

Part 2:

Global Warming

English Literacy & Language Development, Workshop Series 2010

Part 2: Global Warming

# 1. Introduction

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| Icon_5.jpg | Group activity: Introductory Group Activity [±20 minutes] |

Imagine the oceans and the earth’s atmosphere growing warmer and warmer with every year that passes. How will this affect you? How will this affect plants and animals on earth? Discuss ideas with your partner.

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| Icon_10.jpg | TIMECHECK | **Sections** | **Suggested time input** | **Actual time spent** |
| *Introductory group activity* | *20 minutes* |  |

## Learning outcomes

* Use a reading strategy, namely pre-reading activities, to help you organise and understand texts;
* recognise connective words and understand how and why they are used in texts;
* expand your vocabulary;
* use speaking and listening skills to create and understand meaning during spoken tasks;
* complete comprehension-based and problem-solving tasks accurately *(correctly)* in the form of written presentation.

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| Icon_3.jpg | Pre-reading ActivitiesStart-up activity 1.1: [±60 minutes] |

1. What is the topic of this section? Write the topic down in the box below:

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1. What does *global warming* mean?

Discuss this with your partner and be prepared to share your thoughts with the rest of the class.

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1. There are three texts included in this section. Write down the titles of these in the space below. You will find the texts below.

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1. When you look at these titles, what do you think the passages are going to be about?

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1. What effect do you think global warming will have on our lives? Write this down in the space below.

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1. What will happen if our oceans start warming faster every year?

Discuss this with your partner.

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1. How do you think global warming will affect animals on the planet?

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1. Scan the first paragraph of the first text “Global Warming: a primer”.

When you **scan**, you read quickly to find specific information. Find the answer to the following question:

What has been the rate of the rise in temperature during the 20th century? Write this down.

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1. Look carefully at the usage to the two words “affect” and “effect” in the section above. Discuss with your partner the difference between these two words.

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| Icon_10.jpg | TIMECHECK | **Sections** | **Suggested time input** | **Actual time spent** |
| *Start up Activity 1.1* | *60 minutes* |  |

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| Icon_3.jpg | Pre-reading ActivitiesVocabulary activity 1.2: [±40 minutes] |

Study the following vocabulary words carefully before reading the text. Once you are sure of the meanings of these words; complete the activity below the word list. Knowing these words will help you understand the text you are about to read.

| **Word** | **Part of speech** | **Definition** | **Example** |
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| **satellite (1)**  | noun | An electronic device that is sent into space and moves around the Earth or another planet. It is used for communicating by radio, television, etc. and for providing information. | *The interview came live by satellite from Hollywood.* |
| **satellite (2)** | noun | A natural object that moves around a larger natural object in space. | *The moon is a satellite of Earth.* |
| **satellite (3)**  | noun | A town, a country or an organisation that is controlled by and depends on another larger or more powerful one. | *For example satellite states.* |
| **surface (1)** | noun | The outside or top layer of something. | *We’ll need a flat surface to play the game on.* |
| **surface (2)** | noun | The top layer of an area of water or land. | *These plants float on the surface of the water.* |
| **rate (1)** | noun | A measurement of the speed at which something happens. | *Most people walk at an average rate of 5 kilometres an hour.* |
| **rate (2)** | noun | A measurement of the number of times something happens or exists during a particular period. | *Local businesses are closing at a rate of three a year.* |
| **rate (3)** | noun | A fixed amount of money that is charged or paid for something. | *We offer special reduced rates for students.*  |
| **glacier**  | noun | A large mass of ice, formed by snow on mountains, that moves very slowly down a valley. |  |
| **permafrost**  | noun | A layer of soil that is permanently frozen, in very cold regions of the world. |  |
| **level (1)** | noun | The amount of something that exists in a particular situation at a particular time. | *A test that checks the level of alcohol in the blood.* |
| **level (2)** | noun | The height of something in relation to the ground or what it used to be. | *The floodwater almost reached roof level.* |
| **release (1)**  | verb | To let somebody or something come out of place where they have been kept or trapped. | *Firefighters took two hours to release the driver from the wreckage.* |
| **release (2)**  | noun | The act of letting a gas, chemical, etc. come out of the container where it has been safely held. | *The release of carbon dioxide into the atmosphere …* |
| **absorb (1)**  | verb | To take in a liquid, gas or other substance from the surface or space around. | *The cream is easily absorbed into the skin.* |
| **absorb (2)** | verb | To take in and keep heat, light, energy, etc. instead of reflecting it. | *Black walls absorb a lot of heat during the day.* |
| **absorb (3)** | verb | To reduce the effect of a blow, hit, etc. | *This tennis racket absorbs shock on impact.* |
| **convert** | verb | To change or make something change from one form, purpose, system, etc. to another. | *The hotel is going to be converted into a nursing home.* |
| **fossil fuel** | noun | Fuel such as coal or oil that was formed over millions of years from the remains of animals or plants and is now used as fuel for heating. |  |
| **vulnerable**  | adjective | Weak and easily hurt physically or emotionally. | *She looked very vulnerable standing there on her own.* |
| **simulation** | noun | A situation in which a particular set of conditions is created artificially in order to study or experience something that could exist in reality. | *A computer simulation of how the planet functions.* |

