

Do Now

		A	B	C
1	Differences in characteristics within a species is called...	Variation	Evolution	Natural Selection
2	Which is an example of inherited variation?	Body mass	Blood group	Hair colour
3	Which is an example of environmental variation?	Tattoo	Blood group	Hair colour
4	Where is the genetic information found in a cell?	Mitochondria	Nucleus	Ribosome
5	Which is an example of both types of variation?	Body mass	Blood group	Hair colour

I Do

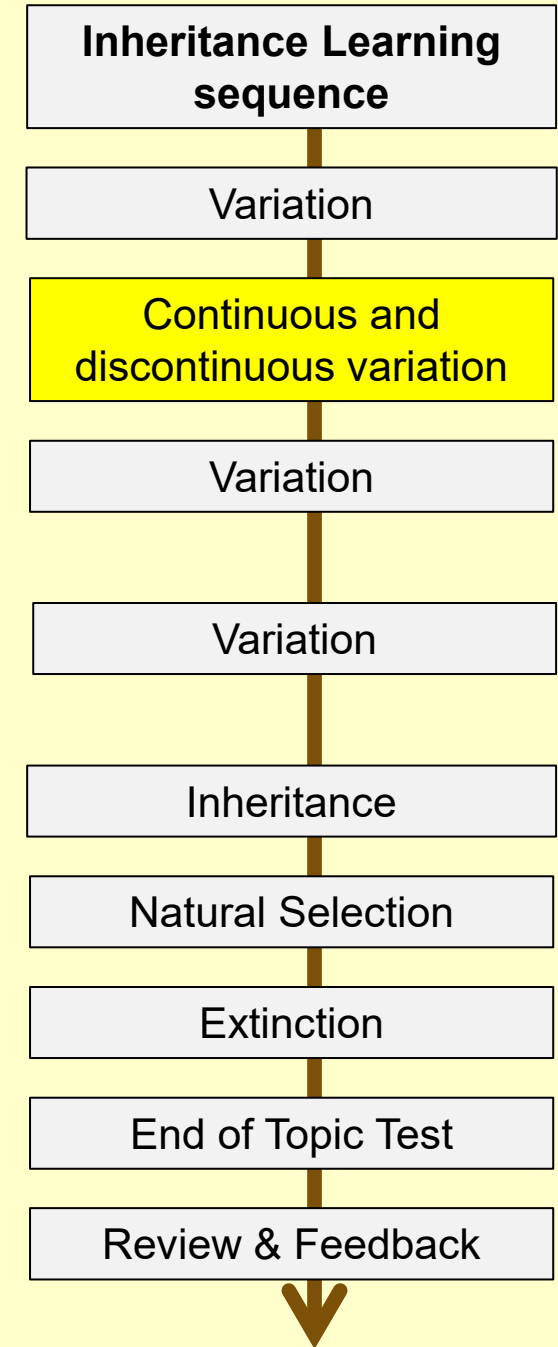
We Do

You Do

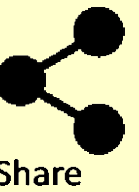
Biology: Continuous and Discontinuous Variation

Tier 3 Vocabulary:	Definition:
Discontinuous variation	Characteristics with values that do not overlap – they can only be one thing or another e.g. blood type
Continuous variation	Characteristics that can be any of a large range of values that overlap e.g. height
Bar chart	A chart with gaps between bars to show discontinuous data
Histogram	A chart with no gaps between bars to show continuous data

Grade	Outcomes
<i>KNOW</i>	State what is meant by continuous and discontinuous data.
<i>APPLY</i>	Use examples to describe the difference between continuous and discontinuous variation.
<i>ANALYSE</i>	Choose and justify the most appropriate graph to display examples of variation data.



Continuous Variation



- 1) Human height is an example of continuous variation.
- 2) It ranges from that of the shortest person in the world to that of the tallest person. Any height is possible between these values. So it is continuous variation.
- 3) For any species a characteristic that changes gradually over a range of values shows **continuous variation**.



Examples of such characteristics are:

- a) height
- b) weight



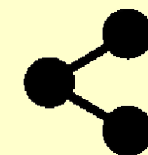
I Do

We Do

You Do

State what is meant by continuous and discontinuous data.

