

| Reproduction | | |
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| 1 | Sexual reproduction | forms non-identical offspring, requires gametes from two parents |
| 2 | Asexual reproduction | forms identical offspring - one parent |
| 3 | Gametes | sex cells (sperm/egg) |
| 4 | Meiosis | cell division to form gametes cells are non-identical and are haploid |
| 5 | Haploid | a sex cell (gamete) that contains one set of chromosomes |
| 6 | Mitosis | cell division to produce identical cells |
| 7 | Zygote | a fertilised egg cell |
| DNA | | |
| 8 | DNA | carries genetic material |
| 9 | Double Helix | the shape of the DNA molecule with two strands twisted together in a spiral |
| 10 | Chromosome | a strand of DNA humans have 23 pairs |
| 11 | Female sex chromosome | XX |
| 12 | Male sex chromosome | XY |
| 13 | Genome | the complete set of DNA found in an organism |
| Inheritance | | |
| 14 | Gene | section of DNA |
| 15 | Allele | different forms of the same gene |
| 16 | Dominant | an allele that always expresses itself |
| 17 | Recessive | must have two copies of a recessive allele for that allele to be expressed |
| 18 | Homozygous | same alleles |
| 19 | Heterozygous | different alleles |
| 20 | Genotype | the alleles that an organism has for a particular characteristic |
| 21 | Phenotype | visible characteristics |
| 22 | Punnet Square | used to determine probability of inherited characteristics |
| 23 | Inherited disorders | caused by inheritance of certain alleles |
| 24 | Polydactyly | having extra fingers and toes, caused by a dominant allele |
| 25 | Cystic Fibrosis | a disorder of cell membranes caused by a recessive allele |

| Evolution | | |
|-----------|--------------------|--|
| 26 | Variation | differences between individuals of the same species |
| 27 | Evolution | the change of inherited characteristics within a population over time through natural selection |
| 28 | Natural selection | i) variation within a species ii) those best adapted survive iii) reproduce and pass on genes iv) offspring inherits characteristics, process repeats |
| 29 | Fossil record | provides evidence for the theory of evolution |
| 30 | Fossils | 'remains' of organisms from millions of years ago |
| 31 | Evolutionary tree | shows how closely related different species are |
| 32 | Extinction | no remaining individuals of a species alive |
| 33 | Resistant bacteria | evolution in bacteria has led to antibiotics not being able work |
| 34 | MRSA | an example of a resistant bacteria |
| 35 | Classification | way of grouping organisms Kingdom, phylum, class, order, family, genus and species. King Phil Came Over For Good Spaghetti |

| Artificial processes | | |
|----------------------|------------------------------------|---|
| 36 | Selective breeding | i) decide characteristics ii) choose parents that show these characteristics iii) choose the best offspring to produce the next generation iv) repeat |
| 37 | Genetic engineering | artificial transfer of genetic information from one donor cell to another |
| 38 | Genetic engineering key steps (HT) | i) selection of the desired characteristic ii) gene responsible for the characteristic is 'cut out' iii) gene is transferred and inserted into another organism iv) replication of the modified organism |
| 39 | Genetically modified | describes a cell or organism that has had its genetic code altered by adding a gene from another organism |