

17 Natural selection – Part 2

Name: _____ Class: _____ Date: _____

Vocabulary

Write each word three times.

English	Write it 3 times (English)
natural selection	
adapted	
stabilising	
directional	
disruptive	
bottleneck effect	

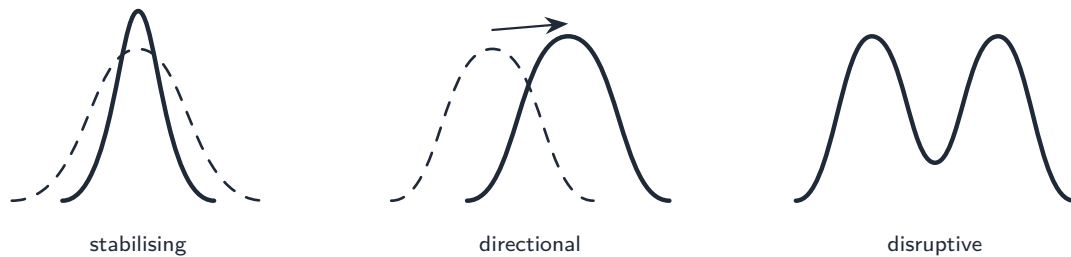
Recall

Living things produce more offspring than can survive, so they must compete. The best-suited survive and pass on their alleles.

New ideas

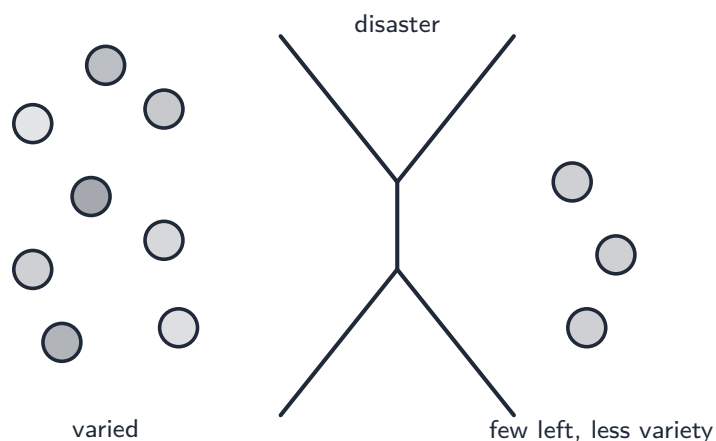
Read these first, then do the Practice.

■ 1 Natural selection and its types



In **natural selection**, the best **adapted** individuals survive and reproduce. It comes in three forms: **stabilising** (favours the average), **directional** (favours one extreme), **disruptive** (favours both extremes).

■ 2 A bottleneck



The **bottleneck effect** is a sudden fall in population size that leaves few survivors, reducing the variety of alleles.

Watch out: stabilising selection favours the *average*; directional shifts the mean towards *one* extreme; disruptive favours *both* extremes. A bottleneck *reduces* genetic variety, because the few survivors carry fewer alleles.

Practice

Try these in order.

17.6 In *natural selection*, which individuals are most likely to survive?

[1]

17.7 Which selection type favours the *average* and removes extremes? [1]

17.8 Which selection type shifts the mean towards one extreme? [1]

17.9 What does *disruptive* selection favour? [1]

17.10 What does the *bottleneck effect* do to genetic variety? [1]

17.11 Challenge. Pollution darkens the tree bark where a moth species rests. Predict which type of natural selection acts on moth colour, and explain. [2]
