

# UNIT 2- THE ENVIRONMENT



## READING I – How to Deal with Natural Disasters

### PREVIEW THE READING

#### A- Quick Discussion



**Discuss these questions with your classmates.**

1. Why do floods and droughts occur? What impact can they have on a country?
2. Look at the photo. How might people deal with a flood like this?
3. What other natural disasters do you know about? What impact do they have on people and places?

#### B- Preview

Skim the interview with a disaster-mitigation expert. Which title below is best for the interview? Why?

- a) Controlling the flow
- b) What to do about risk
- c) A way to protect people from flooding
- d) Protect your house against flooding

**C- Vocabulary** Read the two paragraphs and write the correct form of each bold word next to the correct definition.

**A** Scientists have not yet **identified** which kind of storm is approaching the Caribbean. The last storm was a hurricane which had a **devastating** effect on the buildings near the beach, as many of them were destroyed. To prepare for this storm, there are several important **measures** which people in that area should take. For example, it is **crucial** to have plenty of water, some torches and batteries.

1. (n) a method for dealing with a situation :
2. (v) to recognize something and say what that thing is :
3. (adj) extremely important or necessary :
4. (adj) causing a lot of damage or destruction :

**B** Our **community** is located by the ocean and contains about 75 families. We are all working towards a **reduction** in the damage done by storms here. Part of that includes sharing the **maintenance** costs of planting sea grass and building sand fences. In the past, some families were **criticized** for not contributing their fair share of these maintenance costs.

1. (n) the people living in one particular area :
2. (n) the work needed to keep something in good condition :
- 3.(n) the act of making something smaller in size or amount :
4. (v) to express disapproval of someone or something :



## HOW TO DEAL WITH NATURAL DISASTERS

1 The world has always had to face water-based natural disasters such as tsunamis and hurricanes. In an illuminating<sup>1</sup> interview, Water Management Monthly talks to Dan Smith, who works in disaster mitigation for a government agency.

2 'Dan, could you tell us what disaster mitigation means?'

'Disaster mitigation means attempting to minimize the impact of natural disasters both before and after they happen. My department and I work in two specific areas to try and do this: risk **reduction** and risk analysis. Both are **crucial** in disaster mitigation.'

### 3 'What do you mean by risk reduction?'

'Risk reduction means many things. It is not just referring to big engineering projects like dams. Often, small **community** projects can be the most effective means of risk reduction.

The main way floods can be prevented is by the construction and **maintenance** of earth-wall defences, called levees. These block the progress of rising water. However, even the best levees can't protect against the **devastating** power of a tsunami. In this case, early-warning systems are lifesavers. They can let people know as early as possible if there is likely to be flooding.'

### 4 'What types of risk analysis do you do?'

'Firstly, risk analysis concerns flood mapping, where we **identify** the parts of the country which are at most risk from flooding. Secondly, there is mitigation planning, which helps local communities plan for when disaster strikes. Thirdly, we make sure that the country's dams all work properly and are safe. Although many people **criticize** dams because of their environmental impact, they also have many benefits such as hydroelectricity, irrigation, water storage, water sports and, of course, flood control. In terms of a cost-benefit analysis, we are definitely ahead.'

### 5 'Do you think countries are better prepared now for natural disasters than they were in the past?'

'Definitely. We are constantly developing new flood-prevention solutions. Some examples of these kinds of measures include the construction of sea walls and bulkheads<sup>2</sup>, which protect the coasts, and the redesign of power stations and subway tunnels in the New York City area after the devastating damage caused by Hurricane Sandy in 2012. In the UK, another good example is the Thames Barrier, a huge engineering project designed to prevent London from flooding.'

### 6 'Aren't programmes like that very expensive? What lower-cost alternatives are there?'

'Flood prevention does not have to be expensive. Sandbags, for example, can be a highly effective way of stopping flood water.'

### 7 'Is there any more that can be done, or are we as prepared as we can be?'

'There's always more that could be done. But remember that the government can only be responsible for flood prevention up to a certain point. People have to become aware of the dangers of flooding themselves. This is crucial. Expensive early-warning systems are a waste of money if people pay no attention to them.'

1 **illuminating (adj)** giving you new information about a subject

2 **bulkhead (n)** an underwater wall

## WORK WITH THE READING

**A- Categorize** Read the statements. Write T (true), F (false) or DS (does not say). Then correct each false statement to make it true according to the article.

- \_\_\_ 1. Dan Smith works for an international organization.
- \_\_\_ 2. Risk reduction and risk analysis are both important parts of disaster mitigation.
- \_\_\_ 3. Large-scale projects are always effective for risk reduction.
- \_\_\_ 4. Planning for natural disasters has improved in recent years.
- \_\_\_ 5. The New York City subway tunnel redesign cost \$20 million.
- \_\_\_ 6. Low-technology solutions can protect against flooding, too.

**B- Explain** Answer the questions. Write the paragraph number where the answer is found. Then discuss your answers with a partner.

1. What is the function of *disaster mitigation*?
2. What is a synonym phrase for a *levee*?
3. Why do some people criticize dams?
4. Who is responsible for flood prevention?

**C- Interpret** Discuss your answers with a partner. Which of the opinions do you think Dan Smith would agree with?

1. It's the government's responsibility to protect us from natural disasters.
2. Surely it's more important to spend time and money on ways to stop water from causing floods, rather than finding out which areas are likely to flood. We already know that.
3. Dams are more trouble than they're worth.
4. Building sea walls is a waste of money — sandbags are just as good.
5. People in flood-risk areas need to be educated about the risks and about how they can help themselves.

