

Genetic engineering

What is genetic engineering?

Genetic engineering

Give an example of genetic engineering in medicine.

Genetic engineering **Higher tier**

What does a restriction enzyme do?

Genetic engineering **Higher tier**

What are sticky ends?

Genetic engineering **Higher tier**

What does ligase do?

Genetic engineering **Higher tier**

What is a vector in genetic engineering?

Genetic engineering **Higher tier**

Give the main stages of genetic engineering in order.

Bacteria given the human gene for insulin, so they make human insulin.

A process which involves modifying the genome of an organism to introduce desirable characteristics.

Short, unpaired strands of DNA left at the ends of a cut, which join with complementary sticky ends.

Cuts DNA at a specific base sequence.

A carrier, such as a plasmid or virus, used to insert a gene into another organism's cells.

Joins pieces of DNA together, for example the gene and the vector.

Cut out the gene (restriction enzyme), cut the vector (same enzyme), join with ligase, insert the vector into the target cells.