















**KNOWLEDGE ORGANISER**  
**BIG IDEA: GENES**  
**TOPIC: INHERITANCE**

Key Word	Definition
inherited characteristics	Features that are passed from parents to their offspring
DNA	A molecule found in the nucleus of cells that contains genetic information
chromosomes	Thread like structures containing tightly coiled DNA
gene	A section of DNA that determines an inherited characteristics
allele	different versions of the same gene

**Examples of inherited characteristics**

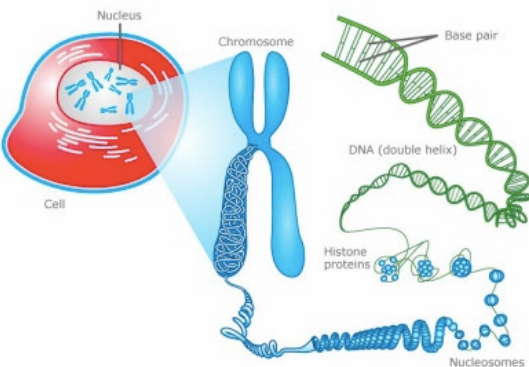
Cleft Chin		No Cleft	
Widow's Peak		No Widow's Peak	
Dimples		No Dimples	
Brown/Black Hair		Blonde Hair	
Freckles		No Freckles	
Brown Eyes		Gray/Blue Eyes	
Free Earlobe		Attached Earlobe	

Inherited characteristics are the result of genetic information, in the form of sections of DNA called genes, being transferred from parents to offspring during reproduction.

The DNA of every individual animal is different, except for identical twins

There is more than one version of each gene e.g. different blood groups (A,B,AB,O)

It is the inheritance of these different versions that lead to different characteristics



Chromosomes are long pieces of DNA, found in the nucleus of cells, which contain many genes.

Gametes (egg or sperm in animals) carrying half the total number of chromosomes of each parent, combine during fertilisation