



## Scientific Literacy Ability of Junior High School Students on Static Electricity and Electricity in Living Things

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DOI: <https://doi.org/10.46245/ijorer.v2i6.170>

### Sections Info

#### Article history:

Submitted: October 31, 2021

Final Revised: November 17, 2021

Accepted: November 28, 2021

Published: November 30, 2021

#### Kata Kunci:

Descriptive

Scientific Learning

Scientific Literacy Ability



### ABSTRACT

Junior high school students need to have good scientific literacy skills to have sufficient competence to compete in the current and future era of information and globalization. Science is basic knowledge covering products, processes, and applications. One of the science materials is static electricity and electricity in living things. This study aimed to determine the literacy profile of junior high school students on static electricity and electricity in living things. The subjects of this study were junior high school students. This research uses a descriptive research method. Data collection instruments consist of scientific literacy instruments. The results showed that junior high school students' average scientific literacy ability on static electricity and electricity in living things, in general, was low criteria. The achievement of scientific literacy ability in the first indicator to explain scientific phenomena obtained a score of 28.76% higher when compared to the second indicator evaluating and designing scientific investigations to obtain a score of 15.73%, while the third indicator to interpret data and scientific evidence obtained the lowest average score of 10.13%. In general, the criteria for scientific literacy in all indicators are very low.

### INTRODUCTION

Education has a significant role in preparing the next generation who will maintain the survival of a nation and state. Education can be obtained formally and non-formally. Formal education is education obtained through learning carried out in schools. Education in schools must equip students with the skills and competencies needed to live in their time. The goal of 21<sup>st</sup>-century education in Indonesia is to form a society with independent, willing, and capable individuals to create a happy, prosperous, and able to compete globally (Mardianti et al., 2020). The purpose of science education is to increase students' competence to meet their needs in various situations and conditions (Rewalino et al., 2020; Rini et al., 2021). With these competencies, students will have the ability to study further and live in a society in the 21<sup>st</sup> century. 21<sup>st</sup>-century abilities include the 4Cs, namely Creativity, Critical Thinking, Collaboration, and Communication (Zubaidah, 2018; Mijaya et al., 2019). One of the higher-order thinking skills that students need to have is scientific literacy skills. Science is a basic knowledge that includes products, processes, and applications (Retnowati et al., 2021). One of the materials contained in the 9<sup>th</sup>-grade science learning is static electricity and electricity in living things.

The Ministry of Education and Culture has released the results of the 2018 PISA study, which was attended by 79 countries. The scientific literacy ability of students in Indonesia scores 396, still far from the OECD average standard of 489 (Ain and Mitarlis, 2020). Scientific literacy is defined as an individual's ability to devote attention to science-related topics and scientific ideas as a form of individual reflection

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