## READING SKILL Identifying Cohesive Devices

Good academic writing flows easily and is not too repetitive. The writer needs to show links between ideas without repeating the same words. **Using pronouns and synonyms** in the place of nouns and noun phrases can help. To read well in English, you need to be able to identify what these pronouns and synonyms refer to.

✚ Droughts often occur in central Kenya. **This area** is so dry that it cannot support crops. In order to avoid repetition, the writer refers back to central Kenya with a pronoun in a new noun phrase: '*this area*'.

✚ Droughts can also cause people to suffer if the **lack of water** means that people don't have enough to drink. Here, the writer refers back to the idea of droughts with a synonym phrase: '*lack of water*'.

**A- Identify** Find these words and phrases underlined in the interview. Write the nouns or noun phrases that they refer to.

1. two specific areas \_\_\_\_\_
2. It \_\_\_\_\_
3. These \_\_\_\_\_
4. this case \_\_\_\_\_
5. these kinds of measures \_\_\_\_\_
6. that \_\_\_\_\_
7. them \_\_\_\_\_

## VOCABULARY SKILL Synonyms for Verbs

Synonyms are words which have the same, or very similar, meaning. Use synonyms in your writing to avoid repetition.

New roads will **stop** traffic congestion in the short term. The local government hopes this will **prevent** traffic jams.

Rewrite the sentences using the verbs from the box to replace their synonyms in bold.

*attempt*

*consider*

*convince*

*produce*

*reduce*

*require*

*waste*

1. We **need** more public transport in the city, like a light-rail network.

\_\_\_\_\_.

2. Commuters **try** to arrive on time, but traffic often causes delays.

\_\_\_\_\_.

3. Masdar City uses solar energy to **make** its electricity.

\_\_\_\_\_.

4. It's important for people in industrial countries to **lower** their use of energy.

\_\_\_\_\_.

5. Traffic congestion causes people to **use** time and energy in an inefficient way.

\_\_\_\_\_.

6. We should **think about** cycling instead of using our cars to travel short distances.

\_\_\_\_\_.

7. It will be difficult to **get** drivers to use public transport.

\_\_\_\_\_.



## WRITING I

# PROBLEM SOLUTION ESSAY

In this unit, you are going to write a problem-solution essay about a health condition, a bad habit, or an environmental hazard. Problem-solution essays describe a problematic situation and ways to solve it. They may explain causes and/or effects of a problem. In addition, they usually emphasize the writer's opinion or advice about which solutions to the problem are the best. Like all essays, a problem-solution essay contains three parts.



## STEP 1 Previewing

For a problem-solution essay, the first prewriting step is to select a topic that you know well enough to describe clearly. Select a problem that you feel strongly about and one that can be solved in specific ways. The prewriting step also includes brainstorming about the problem. Why is it a problem? What are its causes and effects? For example, if your topic is 'Smoking among young people', you might ask yourself: Why is smoking bad for teens? Why do they do it? What effects does it have on their health? What are the best, most effective ways to prevent or stop teens from smoking?

### Your Own Writing

#### Choosing Your Assignment

Choose Assignment 1 or Assignment 2.

1. Describe a health-related problem that you or someone close to you has experienced. Choose a problem that you believe can be solved or improved. For example, you could write about a friend who suffers from bad migraine headaches or asthma, or an uncle who is overweight. Discuss the causes and effects of the problem and give two concrete solutions or ways to improve it.
2. Describe a health problem that is caused by something natural or human-made in the environment. For example, you could discuss the hazards associated with second-hand cigarette smoke, or you could describe damage to the skin and eyes that can be caused by the rays of the sun. Give two concrete solutions or ways to improve the problem.

### Finding out More

#### A) Learn more about your assignment before free writing about it. Online or at the library, locate information about the health problem.

- Search for or look up the name of the health condition, bad habit, or environmental hazard.
- Note the meanings of special words used to discuss the problem.
- Locate new as well as older solutions to the problem.

#### B) Free write for 10 minutes about your assignment. Here are some questions to get you started:

- What are some of the causes and effects of the problem?
- How have people tried to solve or improve the problem?
- Which solutions have been the most helpful? the least helpful?

#### C) Complete the problem-solution chart. List your problem, explain why it's a problem (including its causes and effects), and suggest two ways to solve or improve it. Fill in as much information as you can. You will have a chance to review, change, or add information later in the unit.

Problem (and why it is one)	Possible Solutions

## STEP 2 Writing the First Draft

### THE INTRODUCTION

In a problem-solution essay, the introduction usually gives background information about the problem, for example, why it happens, who it affects, and when or where it occurs. It may also describe how people feel about the problem and/or define key words people use to discuss it.

**Example:**

**Background Information:**

Doing exercise is important to stay healthy, but fewer and fewer people are able to exercise regularly. This is especially true for adults. Adults often complain that they don't have enough time to follow a daily fitness, or exercise routine because of their work, school, or family responsibilities. On the other hand, doctors tell us that a regular exercise is essential to keeping our bodies healthy and working properly. Not getting enough exercise can lead to poor health, but there are some simple steps people can take to increase their physical activity.

