

# SAN JUAN NM REGIONAL SCIENCE & ENGINEERING FAIR

## JUNIOR AND SENIOR DIVISION

### ABSTRACT & CERTIFICATION

TITLE: Do submarines need fins?

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School: Hermosa middle school

Grade Level: 6th

Type the Body of Your Abstract Here (250 Word Maximum)

Does the size of a submarine affect the speed? The purpose of me doing this is because I like submarines, and it looked interesting and fun. I figured that if I did this project, then other people would learn new things too. I wondered if the size of a submarine affects its speed. Doing this project, I thought that I would find the answer. Some people might think of becoming a submarine engineer in the future, so they could learn from my presentation and would know if the size of the sub made a difference in its speed. If we take the fins off the submerined then the model with fins will travel better because it has more control to go straight. The model submarine was built from recycled materials. The propellers were cut from the bottom half of a 2-liter bottle and a hole was drilled into it. Then with the remaining plastic, a small circle was cut to act as the washer. Then with a pin or needle, a hole was made in the middle of the washer. For the submarine, an adult needed to make a whole of the center. A paper clip was straightened and attached to chopsticks. They were fitted to the hole in the bottle. A rubber band was attached to another chopstick and was rotated to be hooked to the other end of the cap propeller.

1. The student independently performed all procedures as outlined in this abstract  Yes  No
2. This project is a continuation.  Yes  No
3. This project is being presented at  SJRSEF  NMJAS Paper Competition

I hereby certify that the above statements are correct and the information provided in the Abstract is the result of one year's research. I also attest that the above properly reflects my own work.

*Ana Villa*

Student's Signature

**2/22/21**

Date

