

## Science 1.9 AS 90948 Genetic Variation

### Linking Genetics terms: DNA, Alleles and Genes

**Success Criteria: complete each level before moving onto the next**

- **Basic:** give 4 correct definitions
- **Proficient:** link a difference in DNA to different alleles
- **Advanced:** link a change in the base sequence to differences in alleles in specific genes



Cornish Rex Cats have a short curly coat of fur that is the result of a **recessive** allele (r). Normal length fur is produced by the **dominant** allele (R). Any cat with the **genotype** RR or Rr will have the **phenotype** of normal length fur.

Explain the relationship between chromosomes, genes, alleles, phenotype, genotype, dominant, recessive and the molecule DNA.

|  |                      |
|--|----------------------|
| Chromosomes are...   |                      |
| and are made of <b>DNA</b> which contain...                      |                      |
| Lengths of which form a <b>gene</b> which...                     |                      |
| and different varieties are called <b>alleles</b> for example... |                      |
| and the differences in alleles are due to....                    |                      |
| A pair of which form a <b>genotype</b> that can be .....         | (RR)<br>(Rr)<br>(rr) |
| Which can produce different <b>phenotypes</b> such as....        |                      |

