7 Natural selection and evolution – Part 1

Name: _____ Class: _____ Date: _____

Vocabulary

Write each word three times.

English	**Write it 3 times** (English)		
Evolution			
natural selection			
variation			
Fitness			
adaptation			
artificial selection			

Recall

You have likely met Darwin's big idea already:

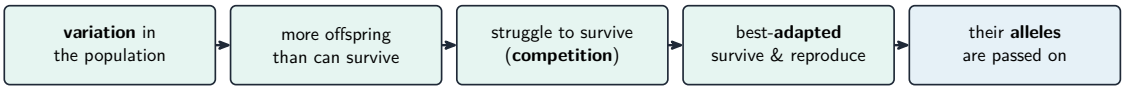
- Living things vary – no two are exactly alike.
- Those best suited to their environment tend to survive and have more offspring.
- Farmers breed animals and plants for the features they want.

This sheet lines up how evolution works. Each idea has a short worked example.

New ideas

1 Natural selection

Evolution is a change in a population's inherited traits over generations. Its main cause is **natural selection** :



over many generations the population becomes better adapted

- individuals show **variation** ,
- some variations survive and reproduce better,
- those helpful traits become more common over time.

2 Fitness and adaptation

Fitness means reproductive success – how many offspring an individual leaves, not how strong it is. A well-suited trait is an **adaptation** .

3 Selection changes populations

Over many generations, natural selection makes helpful traits common and harmful ones rare, reshaping the whole population.

4 Artificial selection

In **artificial selection** , humans (not nature) choose which individuals breed – for bigger crops, faster horses, or friendlier dogs.



Watch out: "fitness" in biology means **reproductive success**, not being strong or healthy. An animal that survives but leaves no offspring has zero fitness.

Practice

Try these in order. The methods are all above.

2.1 State the three key parts of natural selection. [3]

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2.2 State what "fitness" means in biology. [1]

2.3 State the difference between natural selection and artificial selection. [2]

2.4 Explain why a helpful trait becomes more common in a population over time. [2]

2.5 Give one example of a trait produced by artificial selection. [1]

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