The primary objective of this study was to investigate the challenges faced and opportunities available in the teaching and learning of Environmental Education in secondary schools in Kenya using Ruiru District in Central Province as a case study. This was achieved by analysing the secondary school syllabi for selected environment related subjects, namely biology, chemistry, geography and agriculture to establish the elements of EE infused therein. The methods used to teach these elements, the preparedness of teachers to handle them, availability of teaching and learning resources as well as the attitudes of both teachers and students towards EE were also investigated. The target population was the 15 secondary schools in Ruiru district which was a division at the time of the study. A sample of 150 form three students was taken from five randomly selected schools in the division together with 20 teachers of environment related subjects making a total of 170 subjects. Data were collected using questionnaires, attitude scale tests and content analysis of the secondary school syllabi of the selected EE related subjects. Data from questionnaires and attitude scale tests were coded then scored for analysis while data from content analysis of the selected subject syllabi were summarised in tables to show the particular EE related topic and the EE objectives therein. The results are presented in text and tabular form and analysed by use of percentages, means and frequency tables. The findings of the study established that though EE is adequately incorporated in the secondary school syllabi of subjects studied; various challenges are faced by the teachers in the teaching of EE elements in these subjects. These challenges include, fragmentation of EE themes in the various subjects, inadequate instructional materials, inadequate training of teachers to handle EE related topics in their subject areas and over-reliance on the lecture method of teaching among others. However, attitudes of both teachers and students to EE were found to be highly positive with 90% of teachers and 98% scoring above the mean score in the attitude Scale tests. From the research findings, major recommendations such as adequate provision of instructional materials, a review of pre- and in-service EE programmes for teachers as well as regular monitoring of EE programmes among others were made. The findings of the study and the accompanying recommendations will no doubt prove invaluable to curriculum developers and policy makers in the country.