

- **Genetic engineering has completely transformed the ability of human beings to create genetic change. In the space below, summarize the science of genetic engineering by addressing the following:**
 - The limitations of artificial selection & traditional breeding that prompted the development of genetic engineering.
 - The roles of each of the following: restriction enzymes, restriction sites, sticky ends, DNA ligase.
 - Summarize the purpose and necessity of a vector in genetic engineering and provide descriptions of different vectors and how they work.
 - Summarize the purpose and necessity of a marker in genetic engineering and provide descriptions of different markers and how they work.
 - Explain how recombinant DNA can be controlled using the promoters and operators of operons.