Oxford Advanced Learner’s Dictionary

**Global Warming:** a primer



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| **Across** | **Down** |
| 1. To take in and keep heat, light, energy, etc. instead of reflecting it. | 2. A situation in which a particular set of conditions is created artificially in order to study or experience something that could exist in reality. |
| 5. Weak and easily hurt physically or emotionally. | 3. The amount of something that exists in a particular situation at a particular time. |
| 6. A measurement of the number of times something happens or exists during a particular period. | 4. A large mass of ice, formed by snow on mountains, that moves very slowly down a valley. |

<http://www.crosswordweaver.com/index.htm?From=OCWM.puzzle> .

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| Icon_10.jpg | TIMECHECK | **Sections** | **Suggested time input** | **Actual time spent** |
| *Vocabulary Activity 1.2* | *25 minutes* |  |

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| Reading 1:Global Warming: A Primer *– by Larry O’Hanlon* |

**Global Warming: A Primer**

**1.**

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n the simplest terms, global warming is just what it sounds like: the worldwide rise *(increase)* in surface temperatures. The National Academy of Science has put the rise at 1 degree F over the course of the 20th century, but measurements from **satellites** of both land and sea **surfaces** are showing that the **rate** of warming is increasing sharply.

**2.**

It's more than just surface temperatures that are going up, however. A lot of research into temperature changes in the upper layers of the atmosphere, as well as the deep oceans, is showing warming. Then, there are the more obvious signs: the rapid *(fast)* retreat *(moving away)* of **glaciers** in Greenland, Alaska, the Himalaya, the Antarctic Peninsula and on high tropical mountains; the thinning and disappearance of sea ice in the Arctic Ocean during summer; the melting of **permafrost** in Canada, Alaska and Siberia; and the rise of sea **level** and an increase in extreme weather.

**3.**

The cause of global warming is what's called the "greenhouse effect." In other words, the ability *(skill)* of gases in the atmosphere to slow down the **release** of heat into space at night. Some gases are better at this than others. Carbon dioxide, methane and nitrous oxide are the top three "greenhouse gases." They are very good at **absorbing** sunlight and **converting** that energy into heat – rather like a rock does just sitting in the sun.

**4.**

Surprisingly, the greenhouse effect isn't a bad thing. It's essential *(important)* for life on Earth – when it's not too vigorous *(energetic).* If not for the greenhouse effect, the temperature on the surface of Earth would be like that of the airless moon – swinging wildly from 225 degrees F (107 C) during the day to -243 degrees F (-153 C) at night. Not a good place for life.

**5.**

The greenhouse effect is only troublesome *(worrying)* when it gets too strong and warms things too much. And that's just what scientists say has happened over the last 150 years or so as the people of industrialised nations have extracted *(removed)* Earth's vast buried stores of **fossil fuels** and burned them. Since the start of the Industrial Revolution the atmospheric concentration of carbon dioxide has increased nearly 30 percent, methane has more than doubled, and the nitrous oxide concentration is up about 15 percent. All those extra greenhouse gases mean more and more solar energy is being trapped in the atmosphere, exacerbating *(worsening)* the green-house effect and making things warmer.

**5.**

The result: 2005 was Earth's warmest year in a century, according to NASA climatologists. The years 1998, 2002, 2003 and 2004 were the next four runners-up. The year 2005 was also a record-breaking year for Atlantic hurricanes in which the coastal city of New Orleans – made all the more **vulnerable** because of sea level rise – was almost wiped off the map by Hurricane Katrina.

Of course, because the effects of global warming on local climates are very complicated *(complex),* it remains to be seen exactly how different regions will feel the heat. "Global warming is a term that's extremely useful when you're running a planet," says John Cox, author of the book *Climate Crash*. "But it's regional change that affects people. It's the wet and cold and hot and dry." That's why climate modellers are constantly refining their **simulations,** and climate scientists continue to refine our view of past climate changes to create a better idea of what to expect.

Discovery Channel

http://dsc.discovery.com/convergence/globalwarming/primer/primer.html

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| Icon_3.jpg | Learning activity 1.3: [±60 minutes] |

**Paragraph 1**

1. What does “it” refer to in the first sentence?

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1. What does the colon [:] indicate in the first sentence?

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1. What do the words “… has put the rise at …” mean in the second sentence?

