## Genetic Diagrams.

0

Remember you have two genes for each characteristic and different versions of the same gene are called alleles.

In genetic diagrams letters are used to represent or show the alleles. Alleles are either dominant or recessive. Dominant alleles are shown as a capital letter (e.g. 'C') and recessive alleles are shown as a small letter (e.g. 'c'). The dominant allele always overrules the recessive allele.

If the two alleles for a particular gene (e.g. hair colour) are the same then the organism is homozygous. The pairs of alleles could be CC or cc.

If the **two alleles** for the same gene are **different** then the organism is **heterozygous**. The pair of alleles can only be **Cc**.

To display a **dominant** characteristic the organism can either be **CC** or **Cc**. To display a **recessive** characteristic the organism must have **both recessive alleles cc**.

-because they always carry one dominant

Q1. Why can't a heterozygous organism ever display a recessive characteristic?

Genetic diagrams Cross breeding a normal hamster with a crazy hamster.

The gene that makes the hamster crazy is recessive (h) so the crazy hamster must have the genotype hh.

hh

The gene that makes the hamster normal is dominant (H). The normal ham ter claid have the genotypes HH or Hh. Parents phenotype : (characteristic) North D te S Crazy

Parents phenotype : (characteristic)

Parents genotypes: (alleres)

Gametes genotypes: (sperm or egg)

Offspring's genotype:

Offspring's phenotype: - all the offspring are Norma, but they all carry the fecessive allele, so although normal they are also called 'carriers'.

H