Subject	**Science**
Unit/Topic	Year 9 Genetics and Inheritance

Key Vocabulary	Definition
Continuous data	Can take any value and can be measured, e.g height.
Discontinuous data	Can be counted, often categorical, e.g eye colour.
Inherited variation	Differences between individuals due to genetic information, e.g hair colour.
Environmental variation	Differences between individuals due to factors in their surroundings, e.g hair length.
DNA	The molecule that carries an individual's genetic code.
Chromosome	Strands of DNA, in humans they come in pairs, 23 pairs.
Gene	Section of DNA which controls a characteristic by coding for a protein, e.g eye colour gene.
Nucleus	Part of a cell that contains genetic information.
Allele	Variations of a gene, e.g blue eyes or brown eyes.
Dominant allele	Always expressed only if the individual only has one copy.
Recessive allele	Only expressed if the individual has two copies of it.
Gamete	Sex cell that carries half the genetic information, e.g sperm in males, egg cells in females.
Genotype	The alleles that an individual has.
Mitosis	Cell division that creates 2 clone daughter cells.
Meiosis	Cell division that creates 4 gamete cells.
Asexual reproduction	Reproduction involving one parent that results in a clone.

Sexual reproduction	Reproduction involving 2 parents, that results in genetically different offspring.
Cloning	Producing a genetically identical organism.
Evolution	Change of inherited characteristics within a population over time, which may result in a new species.
Natural Selection	Theory that the best-adapted individuals survive longer, and so reproduce and pass on their advantageous alleles.
Inheritance of acquired characteristics	Theory that characteristics that are used more become bigger and stronger and the improvement gets passed on.
Selective breeding	Process where organisms with desired characteristics are chosen as parents to improve crops and livestock.
Genetic engineering	Process which involves transferring genetic information from one organism to another.