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**Paragraph 2**

1. What does “in the upper layers of the atmosphere, …” mean?

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1. What three words can be added to complete this sentence?

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| “… there are the more obvious signs… |
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1. Name the obvious signs of global warming (hint: there are five).

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**Paragraph 3**

1. Complete the following sentence:

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| The “greenhouse effect” occurs when gases in the atmosphere… |
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**Paragraph 4**

1. What does “It’s” in the second sentence refer to?

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1. Mark the words below that best describe the meaning of the word “vigorous”, as it is used in the text.

 **(a)** strongly active **(b)** .very awake **(c)** deeply moving

**Paragraph 5**

1. Is this statement true or false?

Industry has buried great stores of fossil fuels. **TRUE FALSE**

1. Which of the following are known as a greenhouse gas?

 **(a)** carbon dioxide **(b)** methane gases **(c)** nitrous oxide

1. What does the writer mean when he writes “exacerbating the greenhouse effect”? *[Hint: study the words before and after this phrase.]*

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**Paragraph 6**

1. What do the words “The result:” refer to?

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1. Why is a hyphen (-) used in the last sentence, what purpose does it serve?

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1. What do the words “wiped off the map” mean in this last sentence?

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**Paragraph 7**

1. What affects people most?

 **(a)** global warming **(b)** regional changes in temperature

1. Carefully list all the disadvantages *(shortcomings)* of global warming based on the above passage. [Hint: think of the results when oceans become warmer and warmer. You should list at least four items.]

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| Icon_10.jpg | TIMECHECK | **Sections** | **Suggested time input** | **Actual time spent** |
| *Learning Activity 1.3* | *60 minutes* |  |

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| Icon_3.jpg | Pre-reading ActivitiesLearning activity 2.1: [±30 minutes] |

In the previous section we read about the disastrous *(terrible)* effects of global warming. This next text focuses on the effects of global warming on the temperature of the oceans.

**Preparing to read.**

1. Read the title of the text and write down two sentences that tell you what the text will be about.

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1. What is your opinion? Do you think global warming and the warmer oceans are a threat to our lives? Share your ideas with your partner.

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| Icon_10.jpg | TIMECHECK | **Sections** | **Suggested time input** | **Actual time spent** |
| *Learning Activity 2.1* | *±30 minutes* |  |

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| Icon_3.jpg | Pre-reading ActivitiesVocabulary activity 2.2: [±40 minutes] |

Study the words below and complete the crossword puzzle that follows the vocabulary list. Knowing these words will help you understand the text you are about to read.

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| **Word** | **Part of speech** | **Definition** | **Example** |
| **expand (1)**  | verb | To become larger in size, number or importance; to make something greater in size, number or importance. | *A child’s vocabulary expands through reading*. |
| **expand (2)**  | verb | If a business expands or is expanded, new branches are opened; it makes more money, etc. | *We’ve expanded the business by opening two more stores.* |
| **contribute (1)** | verb | To give something, especially money or goods, to help somebody/something. | *We contributed R5000 to the earthquake fund.* |
| **contribute (2)** | verb | To be one of the causes of something. | *Medical negligence (carelessness) was said to have contributed to her death.* |
| **contribute (3)** | verb | To increase, improve or add something. | *This book contributes a great deal to our understanding of the subject.* |
| **delta** | noun | An area of land, shaped like a triangle, where a river has split into several smaller rivers before entering the sea. | *The Delta Nile.* |
| **thermal (1)**  | adj | Connected to heat.Thermal energy |  |
| **thermal (2)** | adj | Of clothing; designed to keep you warm by preventing *(stopping)* heat from escaping from the body. |  |
| **thermal (3)** | adj | Of streams, lakes, etc. in which the water has been naturally heated by the Earth. Thermal springs |  |
| **critical (1)** | adj | Extremely important because a future situation will be affected by it. | *Reducing (dropping) levels of carbon dioxide in the atmosphere is of critical importance.* |
| **critical (2)** | adj | Serious, uncertain and possibly dangerous. | *One of the victims of the fire remains in a critical condition.* |
| **critical (3)**  | adj | Involving making fair, careful judgements about the good and bad qualities of somebody or something. | *Students are encouraged to develop critical thinking instead of accepting opinions without questioning them.* |
| **forecast** | verb | To say what you think will happen in the future based on information that you have now. | *Experts are forecasting a recovery in the economy.* |
| **projection (1)** | noun | An estimate or a statement of what figures, amounts, or events will be in the future, or what they were in the past, based on what is happening now. | *Sales have exceeded (gone beyond) our projections.* |
| **projection (2)** | noun | The act of putting an image of something onto a surface; an image that is shown in this way. | *The projection of three-dimensional images on a computer screen was impressive.* |
| **terrestrial** | adj | Animals and plants that live on the land rather than in water, in trees or in the air. | *The plant is found in the Antarctic and grows in the hardest terrestrial (earthly) conditions on our planet.*  |
| **accumulate (1)**  | verb | To gradually *(slowly)* get more and more of something over a period of time. | *I seem to have accumulated a lot of books.* |
| **accumulate (2)** | verb | To gradually increase in number or quantity over a period of time. | *Debts began to accumulate.* |
| **accumulation (3)** | noun |  | *Accumulations of sand can be formed by the action waves on coastal beaches.* |
| **strategy (1)**  | noun | A plan that is intended *(planned)* to achieve a particular purpose. | *It’s all part of an overall strategy to gain promotion.* |
| **strategy (2)**  | noun | The process of planning something or putting a plan into operation in a skilful way. | *We are working on new strategies to improve our marketing campaign (operation/movement).* |
| **strategy (3)**  | noun | The skill of planning the movements of armies in a battle or war. | *The president held an emergency meeting to discuss military strategy with his defence commanders yesterday.* |
| **adaptation (1)** | noun | A film, movie, book or play that is based on a particular piece of work but has been changed for a new situation. | *Yesterday we watched the screen adaptation of Shakespeare’s Macbeth.* |
| **adaptation (2)** | noun | The process of changing something, for example your behaviour, to suit a new situation. | *An adaptation of desert species to the hot conditions is that they look for food at night.*  |
| **buffer** | noun | A thing or person that reduces a shock or protects somebody or something against difficulties. | *Support from friends and family act as a buffer against stress.* |