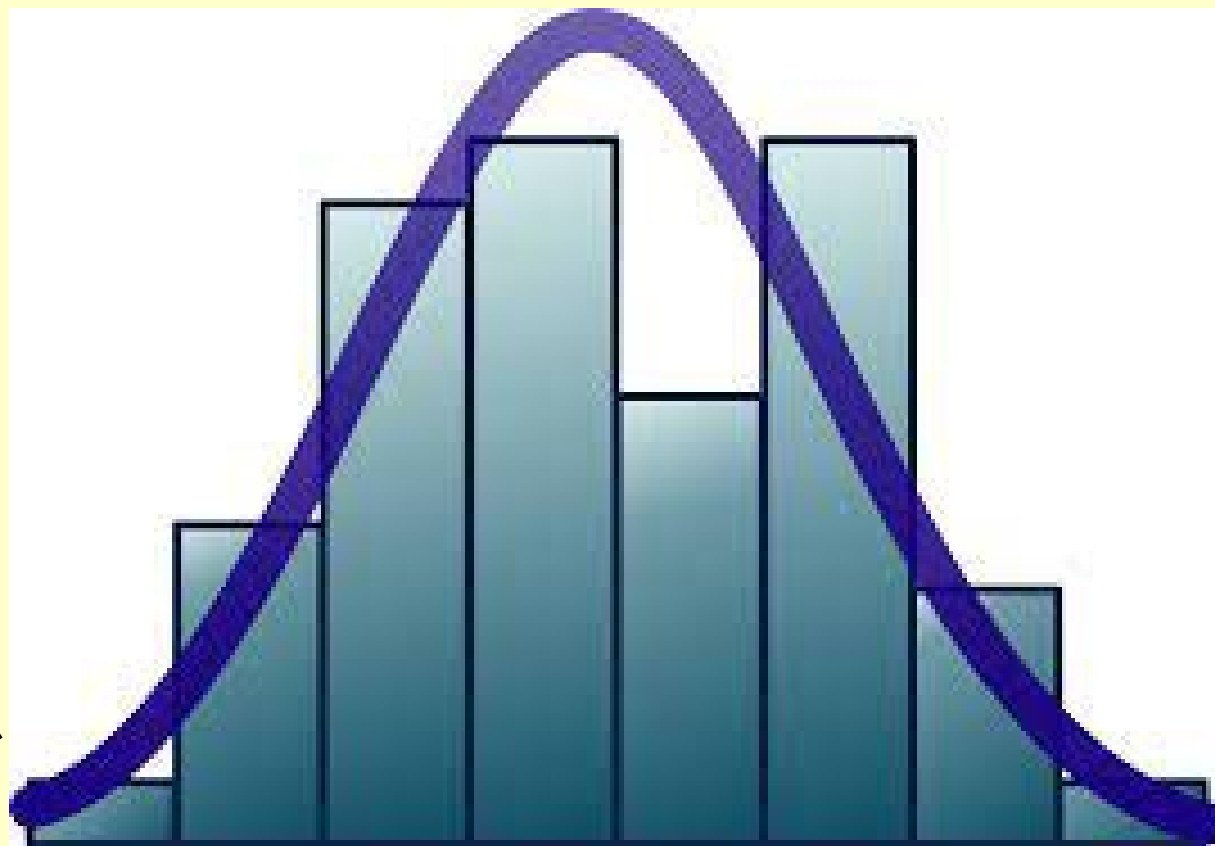
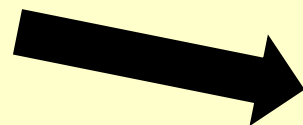
Continuous Variation



Share

Continuous data is displayed in a graph.

Categories are put into groups



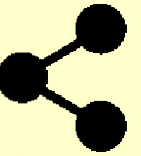
I Do

We Do

You Do

Choose and justify the most appropriate graph to display examples of variation data.

Discontinuous Variation



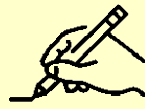
Share



Write

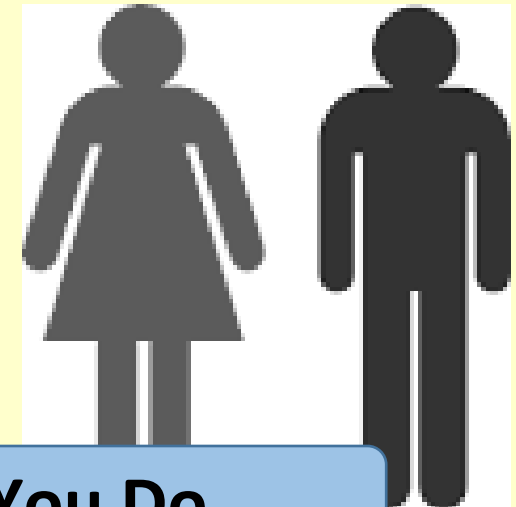
- 1) A characteristic of any species with only a limited number of possible values shows discontinuous variation.
- 2) Human blood group is an example of discontinuous variation. In the ABO blood group system, only four blood groups are possible (A, B, AB or O). There are no values in between, so this is discontinuous variation.