\*\*\*The thesis statement briefly describes the topic and gives the controlling idea. The controlling idea explains why something is a problem and hints at the possible solutions you will present in the body of your essay. The thesis statement may be one sentence or two sentences.

**Example:**

*Topic*

*why it is a problem*

*hints at solutions*

Not getting enough exercise can lead to poor health, but there are some simple steps people can take to increase their physical activity.

### Planning Your Introduction

**A) List the background information you will need to include in your introduction.**

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**B) Write a draft of your thesis statement. Make sure your thesis statement clearly explains the problem and hints at the solutions you will present and justify in the body of your essay. Look back at your free writing and problem-solution chart to help you.**

**C) Share your thesis statement with a partner. Did your partner...**

- \* clearly explain the health problem in the thesis statement?
- \* focus on an illness, a bad habit, or an environmentally caused health problem?
- \* let you know that solutions will be presented in the body of the essay?

Tell your partner what you like about his or her thesis statement, if you have any suggestions for improving it, share them. Based on your partner's feedback, you may want to rewrite your thesis statement.

### THE BODY

In a problem-solution essay, you begin by convincing your reader that a problem exists and is serious. You then give one or more solutions to the problem. There are many ways to structure a problem-solution essay. One of the simplest ways is to present the problem in detail in the first body paragraph and give the solutions in the second body paragraph.

Your essay will use the following pattern:

<b>Paragraph 1</b>	Introduction to the Problem + Thesis Statement
<b>Paragraph 2</b>	Problem: Reasons why it is serious
<b>Paragraph 3</b>	Solutions: Steps to Take and How to Follow Them
<b>Paragraph 4</b>	Conclusion

### Writing Topic Sentences

As you learned previously, each body paragraph must have a clearly stated controlling idea. In a problem-solution essay, the topic sentences introduce the writer's focus on reasons for the problems and ways to solve or prevent them. In a four-paragraph essay, writers often indicate their transition from problems to solutions in the second body paragraph. Here is an example of a thesis statement and two topic sentences for a problem-solution essay. Notice how the three sentences are connected to each other.

#### Example:

**Thesis Statement:** Not getting enough exercise can lead to poor health, but there are some simple steps people can take to increase their activity.

**Topic Sentence 1:** There are two major reasons why not exercising causes problems for people.

**transition from problems to solutions**

**Topic Sentence 2:** To increase their activity levels, there are some ways adults can follow.

### Developing a Body Paragraph about a Problem

As you learned before, writers support their body paragraphs with various kinds of evidence, including reasons, facts, examples and explanations. For a paragraph about a problem, writers can include specific reasons why their problem is serious using listing-order transition signals like "first (of all), for one, second (of all), in addition and finally" to introduce each reason. They may support their reasons by explaining the causes or effects of the problem. To end the body paragraph, some writers add a sentence that summarizes the reasons for the problem; which is optional.

#### Example:

There are two major reasons why not exercising causes problems for people. **First of all**, it can make our muscles weaker. When people don't exercise, their muscles lose strength and become tense. Consequently, people can get hurt more easily when they have to lift heavy objects or run quickly. Due to inactivity, people are also more likely to pull and strain muscles when they stretch their bodies too far. **In addition**, a lack of physical activity is bad for the heart. The heart is also a muscle. As a result, it needs to be exercised too. People who do not increase their heart rate regularly with moderate exercise like jogging or swimming have weaker hearts. Because of this, they can be at a greater risk for heart problems, such as heart disease and heart attacks, when they get older. **If people do not exercise at all, all of their muscles, including the heart, will suffer.**

- When writers discuss a problem, they may use cause - effect transition words, including the ones in the chart, to show how one action or situation affects another.

<b>Causes</b>	<b>Effects</b>
as a result of	as a result
because of	consequently
due to	therefore
owing to	thus



### Examples:

- **Because of this**, they can be at a greater risk of heart problems when they get older, such as heart disease and heart attacks.
- **Due to inactivity**, people are also more likely to pull and strain muscles when they stretch their bodies too far.
- When people don't exercise, their muscles lose strength and become tense. **Consequently**, people can get hurt more easily when they have to lift heavy objects or run quickly
- The heart is also a muscle. **As a result**, it needs to be exercised too.

### Developing a Body Paragraph about Solutions

In a problem-solution essay, the second body paragraph can offer solutions to the problem. As in the first body paragraph, writers often use listing order transition words to introduce their specific solutions or suggestions. The supporting sentences may give steps on how to follow the solutions or provide reasons why the solutions are useful or important to follow. Writers often finish the paragraph with a sentence that summarizes the solutions. Once again, it is optional, but it can tie the parts of an essay together.

### Example:

To increase their activity levels, there are some ways adults can follow. **First of all**, they can make choices throughout the day to exercise the body more. For instance, instead of riding the elevator or escalator, people can take the stairs to get their muscles working and heart pumping. If people live close to a supermarket, they can choose to walk instead of driving just a couple of miles. **Second of all**, people can stick to a short but regular exercise routine. When adults finish work, they can devote a half hour to exercising before doing housework or relaxing on the couch. For example, they might take a short walk around the neighbourhood or stop by a local gym to work out before going home. There are many easy ways for people to exercise more; it just takes a little planning and creativity.

## THE CONCLUSION

As with the essays you wrote before, you will return to the thesis statement in your conclusion and express your final thoughts and recommendations.

Here are two strategies you might want to use to end your problem-solution essay about a specific health condition, bad habit, or environmental hazard.

