Year 8 Science: Darwin, Wallace, new species and common ancestry

Name: _____ Date: _____

Try these without your notes first, then check the answer key.

Practice

1. Why was it important that Wallace reached the same idea as Darwin?

2. A rabbit population lives where winter snow now lasts longer. Rabbits with whiter fur are seen less by hawks. What happens to the population over many generations?

3. Can a single rabbit evolve whiter fur? Explain.

4. Kea and kākā look alike but cannot interbreed. What does this tell you about where they came from?

5. A fossil has broad, flat, ridged teeth and was found among fossil leaves. What did it probably eat?

Fix the mistake

6. Correct this statement: "The moths turned dark so they could hide on sooty trees."

7. Correct this statement: "Humans evolved from chimpanzees."

8. Correct this statement: "Darwin came up with natural selection completely on his own."

9. Correct this statement: "Evolution happens to an animal during its lifetime."

Answer key (for parents and tutors)

1. Why was it important that Wallace reached the same idea as Darwin?
   Two people reaching it independently from different evidence made it far more convincing.
2. A rabbit population lives where winter snow now lasts longer. Rabbits with whiter fur are seen less by hawks. What happens to the population over many generations?
   Whiter rabbits survive and breed more, so white fur becomes more common in the population.
3. Can a single rabbit evolve whiter fur? Explain.
   No; an individual's inherited fur colour does not change, only the population's mix changes over generations.
4. Kea and kākā look alike but cannot interbreed. What does this tell you about where they came from?
   They are separate species that evolved from a shared ancestor.
5. A fossil has broad, flat, ridged teeth and was found among fossil leaves. What did it probably eat?
   Plants, because flat ridged teeth grind tough leaves.
6. Correct this statement: "The moths turned dark so they could hide on sooty trees."
   No moth changed colour; dark moths already existed and survived better, so their share of the population grew.
7. Correct this statement: "Humans evolved from chimpanzees."
   Humans and chimpanzees share a common ancestor; neither evolved from the other.
8. Correct this statement: "Darwin came up with natural selection completely on his own."
   Wallace reached the same idea independently, and their work was presented together in 1858.
9. Correct this statement: "Evolution happens to an animal during its lifetime."
   Evolution is a change in a population's inherited traits across generations.