LASER PROJECT WORKERS—These five members of the Dickinson High School Science Research Club, with the advice of Charles Bennett, physics and match teacher (third from right), are under way in a year-long project of building a helium-neon laser, as one of five such projects of the club. Members are, left to right, Doug Webb, Mary Jane Baldwin, J Moore, Richard Burns and Danny Foucheaux.

The LASER — Light For Space

Space Age Device To Be Built, Used By Students

By MACK WILDER

Fourth of Six Articles

DICKINSON — "You can't do it," was the first response last fall by physics and mathematics teacher Charles Bennett when he was asked by several students whether he thought they could build a gas laser.

The Dickinson High School students had conceived of the homemade laser as their project for the year in the Science Research Club.

Last Friday, however, Bennett said he would not now make such a remark, though it is still far from certain that they will be able to build the device. He said that he still doubts that they can do it, but is by no means sure, judging by their understanding of the theory and the difficulties they face in producing a laser, and making it work.

The members of the laser project, J Moore, Mary Jane Baldwin, Richard Burns, Doug Webb and Danny Foucheaux, have been researching the literature, locating supply sources, talking with laser experts from NASA, drawing plans and securing pledges of aid, and preparing the physics room's darkroom for use as a place to build the device.

The students hope to gather all the components at one time and assemble the machine quickly, so as to minimize the chances of contamination, which would ruin the project.

The laser, as they explained, is a device discovered before its possible applications were thought of. Practical uses for the beam of coherent light produced by the laser appear to be primarily in delicate surgery and in space communications since the light beam can be diffused by the atmosphere and blocked by any opaque object, such as buildings, or even clouds.

The device, which will resemble a neon tube suspended between posts, will produce, if successful, a beam of orange-red light which can be focussed to burn through objects. The project is expected to cost somewhat more than $150.00 to be raised by proceeds from the club members' work at concession stands during basketball games, as well as, if necessary, some support from the school administration.

Some of the work and materials will be donated. For example, a glass blower at Monsanto in Texas City will produce the glass tubes needed, to the plans provided by the club members.

The plans and many of the procedures to be used are from an article that appeared in the September issue of Scientific American magazine, which described the work and methods used by the author to construct a helium-neon laser at home for about $200. The author emphasized that the cost varies according to the ingenuity of the builder.

The local students have had the benefit of a visit from W.L. Thompson, an aerospace technologist in the Electromagnetic Systems branch, Instrumentation and Electronic Systems Division of Manned Spacecraft Center, who demonstrated a gas laser (valued at $9000) which he uses in his research.

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