

1 - Learning Science: Conceptual Understanding | Empirical

SP - (15031) - IDENTIFYING STUDENTS MISCONCEPTIONS OF THE QUANTUM NUMBERS THROUGH VERBAL AND PICTORIAL EXPRESSIONS

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Short Abstract

The study investigates students' misconceptions regarding 'quantum numbers' through both, their verbal descriptions and the pictorial representations of the atomic structure. Participants were 192 secondary students (grade 12, age 17-18) from Northern Greece. Results reveal the existence of a number of misconceptions concerning their verbal descriptions that can be categorized in seven distinct categories, as well as, four additional categories of misconceptions identified through the corresponding pictorial representations of the atomic structure.