1. Add a final observation about how people view the problem.
2. Make a "call for action" that asks people to do something to help solve the problem.

### Example:

<sup>1</sup>In order to avoid poor health due to lack of physical exercise, there are some things adults can do to be more active in their daily life. <sup>2</sup>**Although many adults complain that they are too busy to exercise, they need to realize the enormous benefits that come from doing just a little bit each day.** <sup>3</sup>Adults should figure out a simple way to add regular exercise to their daily routine by reviewing and rearranging some of their day-to-day activities. The earlier they start, the sooner they will start feeling the benefits.

(1. restated thesis 2. **observation** 3. call for action )

**Exercise: Read this introduction and concluding paragraph. Choose the best comment to end the conclusion.**

**Introduction:**

Traffic congestion has already become a major social problem not only in developed cities but also in third world countries, especially in urban areas. It is a tough nut to crack for many nations. Though many ideas are rising from the different corners of the world, I believe that encouraging the people to use public transport is an effective solution.

**Concluding paragraph:**

To conclude, encouraging the public to get along with the common transport system is the best option to bring down city traffic clogging. Buses and trams create less traffic jam by its slow-moving nature. \_\_\_\_\_

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- a. Public vehicles such as buses and trams can slow down the movement on the road.
- b. Public transport system increases the travelling time and give cold comfort to commuters.
- c. If the public uses the public transportation more, it breaks the city traffic jam in a smoother way.

### STEP 3 Revising

Revising your work is an essential part of the writing process. This is your opportunity, to be sure that your essay has all the important pieces and that it is clear.

#### PRACTICE 1

**A) Read the following essay assignment. Then decide which of the details you might use as background information for an introductory paragraph on this topic. Check the sentences you choose. Discuss your answers with a partner.**

*Describe a health problem that is caused by too much exposure to the sun. Give two solutions or ways to improve this problem.*

- \_\_\_ 1. Every time people go outside, they are exposed to the sun.
- \_\_\_ 2. *Sun exposure* means not being protected from the sun's rays.
- \_\_\_ 3. Many young people spend a lot of time on the beach sunbathing because they want a deep, rich tan.
- \_\_\_ 4. A little sun can benefit the skin, but too much exposure can lead to skin damage and even skin cancer.
- \_\_\_ 5. Sunburns feel better when you put aloe lotions or vitamin E on them.
- \_\_\_ 6. Some skin cancers can be treated fairly easily, but others are extremely dangerous and hard to stop.
- \_\_\_ 7. Because serious effects don't appear until much later in life, people often ignore the health warnings about sun exposure.
- \_\_\_ 8. Experts say that overexposure to the sun is a real problem.

**B) Review the background information you chose in Exercise A. Then check the sentence(s) that would be the best thesis statement for the essay. Discuss your answers with a partner.**

- \_\_\_ 1. Even though the sun can cause serious burns, many people ignore this fact and get skin damage as a result.
- \_\_\_ 2. Skin damage is a big problem and can have very bad effects. Prevention is the best policy.
- \_\_\_ 3. Sun exposure can seriously affect people's health; however, people can avoid the health hazards of too much sun in several ways.

*Every time people go outside, they are exposed to the sun. Sun exposure means not being protected from the sun's rays. A little sun can benefit the skin, but too much exposure can lead to skin damage and even skin cancer. Because serious effects don't appear until much later in life, people often ignore the health warnings about sun exposure. Yet, experts say that overexposure to the sun is a real problem. Sun exposure can seriously affect people's health; however, people can deal with the health hazards of too much sun in several ways.*

**C) Look at the model of an introductory paragraph for an essay on the topic in Exercise A. Discuss the questions with a partner.**

1. What is the problem?
2. When does the problem occur? Why does it occur?
3. What does *sun exposure* mean?
4. Why do some people ignore the problem of overexposure to the sun?
5. What is the thesis statement? Underline it.
6. Do you think the thesis is effective? Why or why not?

## **PRACTICE 2**

**Read each thesis statement. Then check the two sentences that would be the best topic sentences for an essay on this topic. Discuss your answers with a partner.**

1. Sun exposure can seriously affect people's health; however, people can deal with the health hazards of too much sun in several ways.  
  
\_\_\_\_ a. Bad sunburns can make people develop more wrinkles when they get older.  
\_\_\_\_ b. Too much exposure to the sun has a bad effect on our body for a number of reasons.  
\_\_\_\_ c. Despite these problems, there are ways for people to protect their skin from the sun and repair damage.  
\_\_\_\_ d. Most people know about the health hazards of too much sun, but they don't do anything to protect themselves.
2. Littering damages the environment, but people can take steps to prevent the situation from happening.  
  
\_\_\_\_ a. Littering has negative effects on the environment for various reasons.  
\_\_\_\_ b. When people throw trash into rivers, they may pollute the water and hurt aquatic animals.  
\_\_\_\_ c. Even though many people know about the problems associated with littering, they still do it.  
\_\_\_\_ d. In spite of the problems, there are two specific ways people can reduce the amount of garbage they produce.
3. Drinking too little water stops the body from working properly, yet there are easy ways for people to increase the amount of water they take in.  
  
\_\_\_\_ a. Not drinking water regularly can make people become dehydrated.  
\_\_\_\_ b. To change this habit, people need to look for simple ways to increase the amount of water they take in.  
\_\_\_\_ c. Not drinking enough water is a bad habit for several reasons.  
\_\_\_\_ d. Although many drinks contain water, such as soft drinks, tea, and coffee, pure water is always the best choice.