Oxford Advanced Learner’s Dictionary

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| Icon_10.jpg | TIMECHECK | **Sections** | **Suggested time input** | **Actual time spent** |
| *Vocabulary Activity 2.2* | *±40 minutes* |  |

**Oceans Warming Faster than Realised**



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| **Across** | **Down** |
| 1. A plan that is intended to achieve a particular purpose. | 2. To gradually get more and more of something over a period of tine. |
| 8. Animals and plants that live on the land rather than in water, in trees or in the air. | 3. To increase, improve or add something. |
| 9. An area of land, shaped like a triangle, where a river has split into several smaller rivers before entering the sea. | 4. The process of changing something, for example your behaviour, too suit a new situation. |
|  | 5. Involving making fair, careful judgements about the good and bad qualities of somebody or something. |
|  | 6. The act of putting an image of something onto a surface; an image that is shown in this way. |
|  | 7. Connected to heat. |

<http://www.crosswordweaver.com/index.htm?From=OCWM.puzzle>

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| Icon_10.jpg | TIMECHECK | **Sections** | **Suggested time input** | **Actual time spent** |
| *Vocabulary Activity 1.2* | *25 minutes* |  |

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| Reading 2:Oceans Warming Faster than Realised |
| *–* By Marlowe Hood, AFP |

**Oceans Warming Faster than Realised**

**1.**

**According to United States climate researchers, t**he world's oceans have warmed 50 percent faster over the last 40 years than previously *(before)* thought due to [climate change](http://dsc.discovery.com/convergence/globalwarming/globalwarming.html%22%20%5Ct%20%22_blank). Higher ocean temperatures **expand** the volume of water, **contributing** to a rise in sea levels that is submerging *(sinking / under water)* small island nations and threatening to wreak havoc *(chaos)* in low-lying, densely-populated **delta** regions around the globe. The study, published in the British journal Nature, adds to a growing scientific chorus of warnings about the pace and consequences of rising oceans.

**2.**

[Rising sea levels](http://dsc.discovery.com/news/2007/03/28/sealevel_pla.html%22%20%5Ct%20%22_blank) are driven by two things: the **thermal** expansion of sea water, and additional water from [melting sources of ice](http://dsc.discovery.com/news/2006/08/11/greenland_pla.html%22%20%5Ct%20%22_blank). Both processes are caused by global warming. The ice sheet that sits [atop Greenland](http://dsc.discovery.com/news/2008/05/08/greenland-ice-melt.html%22%20%5Ct%20%22_blank), for example, contains enough water to raise world ocean levels by seven meters (23 feet), which would bury sea-level cities from Dhaka to Shanghai. Trying to figure out how much each of these factors contributes (adds) to rising sea levels is **critically** important to understanding climate change, and **forecasting** future temperature rises, scientists say.

**3.**

There has, however, been a gap between the **projections** of computer-based climate models, and the observations *(explanations)* of scientists gathering data from the oceans, which until now, has been difficult to understand. The numbers didn't add up," said Peter Geckler, a co-author of the study and a researcher at the [Program for Climate Model Diagnosis and Intercomparison](http://www-pcmdi.llnl.gov/%22%20%5Ct%20%22_blank) at the Lawrence Livermore Laboratory in California. "When previous investigators tried to add up all the estimated contributions to sea level rise" -- thermal expansion, melting glaciers, ice caps and ice sheets, along with changes in **terrestrial** storage -- "they did not match with the independently *(separately)* estimated total sea level rise," he said.

