

ELEVENTH GRADE STUDENTS' DIFFICULTIES AND MISCONCEPTIONS ABOUT ENERGY AND MOMENTUM CONCEPTS

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ABSTRACT

Physics education researchers have revealed that students have some difficulties and misconceptions in basic physics concepts in mechanics including momentum and energy. The main aim of this study is to determine the 11th grade students' difficulties and misconceptions about Energy and Momentum concepts. In order to fulfill this aim, 21 multiple-choice questions related to momentum and energy was administered to 284 eleventh grade high school students from seven High Schools in the city of Balıkesir during the academic year 2013-2014. Analysis of results showed that high school students have many misconceptions related to momentum and energy concepts. For example, students have many problems with applying or connecting relationship between the conservation of energy and momentum in any given situation.

Key Words: Energy, momentum, 11th grade students, misconceptions.