4. Those college students who suffer from lack of sleep can take simple steps to increase the amount of sleep they get each night.

- \_\_\_\_\_ a. Not getting enough sleep is problematic for college students for two reasons.
- \_\_\_\_\_ b. Some students say that, with hours of homework to do each night, they are too busy to get enough sleep.
- \_\_\_\_\_ c. To minimize these problems, college students can change their habits in two important ways.
- \_\_\_\_\_ d. Many college students think that drinking lots of caffeine will keep them alert and awake, but these are only temporary fixes.

## READING II– Combatting Drought in Rural Africa



### PREVIEW THE READING

#### A- Quick Discussion



Discuss these questions with your classmates.

1. Has your country ever experienced drought?
2. Which do you think would be more difficult to live through: a severe drought, or a severe flood? Why?

**B- Preview** Read the title and first paragraph. What is the article's main idea? Check (✓) your answer.

- ☐ to explain the major effects of drought in African countries
- ☐ to point out environmental issues in a particular area in Africa
- ☐ to present strategies to fight against drought



**C- Vocabulary** Complete each sentence with the vocabulary from Reading 2. You may need to change the form of some of the words.

**casualty** (n): a person hurt or killed in a serious accident or event

**disrupt** (v): to prevent something from continuing as expected

**infrastructure** (n): the basic systems and services, such as transport and power, that a country uses to work effectively

**issue** (n): a subject or problem which people are thinking about or discussing

**monitor** (v): to watch and check something carefully over a period of time

**policy** (n): a set of ideas or a plan for action that a business, government, political party or group of people follow

**rely on** (phr. v): to depend on or trust someone or something

**strategy** (n): a long-range plan for achieving a goal

1. A hurricane \_\_\_\_\_ our holiday to the Caribbean, and we had to return home sooner than expected.
2. The local government was relieved that there were no \_\_\_\_\_ in the earthquake. Everyone was safe.
3. There are several effective \_\_\_\_\_ for preventing coastal damage from high waves and flood water, such as planting sea grass, using sandbags and constructing sea walls and bulkheads.
4. Environmental pollution is a(n) \_\_\_\_\_ that more people are paying attention to. There is more recycling and less use of plastic.
5. Companies are now asked to \_\_\_\_\_ their greenhouse gas emissions to make sure they are not too high.
6. Some environmentalists don't think we should just \_\_\_\_\_ the government to regulate pollution. They believe we need citizens to be involved as well.
7. Developing countries often lack a strong enough \_\_\_\_\_ to be able to provide water and electricity to all residents.
8. The Environmental Protection Agency's \_\_\_\_\_ is to make sure that the government considers the environmental effects of its plans.



## Combatting Drought in Rural Africa

1 In order to mitigate the problems which drought can bring, there are several short- and long-term **strategies** which can be adopted. A range of **policies** designed to combat these problems exists at local, national and international levels. As well as general **issues** related to this topic, there are specific recommendations which can be made in the case of Kenya, where drought has been a major problem in recent years.

2 Droughts frequently put millions of people at risk of food *insecurity*<sup>1</sup> in central Kenya. The area is so dry that it cannot support agricultural crops. There are few permanent rivers, and the seasonal waterways caused by flood waters in the rainy months **disrupt** transport across the region. The people of this area mainly live off their cattle. Droughts can quickly kill off their animals, which eliminates their main source of income. Finally, because the area is so vast, **infrastructure** is under-developed, so access to the population is difficult.

3 When drought is predicted in central Kenya, it is important to employ short-term preventative measures and be prepared to respond to it as quickly as possible in order to minimize **casualties**. One such measure is recycling water. Recycled water, from the washing of clothes for example, can be given to animals and used to *irrigate*<sup>2</sup> land. A programme of this kind can be achieved in two to three months. To do this on a regional level in central Kenya would

only cost about \$100,000 per year, which is relatively cost-effective. This water cannot be drunk by people, however. Once drought strikes, the most important response is to transport bottles of drinking water into the drought area. This can be done quickly (within one week), but it is quite expensive. Kenya has 47 million people, and to import bottled water for even a quarter of the population could cost as much as \$10 million per year. In addition, since drought also often kills animals and crops, it is also vital to bring food to prevent people from starving.

4 Drought tends to reoccur in the same central areas of Kenya, so long-term solutions are also necessary. The authorities need to **monitor** droughts and gather relevant data. As they are already being paid for their government jobs, this should not add any extra costs to the national budget. The data can then be used for appropriate planning at the local and national levels. This part costs more, as it involves developing irrigation systems for farming communities, or building canals and dams to benefit villages and cities. This could cost as much as \$8 million and take as long as two years. On a micro-scale, the construction of *wells*<sup>3</sup> can help provide more water at a cost of about \$500,000. Once the funding is in place, this can be done immediately. On a wider scale, desalination plants, which remove salt from sea water, also make drinking water available, but at a much higher cost of about seven to ten million dollars. These plants can take years to construct before they are running efficiently — perhaps as long as five years. Additionally, harvesting rainwater lets communities collect and store any rain which does fall. This is less costly, but it depends on the rainfall in the area. Sometimes Kenyans have to wait months for a rainfall.