**4.**

The new study, led by Catia Domingues of the Center for Australian Weather and Climate Research, is the first to reconcile *(settle)* the models with observed data. Using new techniques to assess (measure) ocean temperatures to a depth of 700 meters (2,300 feet) from 1961 to 2003, it shows that thermal warming contributed to a 0.53 millimeter-per-year rise in sea levels rather than the 0.32 mm rise reported by the Intergovernmental Panel on Climate Change (IPCC). "Our results are important for the climate modelling community because they boost confidence in the climate models used for projections of global sea-level rise resulting for the **accumulation** of heat in the oceans," Domingues said in a statement. "The projections will in turn assist in planning to minimise impacts, and in developing a**daptation** **strategies**," she added.

**5.**

The IPCC report was criticised for including only the impact of thermal expansion in its projections of sea level rises over the next century, despite recent studies showing that melting ice is a significant *(important / major)* -- and growing -- factor. The [planet's oceans](http://dsc.discovery.com/news/2007/03/01/conveyerbelt_pla.html%22%20%5Ct%20%22_blank) store more than 90 percent of the heat in the Earth's climate system and act as a temporary **buffer** against the effects of climate change.

Discovery Channel

<http://dsc.discovery.com/news/2008/06/18/ocean-warming-print.html>

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| Icon_3.jpg | Pre-reading ActivitiesLearning activity 2.3: [±60 minutes] |

**Paragraph 1**

1. Do you think the information in this text is true or not? Why? Write your answer down.

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1. Why are sea temperatures rising? Share your ideas with your partner.

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1. Why should we be concerned *(worried)* about the consequences/ results of oceans rising? Share your ideas with your partner.

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**Paragraph 2**

1. What does “are driven by…” mean?

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1. What do the words “Both processes…” refer to?

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**Paragraph 3**

1. Who is Peter Geckler?

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1. What is meant by “they did not match”?

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**Paragraph 4**

1. Can scientists do anything to stop terrible disasters from taking place? If so, what can they do?

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**Paragraph 5**

1. How do the oceans protect us against global warming?

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**Reading carefully**

1. Read the following statements carefully. Are they true or false? Go back to the text and read it again to help you.
	1. Water is *not* influenced by temperatures rising
	in the atmosphere. **TRUE FALSE**
	2. Glaciers and melting ice from areas like the
	Antarctic are causing sea levels to increase. **TRUE FALSE**
	3. Scientists of Program for Climate Model Diagnosis
	and Intercomparison in California are the only
	scientists studying global warming. **TRUE FALSE**
	4. It will not be useful to us (our planet) if we could
	know in advance what the effects of global
	warming will be. **TRUE FALSE**

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| Icon_10.jpg | TIMECHECK | **Sections** | **Suggested time input** | **Actual time spent** |
| *Learning Activity 2.3* | *60 minutes* |  |

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| Icon_3.jpg | Start up ActivityGroup activity 3.1: [±25 minutes] |

Think of the previous two texts and answer the following question: What causes global warming? Share your answer with your partner.

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| Icon_10.jpg | TIMECHECK | **Sections** | **Suggested time input** | **Actual time spent** |
| *Start up Activity 3.1* | *25 minutes* |  |

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| Icon_3.jpg | Learning activity 3.1: [±40 minutes] |

**Preparing to read.**

Think about the title of the next passage, “Millions pay a heavy price for a warmer world”.

1. Who or what are being referred to by the word “millions”?

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1. What does the expression “… pay a heavy price…” mean? Share your answers with your partner.

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1. Write down what you think the passage is about.

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| Icon_10.jpg | TIMECHECK | **Sections** | **Suggested time input** | **Actual time spent** |
| *Learning Activity 3.1* | *±40 minutes* |  |

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| Icon_3.jpg | Pre-reading ActivitiesVocabulary activity 3.2: [±40 minutes] |

Study the following words carefully before reading. When you have understood the words and their meanings, please complete the vocabulary activity below the word list.

