

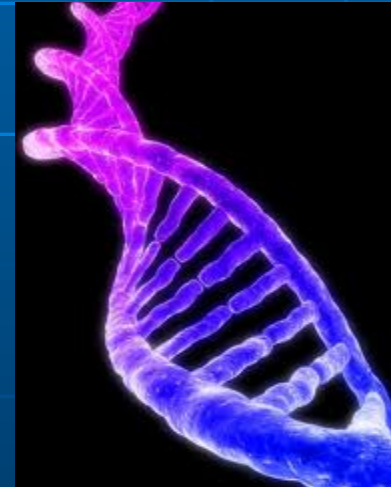
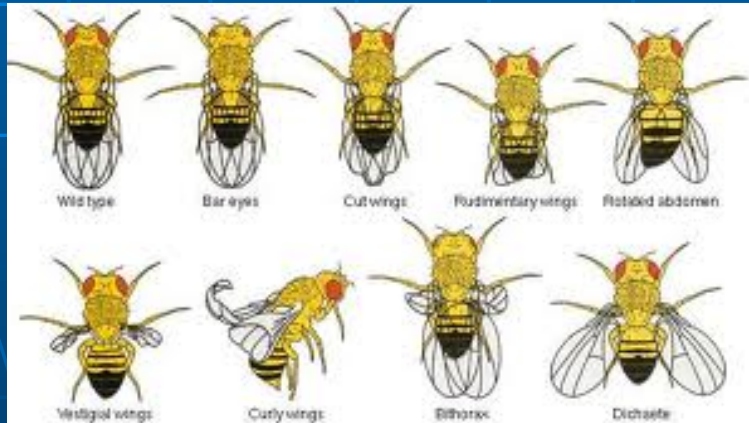
Genes & Variation

Essential Questions:

- What are the main sources of genetic variation in a population?
- What determines the number of phenotypes for a given trait?

