The initial purpose of this experiment was to determine if added levels of auditory and visual stimuli during study time (rehearsal) affect the level of retention of new materials. A secondary purpose of this experiment was to determine whether visual or auditory stimulus during rehearsal had a greater effect on retention. Rehearsal was defined as the time period during which subjects read the nonfiction passage. Retention was defined as the test score. Subjects were given a series of five nonfiction reading passages. Subjects had three minutes to read the passages and during this time different stimuli were presented depending on the trial. Students then covered the reading and had two minutes to answer questions regarding the reading. The same stimulus presented during rehearsal (reading) was playing during the retention (test). The first trial had no added stimulus (silence) and was used as the control. Subjects during the control had an average test score of 60.45%. Subjects with all other stimuli scored higher with the audio stimuli without words having the highest average at 69.77%. When comparing visual verses audio stimuli, the audio scores were higher with an average of 69.09%. The results indicate that subjects were able to retain more information during all the trials in which stimuli were presented than in the control. The auditory stimulus with no words had the highest test scores therefore showing the most retention. This research could be used in various ways in the classroom and at home to optimize student retention during rehearsal.