| **Word** | **Part of speech** | **Definition** | **Example** |
| --- | --- | --- | --- |
| **arid**  | adj | (of land weather) having little rain; very dry. | *The desert is so arid that nothing can grow there*. |
| **omen**  | noun | Something that is considered to be a sign of how a future event will take place. | *England’s victory over France is a good omen for next week’s match against Germany.* |
| **ominous** | adj | Something that is ominous suggests that something unpleasant is likely to happen. | *There was an ominous silence when I asked whether my contract was going to be renewed.**The engine was making an ominous sound, so I wasn’t surprised when the car broke down.* |
| **frequency** | noun | The number of times something happens within a particular period. | *The frequency of terrorist attacks seems to have fallen recently.**The illness occurs with increasing frequency in older people.* |
| **pound** | verb | To hit or beat something or somebody repeatedly with a lot of force. | *I could feel my heart pounding as I went on stage to collect the prize.* *Nearly 50 people are still missing after the storm pounded southern France with heavy rains.* |
| **catastrophe** | noun | A sudden event that causes great trouble of destruction. | *They were warned of the ecological catastrophe to come.**The emigration (mass departure) of scientists is a catastrophe for the country.* |
| **demolish**  | verb  | To destroy | *I think it’s very bad that those houses had to be demolished so that a supermarket could be built.* |
| **swarm** | noun | A large group of insects, moving all together. | *(a swarm of bees/wasps/ants/locusts)**The dead sheep was covered with swarms of flies.* |
| **consume** | verb | To use fuel, energy or time, especially in large amounts. | *That’s the trouble of those big powerful cars, they consume too much fuel.**He consumes vast quantities of chips with every meal.* |
| **magnify** | verb | To make something look larger than it is, especially by looking at it through a special piece of glass. | *Although your skin looks smooth, when magnified it is full of bumps and holes.* |

Cambridge International Dictionary of English**.**

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| Icon_10.jpg | TIMECHECK | **Sections** | **Suggested time input** | **Actual time spent** |
| *Vocabulary 3.2* | *±40 minutes* |  |

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| Icon_3.jpg | Vocabulary activity 3.2: [±35 minutes] |

Rewrite the following words in the order in which they appear in the in the text below. When you have completed this, write the meanings of each word in the space provided next to the word.

|  |  |
| --- | --- |
| 1. Ominous
2. Omen
3. Swarm
4. Consume
5. Magnify
 | 1. Arid
2. Catastrophe
3. Demolish
4. Swarm
5. Pound
 |

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| **Words Meanings****1. 🡪****2. 🡪****3. 🡪****4. 🡪****5. 🡪****6. 🡪****7. 🡪****8. 🡪****9. 🡪****10. 🡪** |

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| Icon_10.jpg | TIMECHECK | **Sections** | **Suggested time input** | **Actual time spent** |
| *Vocabulary activity 3.2* | *±35 minutes* |  |

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| Reading 3:Millions pay a heavy price for a warmer world |
| *–* Mail and Guardian Newspaper: “Africa’s best read” |

**Millions pay a heavy price for a warmer world**

**1.**

F

loods and droughts can happen with or without global warming. But the drought and famine in Ethiopia, the desertification *(process of becoming a desert)* of Rajasthan, the **arid** farmland of the US west, and the towns in Mozambique and Venezuela swept by storms and floods, are beginning to look like pieces in the same **ominous** puzzle. “You can’t ever say that a hurricane or a flood or a drought is because of global warming,” said one disaster expert. “What you can say is that global warming makes any of these more likely.”

**2.**

One of the first predicted *(expected)* results of the greenhouse effect was that a warmer world would be accompanied by a greater **frequency** of “extreme” events. This is because more heat should mean more evaporation and more wind energy, and therefore more violence. So far, events have matched predictions with frightening accuracy. Islands usually hit by a cyclone once in a century have been **pounded** four times in a decade. Rivers that used to dry up once every year few decades are now failing to reach the sea on 100 or more days a year. Seven of the hottest years ever recorded were in the 1990s.

**3.**

The hottest year of the decade was 1998. It was also according to the insurance giant Munich Re, one of the most expensive, with a total of 80 separate natural **catastrophes** caused by the influence of El Nino, a centre of heat in the Pacific which periodically tips climate patterns upside down, sparking fires in tropical rainforests and floods on barren *(infertile/desolate)* lands. That year was marked by terrible floods in China, disastrous ice storms in the US, and a huge cloud of smoke and flames over Indonesia. It also saw some of the most destructive hurricanes ever to hit central America, **demolishing** hillsides and sweeping away villages and cropland.

**4.**

Storms are reported by governments and the news media as single and separate events, but they are not. When winds die down the floodwaters move away, life does not return to normal. Victims will have lost their homes, their livestock and their savings, and they will face malnutrition *(undernourishment)* and waterborne diseases.

**5.**

And a year or two later, when the land is green again, they could also face plagues of locusts. For most of the time, locusts dwell in little groups in arid regions. But every few years, after rain has multiplied the vegetation, they suddenly **swarm**. One swarm in north Africa in 1988 was measured at 75 miles by 16 miles. It was estimated to contain 15 billion insects **consuming** 300 000 tones of greenstuff a day. “You don’t see soil any more, you don’t see plants,” said one scientists. “It covers everything like a thick fabric. All you hear is chewing.”

