

17 Variation – Part 1

Name: _____ Class: _____ Date: _____

Vocabulary

Write each word three times.

English Write it 3 times (English)

Variation

discontinuous

variation

continuous variation

environmental factors

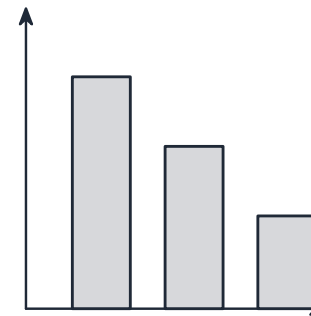
Recall

Variation means the differences between individuals. It comes in two patterns and has three possible causes.

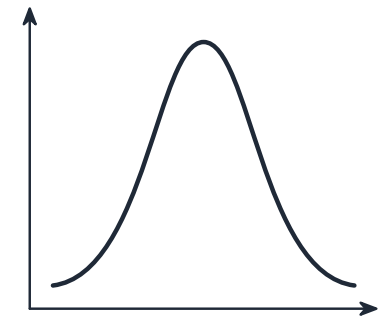
New ideas

Read these first, then do the Practice.

1 Two patterns



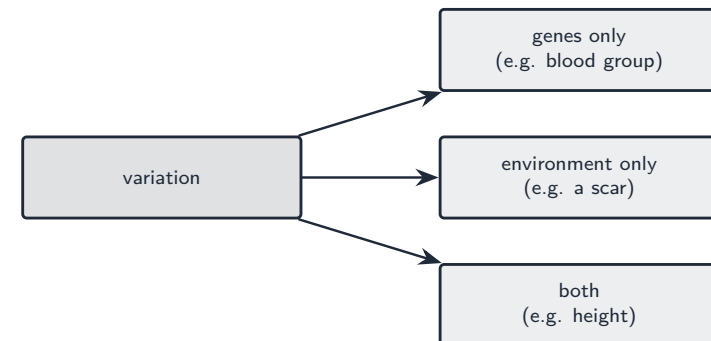
discontinuous



continuous

- **discontinuous variation** – clear separate groups (like blood group), set by one or a few genes;
- **continuous variation** – a smooth range (like height), set by many genes plus the environment.

2 Three causes



A feature can be set by genes only, by **environmental factors** only, or by both together (most features, like height).

Watch out: discontinuous variation = separate groups (one or a few genes, e.g. blood group); continuous variation = a smooth range (many genes *plus* the environment, e.g. height). Most features depend on *both* genes and environment.

Practice

Try these in order.

17.1 What does *variation* mean? [1]

17.2 Is blood group *discontinuous* or *continuous* variation? [1]

17.3 Is height *discontinuous* or *continuous* variation? [1]

17.4 What controls continuous variation? [1]

17.5 Give one feature set by *both* genes and environment. [1]

17.6 Challenge. Two genetically identical plants are grown, one in bright light and one in shade, and they end up different heights. Explain what this shows about height. [2]