5 The majority of these strategies are undoubtedly expensive and may only be affordable for richer countries, which have the technology and expertise to predict and plan for drought more effectively. Poorer countries, on the other hand, are generally unable to afford long-term solutions, and may have to **rely on** international support and charity in the short term. Lack of education and under-developed infrastructure may also hamper some of these projects.

6 Overall, we can see that there are several recommendations that can be made for Kenya's drought problems. First, the provision of training in recycling and harvesting water throughout the country at a local level. Second, the implementation of a well-construction programme to maximize the amount of water available nationally. Third, a movement to lobby the international community to provide funding for a desalination plant on the coast to ensure that Kenya can always meet its water needs.

**1 food insecurity** (n) the state of being without reliable access to a sufficient quantity of affordable, nutritious food.

**2 irrigate** (v) to supply land with water so that crops and plants will grow

**3 wells** (n) deep holes in the ground which hold water

## WORK WITH THE READING

**A- Identify** Read the article. Then write the paragraph number next to the purpose mentioned in the article.

- a. sets out a number of suggestions \_\_\_\_\_
- b. consider economic factors in decision-making \_\_\_\_\_
- c. introduces the main purpose of the text \_\_\_\_\_
- d. discusses a range of long-term strategies \_\_\_\_\_
- e. discusses a range of short-term strategies \_\_\_\_\_
- f. briefs the reader on the effects of drought in Kenya \_\_\_\_\_



**B- Categorize** Read the article again. Place the strategies for dealing with drought in the appropriate places in the table.

1. constructing dams
2. rainwater harvesting
3. building wells

4. bringing in drinking water
5. water recycling
6. constructing desalination plants

<i>expensive</i>	<i>inexpensive</i>	<i>short-term</i>	<i>long-term</i>

**C- Interpret** Choose the best answers.

1. According to the writer, what aspect of this issue is important to understand?
  - a. the moral challenges of dealing with drought
  - b. the financial aspects of dealing with drought
2. Why are the people of central Kenya most at risk of drought?
  - a. their way of life means they need to use a lot of water
  - b. the area experiences low annual rainfall
3. Which of these points do you think the author agrees with most?
  - a. Partnership between organizations is important in preventing drought.
  - b. Every country should follow the recommendations in this article.



## WRITING II

### GRAMMAR

#### EXPRESSING SOLUTIONS (1)

##### Making Suggestions

When you write an academic essay, you may need to make suggestions. You can use **should** to do this. However, when you make more than one suggestion and you want to avoid repetition, use **other ways** to say should.

Look at the sentences below. They show different expressions for making a suggestion in an academic essay.

- \* Cities should encourage commuters to use public transport.
- \* It is important to encourage commuters to use public transport.
- \* Encouraging commuters to use public transport is essential.

Notice how you need to add **-ing to a verb (encouraging)** when you use it as a noun. This is a good way to make an action the subject of your sentence.

**A- Look at the suggestions with *should* and complete the sentences so that the meaning is the same.**

1. We should use bicycles to travel short distances.  
It is important to \_\_\_\_\_.
2. We should build more high-speed railways between cities.  
\_\_\_\_\_ is a good idea.
3. We should consider new ways of reducing traffic congestion.  
It is important to \_\_\_\_\_.

**B- Complete the sentences using the phrases in the box.**

*is a good idea*

*it is important*

*we should*

1. There are a number of reasons why \_\_\_\_\_ use public transport instead of driving.
2. Another reason why using public transport \_\_\_\_\_ is that it reduces the amount of pollution from cars.
3. It seems to me that \_\_\_\_\_ encourage people to use cycle lanes more by building more and making them safer.
4. \_\_\_\_\_ for people of all ages to be able to use public transport.
5. I am not entirely convinced that \_\_\_\_\_ use public transport for all local journeys instead of driving.
6. Some people doubt whether spending money to build an underground rail system \_\_\_\_\_.

**EXPRESSING SOLUTIONS (2)**

**Expressing Solutions Using "It"**

Most sentences in English need a subject as well as a verb.

**\*Minimizing the risks caused by natural disasters** is possible.

The words in bold are the subject. When the subject is long like this, it sounds better to change the sentence, so we use it as the subject.

**\*It** is possible to minimize the risks caused by natural disasters.

Note that **it** has no meaning in this structure. **It** does not refer to anything else in the text.

**It** is only included to provide a subject for the sentence.

**There are a number of grammar patterns which follow it.**

- 1) it + is + noun phrase OR adjective + infinitive

**It is a good idea to keep** an emergency kit at home.

**It is essential to prepare** for natural disasters.

- 2) it + is + adjective + gerund

**It is worth preparing** for natural disasters.

- 3) it + is + noun phrase OR adjective + that + clause

**It is surprising that** government do not always prepare for disasters.

**It is a sad fact that** many lives were lost.

### A- Complete the sentences with your own ideas.

1. It is important to prepare for a flood by \_\_\_\_\_.
2. It is never a good idea to build houses \_\_\_\_\_.
3. In areas that suffer from drought, it's worth \_\_\_\_\_.
4. When working with many different organizations, it can be difficult \_\_\_\_\_.
5. After a serious natural disaster, it is not easy to \_\_\_\_\_.

### B- Rewrite the sentences.

1. If people don't pay attention to them, it is useless to invest in tsunami warnings.  
It is not worth \_\_\_\_\_.
2. Building homes in a flood zone is a terrible idea.  
It is never a good idea to \_\_\_\_\_.
3. A tsunami can overcome large-scale flood defences.  
It is possible that \_\_\_\_\_.

