The recognition of the role of vocabulary in language learning has continued to grow in recent years. This study was designed to find out whether the difference between rote learning and semantic mapping was significant in learning new vocabulary items. One hundred and twenty Iran junior high school third-graders were selected, through availability sampling procedures, for the purpose of this study. They were divided into 3 equal groups of control, semantic mapping, and rote learning groups. In the semantic mapping group, they learned vocabulary by the semantic mapping strategy, and in the rote learning group, they learned vocabulary by the rote learning strategy. The participants in the control group did not receive any specific method of vocabulary teaching/learning. The results of the study, based on one-way ANOVA, indicated that the experimental groups outperformed the control group in vocabulary learning. Also, the results indicated that there was a significant difference between rote learning and semantic mapping strategies, with the latter strategy overriding the former. It could, thus be, concluded that semantic mapping can be used as an efficient method for teaching vocabulary.