**6.**

Scientists working together have helped limit locust plagues around the Mediterranean, and meteorologists warn governments about windstorms and floods, but drought is another matter. Droughts tend to do their worst on land that is already arid, and where societies are already poor. Global warming will **magnify** all these problems.

Mail and Guardian Newspaper: “Africa’s best read”

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| Icon_3.jpg | Learning activity 3.3: [±60 minutes] |

**Paragraph 1**

1. Underline the complete **subject[[1]](#footnote-0)** of sentence two. [Hint: the verb is “are beginning”].

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1. What does “these” refer to in ‘… global warming makes any of these more likely”?

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**Paragraph 2**

1. What does “this” refer to in “This is because more heat..”?

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1. If “Rivers used to dry up once every few decades,” how often did these rivers dry up?

**(a)** three times in ten years **(b)**  one time in thirty years

1. The writer uses different phrases to express the same meaning. What word or phrase does the writer use to mean the same as the underlined words:
	1. Islands usually “hit” by a cyclone =
	2. Rivers used to “dry up” =

**Paragraph 3**

1. What does “it” refer to in “It also saw some of the most destructive…?

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1. What does “EL Nino tips weather patterns upside down” mean?

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**Paragraph 4**

1. What two words can be added to complete this sentence:

“… but they are not \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_”

1. What does “face” mean in “… they will face malnutrition and waterborne diseases”?

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**Paragraph 5**

1. What does the word “they” refer to in “… they could also face plagues…”?

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1. What does “it” refer to in “It covers everything…”?

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**Paragraph 6**

1. What is meant by the expression “do their worst” in the second sentence?

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| Icon_10.jpg | TIMECHECK | **Sections** | **Suggested time input** | **Actual time spent** |
| *Learning activity 3.3* | *±60 minutes* |  |

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| Icon_3.jpg | Learning activity 3.4: [±60 minutes] |

1. Rewrite the **topic sentence[[2]](#footnote-1)** of each paragraph below: [Hint: The topic sentence is the sentence that contains the main idea of the paragraph. All the other sentences support the topic sentence.]

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| **1.** |
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| **2.** |
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| **3.** |
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| **4.** |
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| **5.** |
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| **6.** |
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1. With your partner, summarise each paragraph in one sentence.

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| **1.** |
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| **2.** |
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| **3.** |
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| **4.** |
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| **5.** |
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| **6.** |
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| Icon_10.jpg | TIMECHECK | **Sections** | **Suggested time input** | **Actual time spent** |
| *Learning activity 3.4* | *±60 minutes* |  |

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| Icon_3.jpg | Assessment activity for this module:[±60 minutes] |

1. Write a paragraph about what we can do to reduce global warming.

Your paragraph should contain one topic sentence and four supporting sentences. See guidelines for writing a paragraph below. **(20 marks)**

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You will be assessed as follows:

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| **Organisation:** (Topic sentence and supporting sentences in place)  | 6 MARKS |
| **Content:** Is the content relevant and did you stick to the given topic?  | **8 MARKS** |
| **Clarity:** Are your sentences clear and legible and coherent? | 3 MARKS |
| **Language:** Spelling, punctuation and language usage | 3 MARKS |
| TOTAL | 20 MARKS |

1. Make a list of some effects of global warming. Your list should contain no fewer than eight items. Draw your information from all three texts provided.

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| **Guidelines for writing a paragraph**For each paragraph:* Do you have a topic sentence?
* Do you have at least four supporting sentences?
* How do the supporting sentences support the topic sentence? Is it an explanation, an example, a description, an elaboration (give more detail) or a comparison?
* Do you have a clear concluding sentence?
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| Icon_10.jpg | TIMECHECK | **Sections** | **Suggested time input** | **Actual time spent** |
| *Assessment activity 3.4.3/4* | *±60 minutes* |  |

# Tracking my progress

You have reached the end of this section. Check whether you have achieved the learning outcomes for this section.

|  |  |  |
| --- | --- | --- |
| **Learning outcomes** | **✓ I feel confident** | **✓ I don’t feel confident** |
| **Learning outcome 1** – Use a reading strategy to organise and understand texts |  |  |
| **Learning outcome 2** – Identify and understand the connective words in texts |  |  |
| Learning outcome 3 – Extend vocabulary |  |  |
| Learning outcome 4 – Use skills to write a paragraph |  |  |
| Learning outcome 5 – Accurately complete tasks |  |  |

Now answer the following questions honestly:

1. What did you like best about this section?

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1. What did you find most difficult in this section?

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1. What do you need to improve on?

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1. How will you do this?

