

Variation, evolution, selective breeding recall questions

1. Use the words individual, population and characteristics to explain what variation means. **Variation is the differences in characteristics of individuals within a population.**
2. What three things can cause variation and write down one example of a characteristic caused by each of these? **Genetic – blood group, conditions of development – plant height, combination of genes and environmental conditions – maximum height an animal can grow to**
3. What (very rarely) can cause a new phenotype? **Genetic mutation**
Why might this relatively quickly become common in a species? **If the new phenotype is suited to environmental change.**
4. What does the theory of evolution by natural selection state? **All species of living thing have evolved from simple life forms that first developed three billion years ago,**
5. To be the same species members must be able to **interbreed** and produce **fertile** offspring.

Variation, evolution, selective breeding application questions

1. What do humans do in selective breeding? **Choosing parents with desired characteristics, breeding these together, from the offspring choosing those with the desired characteristic and breeding these together.**
2. Say three characteristics humans might selectively breed apples for. **Disease resistance, larger size, sweeter taste.**
3. Say three characteristics humans might selectively breed sheep for. **Higher milk yield, higher meat yield, sturdy**
4. Say one characteristic that is useful to selectively breed into plants. **Disease resistance, larger flowers, unusual flowers.**
5. Say one characteristic that is useful to selectively breed into dogs. **Gentle nature, intelligence, to not moult**
6. Say one problem that can happen with selective breeding of animals. **Reduction in the gene pool leading to higher chance of inherited disease.**