

INVESTIGATING STUDENTS' CONCEPTIONS ON THE PARTICULATE NATURE OF MATTER

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This study determined the first and second year high school students' conception on the changes in the microscopic properties of solid, liquid and gas on the: (a) size of particles, (b) spaces between the particles, (c) speed of the particles, and (d) number of the particles during phase changing, cooling, heating and pressing of them. The sample of the study consisted of 339 high school students, 175 of them were first year (Grade 7) and 164 were second year. Data was collected through a questionnaire adopted from Ozmen and Kenan (2007). Results showed that conceptual understanding of the students in both levels about the particulate nature of matter is quite low; students appeared to have a fragmented, inconsistent, anomalous understanding about the microscopic properties of matter during phase change.