

ABSTRACT

Shinta Rap Sitinjak, IDN. 4183151037. The Effect of Using Student Worksheets with a STEM Approach on Vibrations, Waves, and Sounds Material On Learning Outcomes of Class VIII Students.

This research aims to determine the effect of using STEM-based student worksheets on vibrations, waves, and sounds material on learning outcomes of class VIII students. This research was quasi-experimental with a pretest-posttest control group design. This research was carried out from March to April 2024 at SMP N 3 Harian. This research uses a test instrument in the form of 20 multiple-choice questions and a non-test in the form of a student response questionnaire to STEM-based student worksheets of 15 questions. The sampling technique used in this research was random sampling consisting of 60 students, namely 30 students in class VIII B and 30 students in class VIII A. Hypothesis testing uses the t-test with research results $t_{\text{count}} > t_{\text{table}}$, (2.237 > 2.002). Based on the research results, it can be concluded that there is an influence on learning outcomes using student worksheets with a STEM approach on vibrations, waves, and sound material in class VIII.

Keywords: student worksheets, STEM approach, learning outcomes