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| Icon_10.jpg | TIMECHECK | **Sections** | **Suggested time input** | **Actual time spent** |
| *Reflection Activity* | *±30 minutes* |  |

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| Icon_3.jpg | PART 2 – global warming:Glossary of difficult words[±40 minutes] |

Match the meanings of the words in columns A and B by placing the correct numbers of the synonyms in column B next to the words in column A

**Example:**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **A** |  |  |  | **B** |
|  |  |  |  |  |
| **radical** |  |  **2** |  | 1. complete
 |
|  |  |  |  | 1. drastic
 |
|  |  |  |  | 1. favourable
 |

**Now do the following:**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **A** |  |  |  | **B** |
|  |  |  |  |  |
| **reconcile**  |  |  |  | 1. increase
 |
| **ability**  |  |  |  | 1. important
 |
| **viz.**  |  |  |  | 1. undernourishment
 |
| **disastrous**  |  |  |  | 1. correctly
 |
| **extracted**  |  |  |  | 1. namely
 |
| **previously** |  |  |  | 1. stopping
 |
| **troublesome** |  |  |  | 1. energetic
 |
| **negligence** |  |  |  | 1. fast
 |
| **complicated** |  |  |  | 1. chaos
 |
| **submerging** |  |  |  | 1. removed
 |
| **disadvantages** |  |  |  | 1. adds
 |
| **accurately**  |  |  |  | 1. skill
 |
| **reducing** |  |  |  | 1. gone beyond
 |
| **rise** |  |  |  | 1. expected
 |
| **exceeded** |  |  |  | 1. shortcomings
 |
| **vigorous** |  |  |  | 1. worrying
 |
| **exacerbating** |  |  |  | 1. slowly
 |
| **terrestrial** |  |  |  | 1. terrible
 |
| **rapid** |  |  |  | 1. dropping
 |
| **campaign** |  |  |  | 1. earthly
 |
| **significant**  |  |  |  | 1. planned
 |
| **concerned**  |  |  |  | 1. settle
 |
| **gradually** |  |  |  | 1. explanations
 |
| **predicted** |  |  |  | 1. infertile/desolate
 |
| **emigration**  |  |  |  | 1. operation/movement
 |
| **intended** |  |  |  | 1. worsening
 |
| **independently**  |  |  |  | 1. mass departure
 |
| **desertification**  |  |  |  | 1. sinking / under water
 |
| **retreat** |  |  |  | 1. before
 |
| **assess**  |  |  |  | 1. complex
 |
| **observations**  |  |  |  | 1. measure
 |
| **havoc**  |  |  |  | 1. worried
 |
| **barren**  |  |  |  | 1. moving away
 |
| **contributes**  |  |  |  | 1. carelessness
 |
| **malnutrition**  |  |  |  | 1. important / major
 |
| **preventing** |  |  |  | 1. process of becoming a desert
 |
| **essential** |  |  |  | 1. separately
 |

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| Icon_10.jpg | TIMECHECK | **Sections** | **Suggested time input** | **Actual time spent** |
| *Glossary of difficult words*  | *±40 minutes* |  |

## Part 2 – overall time check

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| Icon_10.jpg | TIMECHECK | **Sections** | **Suggested time input** | **Actual time spent** |
| *Introductory group activity*  | *±20 minutes* |  |
|  |  | *Start-up activity 1.1*  | *±60 minutes* |  |
|  |  | *Vocabulary 1.2*  | *±40 minutes* |  |
|  |  | *Vocabulary 1.2 activity* | *±25 minutes* |  |
|  |  | *Learning activity 3.1*  | *±60 minutes* |  |
|  |  | *Learning activity 2.1* | *±30 minutes* |  |
|  |  | *Vocabulary 2.2*  | *±40 minutes* |  |
|  |  | *Vocabulary 2.2 activity* | *±30 minutes* |  |
|  |  | *Learning activity 2.3* | *±60 minutes* |  |
|  |  | *Start up activity 3.1* | *±25 minutes* |  |
|  |  | *Learning activity 3.1* | *±40 minutes* |  |
|  |  | *Vocabulary 3.2*  | *±40 minutes* |  |
|  |  | *Vocabulary 3.2 activity* | *±35 minutes* |  |
|  |  | *Learning activity 3.3*  | *±60 minutes* |  |
|  |  | *Learning activity 3.4*  | *±60 minutes* |  |
|  |  | *Assessment activity 3.4.3/4*  | *±60 minutes* |  |
|  |  | *Reflection activity*  | *±30 minutes* |  |
|  |  | *Glossary words activity*  | *±40 minutes* |  |
|  |  | *Skills pack materials* | *±240 minutes* |  |
|  |  | ***Estimated total time for Part 2*** | ***17 hours***  |  |

1. Skills pack: Concord in texts (pg 2) [↑](#footnote-ref-0)
2. Skills pack: Review material (g 34) [↑](#footnote-ref-1)