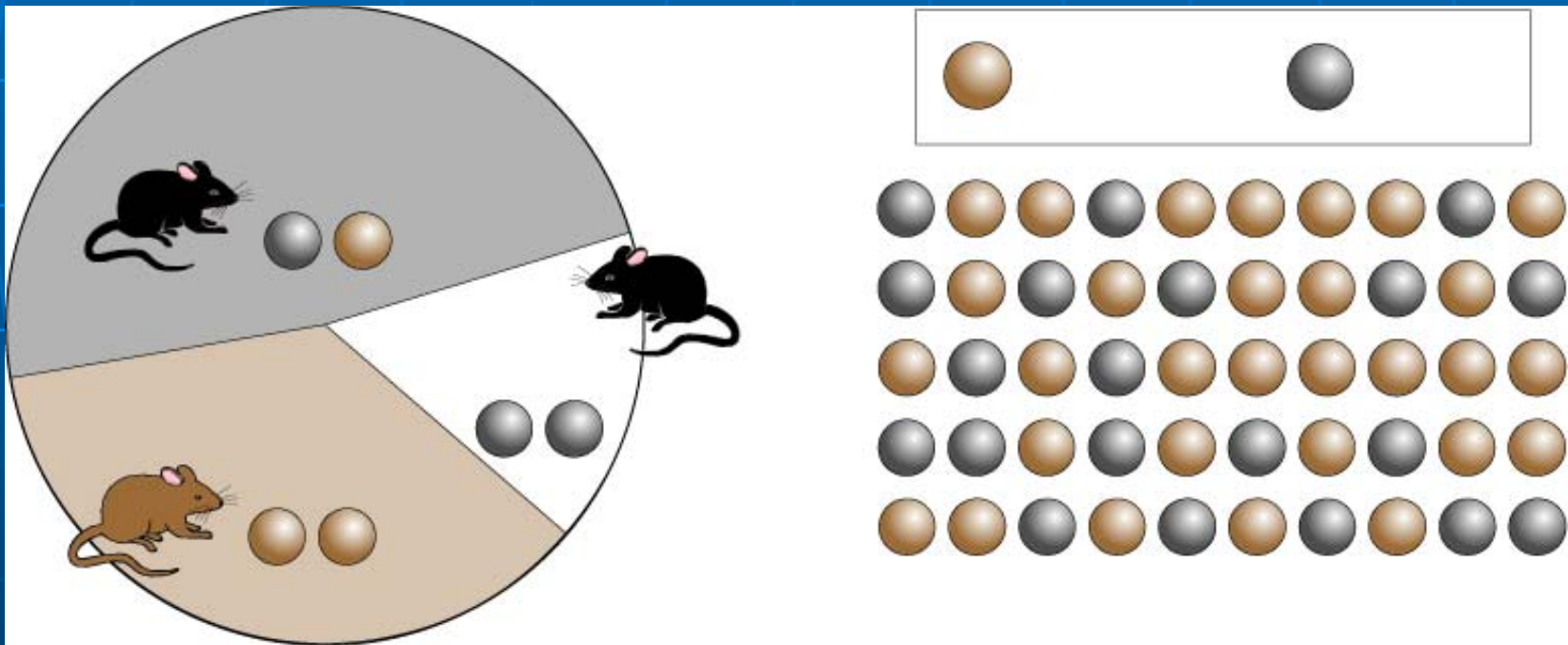
■ Darwin's ideas revisited

- D. – no genetics knowledge
- Now genetics & molecular biology tell us
 - how *variation* appears
 - how nat. selection acts on variation



■ Gene pools

- *alleles* for each heritable trait
- *Relative frequency* of allele



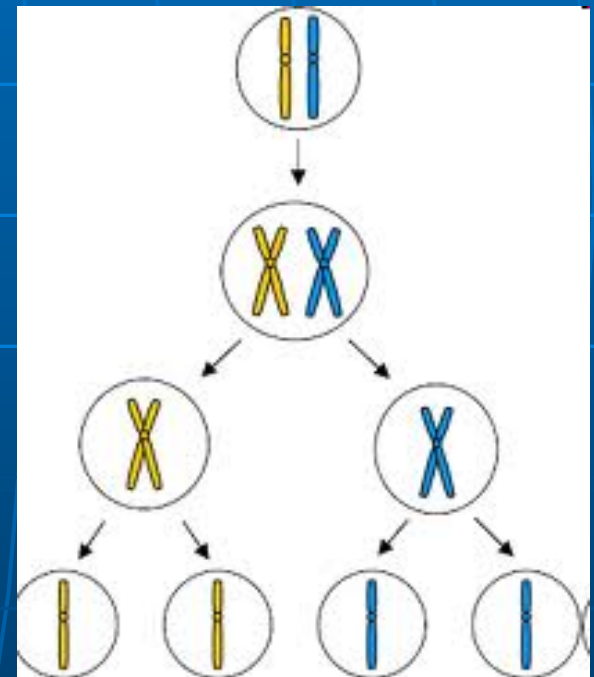
- Sources of genetic variation
 - Mutations
 - Gene shuffling



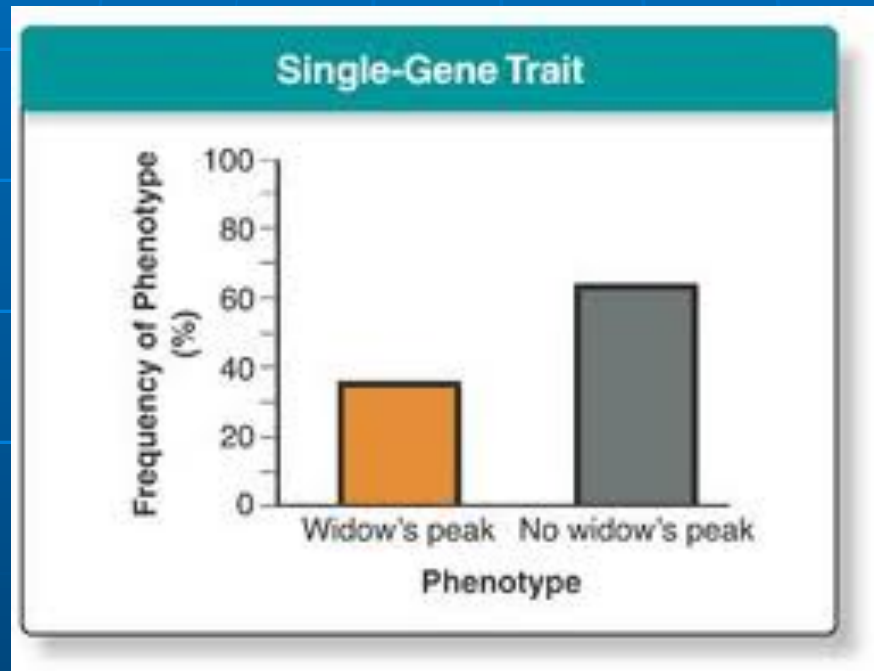
GRUESOME GENETIC MUTATIONS

Occasionally, they can be kinda cute.

motifake.com



- Single-gene & polygenic traits
 - Single-gene traits (w/ 2 alleles)
 - 2 phenotypes only



- Polygenic traits
- “bell curve” graph