Here are some examples:



Write

- a) blood group
- b) sex (male or female)
- c) eye colour



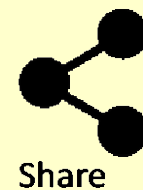
I Do

We Do

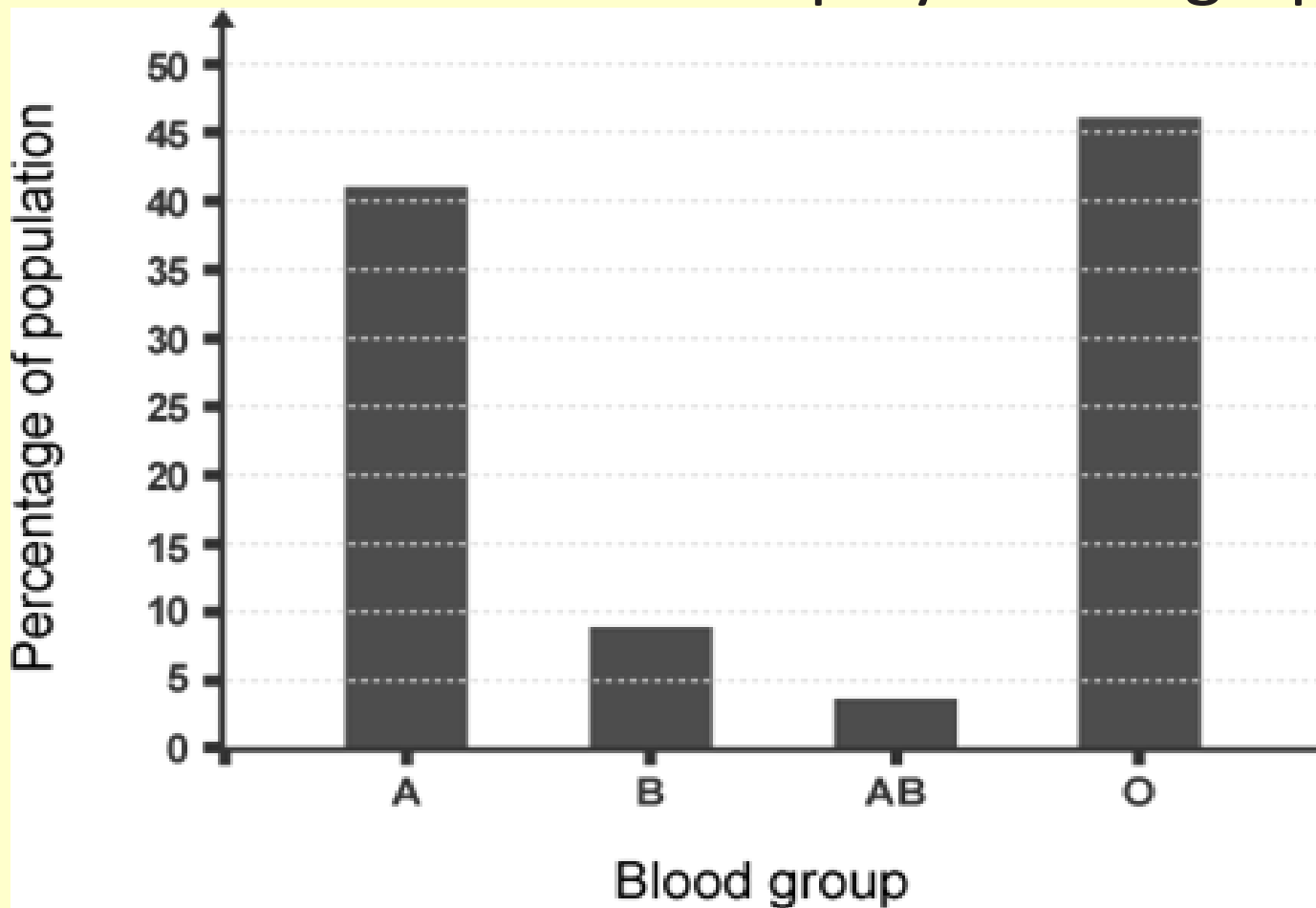
You Do

State what is meant by continuous and discontinuous data.

Discontinuous Variation



Discontinuous data is displayed in a graph.



How can data from continuous and discontinuous phenotypic features be used to show traits in a population?

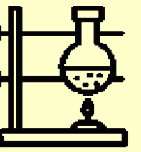
I Do

We Do

You Do

Choose and justify the most appropriate graph to display examples of variation data.

Discontinuous and Continuous Variation



Experiment
Time

We are going to investigate the classes data.

We are going to:

- Record each students eye colour
- Measure each students hand span



Instructions:

- Collect a worksheet for recording handspan and eye colour.
- Move around the class and collect the data.

Task: Use this information to record your results on a graph.

I Do

We Do

You Do

Use examples to describe the difference between continuous and discontinuous variation.