## Problem-Solution Essay Guided Exercises

### PRACTICE 1

**A) You read an introductory paragraph for a problem-solution essay about overexposure to the sun. Now read the writer's thesis statement again and the first body paragraph. Then discuss the questions with a partner.**

**Thesis Statement:** Sun exposure can seriously affect people's health; however, people can deal with the health hazards of too much sun in several ways.

Too much exposure to the sun has a bad effect on our body for a number of reasons. For one, people, especially those who are fair skinned, can get sunburns. Skin is sensitive to sunlight. Because of this, it can turn pink or red when it is not protected. Bad sunburns can be uncomfortable, painful, and damaging to the skin. Furthermore, as a result of overexposure, health problems can crop up later in life. When skin is damaged over many years, it cannot repair itself. Consequently, people who have had many sunburns can develop more wrinkles when they get older. They also experience premature aging, where wrinkles show up sooner than normal. In addition, studies have shown that people who sunbathe end up being at a much higher risk for skin cancer. Due to the sun, people suffer from mild and serious health problems.

1. Where are reasons for the problem introduced? Underline the topic sentence.
2. Why is overexposure to the sun a problem? Check three main reasons.
3. Which transition words introduce each specific reason? Circle them.
4. Which transition words signal causes? Underline them.
5. Which transition words signal effects? Double underline them.
6. Circle the sentence that sums up all of the information in the paragraph.

## PRACTICE 2

**A) Work with a partner. Read the body paragraph about solutions. Then fill in the two sentences from below that best introduce each solution.**

Despite these problems, there are ways for people to protect their skin from the sun and repair damage. First of all, \_\_\_\_\_

\_\_\_\_\_. Sunscreen contains special chemicals that prevent burning. Using sunscreen is necessary when people are exposed to the sun for long periods of time, such as when sunbathing, taking a walk outside, or working in the garden. Second of all,

\_\_\_\_\_. The simplest solution is to eat healthy foods such as fruits and vegetables. They have vitamins that the body uses to repair skin and make it strong again. In addition, using lotions with vitamin A can promote the healing of sunburned skin.

- a. people should use sunscreens that contain vitamin A
- b. people can take different steps to prevent sun damage
- c. people need to use sunscreen to keep their skin healthy
- d. when people do have sun damaged skin, they can also take steps to fix it

**B) Look again at the body paragraph in Exercise A. Write a concluding sentence for the paragraph. Discuss your sentence with your partner.**

## PRACTICE 3

**Read the model of a concluding paragraph. Discuss the questions with a partner.**

1. What is the writer's restated thesis? Circle the sentence.
2. According to the writer how do people view the problem? Underline the sentence that gives the writer's observation.
3. What is the writers call for action? Double underline the sentence(s).

In all, there are several ways people can prevent and minimize the problems brought about by overexposure to the sun. Most people understand the dangerous link between sun exposure and sunburns, wrinkles, and cancer, but they still put themselves at risk by not protecting themselves or repairing damaged skin. People need to take the dangers of sun exposure more seriously. They should put on sunscreen whenever they are outside for a long time, and they should consume fruit and vegetables in order to help their skin stay healthy in the sun.

## PRACTICE 4

**You have read parts of this problem-solution essay already. Now read it from beginning to end, and notice how the parts fit together.**

### Here Comes the Sun

Every time people go outside, they are exposed to the sun. Sun exposure means not being protected from the sun's rays. A little sun can benefit the skin, but too much exposure can lead to skin damage and even skin cancer. Because serious effects don't appear until much later in life, people often ignore the health warnings about sun exposure. Yet, experts say that overexposure to the sun is a real problem. Sun exposure can seriously affect people's health; however, people can deal with the health hazards of too much sun in several ways.

Too much exposure to the sun has a bad effect on our body for a number of reasons. For one, people, especially those who are fair skinned, can get sunburns. Skin is sensitive to sunlight. Because of this, it can turn pink or red when it is not protected. Bad sunburns can be uncomfortable, painful, and damaging to the skin. Furthermore, as a result of overexposure, health problems can crop up later in life. When skin is damaged over many years, it cannot repair itself. Consequently, people who have had many sunburns can develop more wrinkles when they get older. They also experience premature aging, where wrinkles show up sooner than normal. In addition, studies have shown that people who sunbathe end up being at a much higher risk of skin cancer. Due to the sun, people suffer from mild and serious health problems

Despite these problems, there are ways for people to protect their skin from the sun and repair damage. First of all, people need to use sunscreen to keep their skin healthy. Sunscreen contains special chemicals that prevent burning. Using sunscreen is necessary when people are exposed to the sun for long periods of time, such as when sunbathing, taking a walk outside, or working in the garden. Second of all, when people do have sun-damaged skin, they can also take steps to fix it. The simplest solution is to eat healthy foods such as fruit and vegetables. They have vitamins that the body uses to repair skin and make it strong again. In addition, using lotions with vitamin A can promote healing of sunburned skin. With sunscreen, a good diet, and lotions, people can keep their skin healthy in the sun.

