# Unit 15

# Read for detail

1. What do the authors of hundreds of scientific studies from around the world conclude about climate change? (Paragraph 1).

That almost every aspect of life on Earth has been affected by climate change.

## 2. Genes, species and ecosystems are impacted by climate change. What are some of the changes that scientists have observed? (Paragraph 2).

* their genetics
* their shapes, colours and sizes
* their abundance
* where they live and how they interact with each other.

## 3. Give some examples of the ways species are adapting to climate change. What are they doing, and why? (Paragraph 3).

The colour of some animals, such as butterflies, is changing because dark-coloured butterflies heat up faster than light-coloured butterflies, which have an edge in warmer temperatures. Salamanders in eastern North America and cold-water fish are shrinking in size because being small is more favourable when it is hot than when it is cold.

## 4. What do the scientists fear might happen as a result of every species being affected by climate change? (Paragraph 4).

Entire ecosystem collapse is possible.

## 5. To find out more, researchers are comparing the current characteristics of a species with their characteristics in the past (a technique known as resurrection ecology). The text gives us the example of a water flea, which lived in a cold lake in upper north-eastern America. Tell the story of the flea (paragraphs 6, 7 and 8):

* Age - 100
* Size – a pencil tip
* Where she laid her eggs – in a cold lake in upper north-eastern America
* What her eggs are like – 12 eggs which have a tough, hardened coat that protects them
* What is amazing about the eggs – they can remain viable for a very long time
* What happened in the researcher’s lab – they hatch
* What the researcher learned from examining the eggs – they are different from current flea’s eggs which have adapted to much hotter conditions

## 6. Make a list of techniques that scientists are using to understand how species are responding to climate change (paragraphs 10 and 11).

* Drills that can sample gases trapped several miles below the Antarctic ice
* Genetic sampling
* Resurrection ecology
* Studying museum specimens

## 7. How is climate change affecting turtles? (Paragraph 12).

Higher temperatures are causing more female turtles to be born.

## 8. Why should humans care about the changes these studies have revealed? What does the text say about the link between climate change and (Paragraph 15 and 16):

* Food – reduced crop and fruit yields
* Pests – are eating more of the food crops and timber
* Fish – are distributed differently
* Bees – a decline in their numbers affects pollination
* Storms – we’ll see more storm surges due to the loss of natural systems that protect us

## 9. What does the author conclude about the responsibilities that humans have? (Paragraphs 18 and 19).

We must make commitments to prevent global climate change. We need to recognise that change is happening and adapt our behaviour to limit the consequences.