Metabolism and Adverse Conditions

15. Which of the statements describes a behaviour used to avoid adverse conditions?

A Ruby throated hummingbirds enter a state of torpor every night.

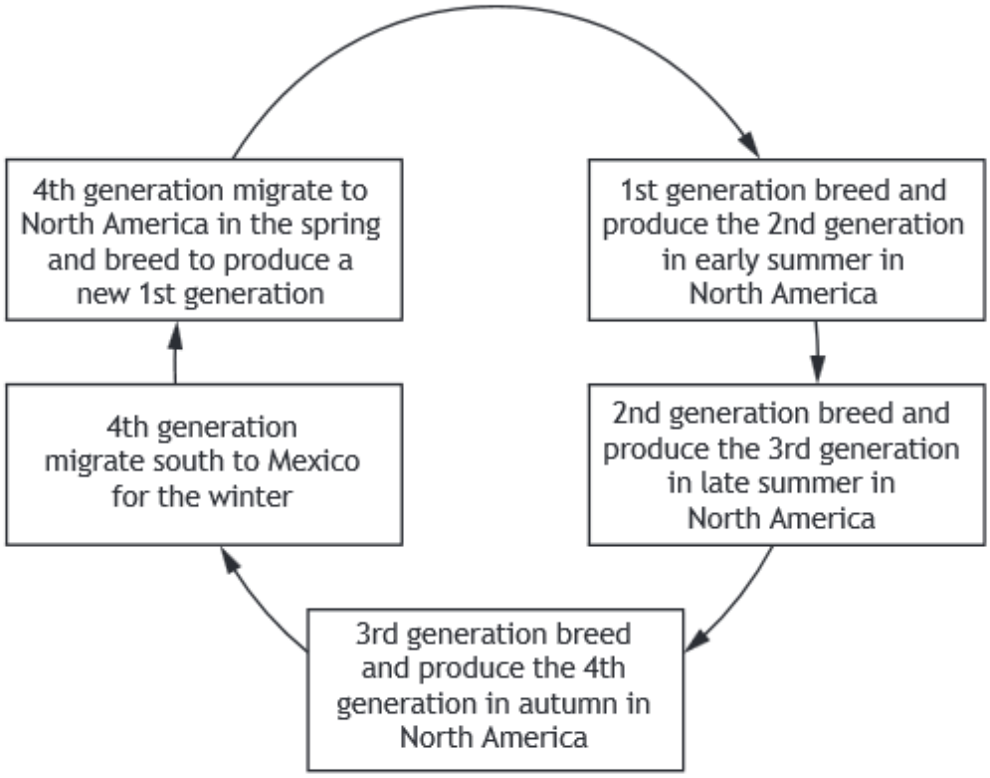
B Humpback whales swim from Alaska to Hawaii prior to the onset of winter.

C European hedgehogs reduce their metabolic rate as a result of low temperatures.

D Mugger crocodiles become dormant due to drought conditions.

A Describe how animals survive adverse conditions. **4**

4. The diagram shows information on the breeding and migration of Monarch butterflies (*Danaus plexippus*). Each generation dies after laying eggs.



(a) State one advantage and one disadvantage to the Monarch butterfly of migration to Mexico. **2**

Advantage _____

_____

Disadvantage _____

_____

(b) The migratory behaviour of the Monarch butterfly from North America to Mexico is innate.

Use the information given to justify this statement. **1**

(c) Some species of hummingbird also migrate between North America and Mexico. They have high metabolic rates which they reduce while resting each night during the migration period.

Name this reduction in metabolic rate. **1**

B Write notes on how animals survive and avoid adverse conditions. **7**

9. During unexpected periods of drought the South American lungfish, *Lepidosiren paradoxa*, survives by burying into mud.

This type of behaviour is known as

A predictive dormancy

B daily torpor

C aestivation

D hibernation.