In all, there are several ways people can prevent and minimize the problems brought about by overexposure to the sun. Most people understand the dangerous link between sun exposure and sunburns, wrinkles, and cancer, but they still put themselves at risk by not protecting themselves or repairing damaged skin. People need to take the dangers of sun exposure more seriously. They should put on sunscreen whenever they are outside for a long time, and they should consume fruits and vegetables in order to help their skin stay healthy in the sun.

**The essay below is a well-written sample. Check the outlines to see how the essay is organised. Pay close attention to the underlined sentences.**

### **The Problem of Global Warming**

One of the biggest problems facing the world today is global warming. Many experts believe that our production of carbon dioxide and other greenhouse gases is heating the atmosphere, and this could be very dangerous for human life. This essay will examine the problem of global warming and suggest some solutions for it.

Many problems could result from global warming. One of the biggest is rising sea level. This could result in the flooding of low lying coastal areas and cities, such as Egypt, the Netherlands, and Bangladesh. Another problem is changes in weather patterns. Many areas of the world are experiencing increased hurricanes, floods, and other natural disasters. A final issue associated with this phenomenon is the negative effect on animals. Fish populations could be affected, while some insects which spread disease might become more common.

There are several things we can do to deal with global warming. One answer is to stop producing CO2. We can do this by switching from oil, coal and gas to renewable energy. A second solution is to plant more trees. Trees absorb CO2 and produce oxygen, which is not a greenhouse gas. A third idea is to use less energy and recycle more products. If we use less energy and are more environmentally friendly, the earth's temperature may not rise too much.

In conclusion, making small changes now in the way we live means avoiding huge changes in the future. Scientists, governments and individuals must work together to overcome this serious threat.

## The Problem of Global Warming

### Sample Outline

- **Introduction:** One of the biggest problems facing the world today is global warming.

**Thesis Statement:** This essay will examine the problem of global warming and suggest some solutions for it.

- **1<sup>st</sup> body**

**Topic Sentence:** Many problems could result from global warming.

**Supporting Ideas:**

- One of the biggest is rising sea level.
- A final issue associated with this phenomenon is the negative effect on animals.

- **2<sup>nd</sup> body**

**Topic sentence:** There are several things we can do to deal with global warming.

**Supporting Ideas:**

- One answer is to stop producing CO2.
- A second solution is to plant more trees.
- A third idea is to use less energy and recycle more products.

- **Concluding Sentence:** In conclusion, making small changes now in the way we live means avoiding huge changes in the future.

## SAMPLE STUDENT ESSAY

The Problem ~~Of~~ **of** Our Era Is ~~The~~ **the** High Volume of Traffic

Could you look out from where you are now and count the cars? Or do you have any estimates of how many cars there are in your neighbourhood, on the street, or wherever you are? In our era, people prefer to provide their transportation by car. Some individuals continue these actions despite being aware of the hardships caused by their choices. Some individuals also continue these actions without being aware of them at all. It is undoubtedly the case that urban areas around the world increasingly suffer from the high volume of traffic. It is a major problem in big cities yet there are some notable steps that need to be taken ~~to tackle~~ **to** reduce the high volume of traffic by the government and community.



There are several hardships caused by the high volume of traffic. The first reason is the high volume of traffic leads to drivers and passengers to get nervous and stressed. And this may increase the possibility of ~~have~~ **having** an accident. For instance, let's imagine a man gets into a taxi to catch a meeting, but the taxi gets stuck in traffic, and then the man and the taxi driver have to wait. At this time, the man starts to worry and get angry, and tells the taxi driver that he is in a hurry. The taxi driver also tries to hurry and loses attention. You have more or less guessed how this story will end. Secondly, it may block the passage of emergency vehicles going to places of urgent need such as ambulance, police car, or fire brigade truck. For instance, in traffic jams, it is difficult for an ambulance to get an emergency patient to the hospital, and every second is vital for the patient inside the ambulance.

Despite the hardships, there are several substantial steps the government and community may take to reduce the high volume of traffic. To begin with, driving should be charged in areas where traffic congestion are predicted. Besides, if this comes into force by the government then individuals will prefer to use means of public transport or their bicycles. Secondly, the government's development of ~~ways~~ **roads** and the construction of new ~~ways~~ **routes** will also significantly reduce the high volume of traffic. Apart from that, the solutions to be found should limit the use of cars and encourage transport by public transportation vehicles, by bicycle or on foot.

In brief, the best transportation is by public transportation vehicles, by bicycle or on foot but governments should support and encourage their community to prefer these choices in transport. The government and the community can beat the high volume of traffic with hand in hand if they pay attention to the ~~above~~ **solutions given** above.



**WRITING TASK 2:** Write a well-organized problem-solution essay about one of the topics below:

- 1) *Air pollution is a big problem for all countries. What are the causes of air pollution and what should be done to stop or slow down air pollution?*
- 2) *Due to wrong city planning, some residential areas are flooded and serious damage occurs. What are the effects of this problem and what are some measures to be taken?*

**Edit-** Complete the self-assessment checklist before you hand in your essay.

SELF-ASSESSMENT	Yes	No
Does the essay include an introductory paragraph, two / three body paragraphs, and a concluding paragraph?		
Does the essay start with an introductory paragraph with a hook and give important background information regarding the topic?		
Is there a clear thesis statement?		
Do the body paragraphs provide details and /or examples?		
Does the concluding paragraph summarize the information you have put in the essay?		
Have you used expressions for solutions suitably?		
Does the essay include vocabulary from the unit?		
Did you check your essay for punctuation, spelling, and grammar?		

