Physical resource management is a crucial aspect of the overall management of a school. The physical resources play a key role in the attainment of the school's intended objectives. A direct correlation exists between quality of school facilities provided and performance in National examinations. This study assessed the impact of management of physical resources on KCSE performance. A descriptive survey design was used. The research instruments were questionnaires for the head teachers, teachers and students. An interview schedule for the District Education Officer (DEO) and an observation schedule to assess the status of physical facilities in public secondary schools in Kisii Central District were used. The target population comprised of head teachers, teachers and students of all the 56 public secondary schools in Kisii Central District. Stratified random sampling was used to select 15 head teachers, convenience sampling to select 60 teachers and systematic random sampling to select 300 students from the 15 secondary schools. Validity and reliability of the research instruments was determined through pilot-testing before use. The study found out that due to inadequate funding, majority of the schools suffered congestion in facilities, a poor learning environment, lack of adequate teaching and learning resources, limited syllabus coverage, and limited teacher-student interaction. The study also found out that practical oriented subjects were worst affected considering that they are resource intensive. The study concluded that school managers need innovative skills in terms of acquisition, utilization and maintenance of physical and material resources. For effective management of the scarce physical and material resources, participatory management through delegation and established policies were found to be essential to ensuring that school resources are well managed to achieve school objectives. The study recommended that the government increases funding to schools, strengthens in-service training of school administrators in all aspects of resource management and to monitor policies that facilitate effective, and efficient management of physical and material resources.