and hazard-free experience.

In addition to developing an interest i photography, meteorology, climatology, an aerospace, the weeks and months of work an testing instill patience and determination.

As rocketeers explore topics like why satellites stay in orbit and what rockets push against in space, many begin to think seriously of ultimate careers in science engineering, and mathematics. In the mean time, they claim that what they are learning in the program has greatly improved their performance in science subjects in school. ★