The purpose of this study was to find out the effect of embossed picture technique when used in teaching reading to the pupils with hearing impairment. The study was guided by Piaget’s theory of human mental development. The study adopted an experimental design. The study was carried out at Kambui School for the hearing impaired located on Githunguri- Ruiru road in Kiambu District, Githunguri Division, Ngewa zone, 3 kilometers off Kwa-Maiko centre. The school was chosen since it caters for all categories of pupils with hearing impairment from nursery to class eight. The school also admits pupils from all over the country. Pupils were assigned randomly to the experimental and control groups. Each group consisted of 9 pupils totaling 18. Data were collected from both experimental and control groups for a period of 6 weeks. Criterion reference test (CTR) was used as a pre-test and post-test for the purpose of data collection. Non-parametric tests such as the Mann-Whitney test and the Wilcoxon sum of rank test were used to test the significant difference in performance in reading of pupils with hearing impairment taught with embossed picture technique and those taught with “look and say” method. To determine if there was any significant effect of the degree of hearing loss on performance of pupils with hearing impairment in reading, and the difference in performance of pupils of different ages when taught with embossed picture technique, the Kruskal-Wallis one-way Analysis of Variance (ANOVA) which takes care of small samples were used with the different degrees of hearing loss and the different ages as factors. The results showed that there is a high statistical significant difference between pupils taught with embossed picture technique and those taught with the look and say method. The results revealed that there is no significant age effect on reading performance of pupils with hearing impairment of different ages taught with embossed picture technique. Finally, the study revealed that there is no significant performance difference in reading of pupils with hearing impairment at different degrees of hearing loss when taught with embossed picture technique.