

KEY FACTS

- 1. **VARIATION** exists in population (from mutations and sexual reproduction)
- 2. **COMPETITION** for limited resources
- 3. **SURVIVAL** of the best-adapted individuals
- 4. Better-adapted individuals **REPRODUCE** more → pass on advantageous alleles
- 5. Over generations, frequency of advantageous alleles **INCREASES**
- Evidence: fossil record, DNA comparisons, antibiotic resistance, comparative anatomy
- Speciation: isolation → independent evolution → cannot interbreed → new species

KEY TERMS

Natural selection	Better-adapted individuals survive and reproduce → allele frequencies change
Adaptation	Inherited feature improving survival/reproduction in a specific environment
Speciation	Formation of new species through reproductive isolation + genetic divergence

■ **EXAM TIP:** 5 steps — need ALL 5 for full marks: **VARIATION** → **COMPETITION** → **SURVIVAL** → **INHERITANCE** → **FREQUENCY INCREASES**. "Organisms adapt" is wrong — mutations are random.