



EARTH AND ENVIRONMENT

Text type: Article

Theme: Nature and natural resources

Subthemes: Connecting People and Nature/Wildlife Vignette/Environment Matters

In this unit the students will be able to

- Use pre-reading strategies to predict the content of a text from topic / picture, title / headings, key words and visuals etc. by using prior knowledge, asking questions and contextual clues.
- Skim text to have general idea of the text, infer theme/ main idea.
- Apply critical thinking to interact with text and use intensive reading strategies (while-reading) to make simple inferences using context of the text and prior knowledge, use context to infer missing words, read silently with comprehension and extract main idea and supporting detail, comprehend/interpret text by applying critical thinking.
- Use summary skills to extract salient points and develop a mind map to summarize a text.
- Write a persuasive/ argumentative essay.
- Distinguish fact from opinion.
- State an opinion on the topic.
- List ideas and arguments that support opinion.
- Organize ideas and supporting arguments in a clear structured and logical manner.
- Use persuasive language to enhance ideas.
- Use special devices to support arguments.
 - Use conditional sentences.
 - Identify and demonstrate use of relative pronouns
- Write procedures (e.g., recipes, directions, instruction manuals)
- Construct complex sentences and paragraphs using main and subordinate clauses with appropriate transitional devices and correct punctuation in varying degrees of complexity
- Apply knowledge of parts of speech, tenses, sentence structure and other features of grammar and vocabulary to understand how language functions in different contexts, make effective choices for meaning or style while reading, listening and writing.

Pre-Reading

- How does overpopulation effect natural habitats?
- How are human activities are impacting climate globally?

The diversity of life on Earth is essential to the health of our planet and to our wellbeing as human beings. But nature is under pressure as never before. Our needs for food, water and land, and our demands for energy is destroying habitats, polluting our air and water, and driving species of animals and plants to extinction. We are now losing biodiversity up to ten thousand times faster than it was disappearing 100 years ago.

We are in a bottleneck of overpopulation and wasteful consumption that could push half of Earth's species to extinction in this century.

- E.O Wilson

More people need more space. Damaging human activity continues to encroach on natural environments, thereby destroying the habitats of countless species. As our numbers rise, cities, infrastructure, and agricultural land are growing and merging with each other, fragmenting the remaining habitat and leaving isolated "islands" of natural populations of plants and animals which are too small to survive.

Humankind's relentless consumption of resources such as timber, oil and minerals is continuing to destroy natural habitats around the globe. We are also putting enormous pressure on populations of wild species by large-scale industrial fishing in our seas.

Our planet is on the verge of a climate crisis due to our endless production of greenhouse gases including carbon dioxide and methane. We are headed for a 3-4°C warmer world by the end of the century. We are already seeing species decline due to global temperature increase. Every half a degree of warming has a huge knock-on effect on ecosystems, with mobile species running out of areas to migrate to and temperature-sensitive organisms like corals undergoing massive die-offs.

As populations increase, the disposal of waste from households, agriculture and industry, becomes an increasingly serious issue. Our oceans are becoming choked with plastic waste which is killing millions of animals, from sea turtles to whales. The Ellen MacArthur Foundation estimates that by 2050, there will be more plastic than fish in the sea. As well as affecting the lives of humans, noise, light and chemical pollution all damage the health of wild species.

Though we often think about human-induced climate change as something that will happen in the future, it is an ongoing process. Ecosystems and communities around the world are being impacted today. Global temperatures rose about 1.98°F from 1901 to 2020, but climate change refers to more than an increase in temperature. It also includes sea level rise, changes in weather patterns like drought and flooding, and much more. Things that we depend upon and value water, energy, transportation, wildlife, agriculture, ecosystems, and human health are experiencing the effects of a changing climate.

The impacts of climate change on different sectors of society are interrelated. Drought can harm food production and human health. Flooding can lead to disease spread and damages to ecosystems and infrastructure. Human health issues can increase mortality, impact food availability, and limit worker's productivity. Climate change impacts are seen throughout every

While-reading

How are oceans affected due to disposal of waste in them?

aspect of the world we live in. Long-standing socioeconomic inequities can make underserved groups, who often have the highest exposure to hazards and the fewest resources to respond, more vulnerable.

No doubt international agreements like Kyoto Protocol and Paris Agreement are in place at the policy level but these are of a medium- and- long-term nature and may take up to 50 years to be fully implemented for real effect. Even if these are made mandatory for all the countries, the ozone layer may take another 50 years to repair itself.

The situation is quite alarming and terrifying for the worst effected country like Pakistan. Pakistan is one of the most vulnerable countries affected by climate change, and has been ranked among the top 10 by the German Watch Institute. Pakistan highly depends on its climate-sensitive land not only providing employment, but also a source of income through export of agricultural products. That being so, natural disasters may cause a great harm to the country.

Climate change and natural disasters, such as floods, pose potential risks of epidemic due to vector-borne diseases, like malaria or cholera, which would reduce the efficiency of the people. Financial and health barriers being created due to the loss of employment and disease may lead to an economic recession of its own in a country that already has a struggling economy.

The 2022 flood in Pakistan was a grim illustration of a humanitarian crisis on a massive scale.

Entire towns, critical infrastructure, homes, farmlands, and crops were swept away. Escalating temperatures are driving environmental degradation, natural disasters, extreme weather events, food and water insecurity, as well as economic disruptions.

While-reading

What risks are involved regarding epidemics due to climate change and natural disasters in Pakistan?

It is crucial for us to realise our complex relationship with ecology. Historically, it is observed that we have been dependent on the environment for our survival. However, the modern age has witnessed the amount of control humans have over the environment, and that makes it our responsibility to care for it. This can only be achieved through a national effort in line with global initiatives.

Pakistan needs to contribute its share to the global fight against the adverse effects of climate change by initiating mitigating steps to reverse the process and at least stop the worsening of the damaging effects of climate change. This calls for implementing a robust policy to save Pakistan from the effects of climate change. Natural disasters, like floods, will likely increase if we do not take action on climate change. And the time to do that is now. Any delay will be harmful.

It is important to remember the vital contributions that can be made by private citizens. "Change only happens when individuals take action," rightly says clean energy advocate Aliya Haq. "There's no other way, if it doesn't start with people." There are many ways individuals can help reduce the hazardous effects of climate change in Pakistan. Take steps to save energy, such as using energy-efficient appliances. Upgrade your heating system. Walk, cycle, or use public transportation for short distances. Reconsider how you dispose of food in order to reduce food waste. Electronics, clothes and other items we buy cause carbon emissions at each point in production, from the extraction of raw materials to manufacturing and transporting goods to market. To protect our climate, buy fewer things, shop second-hand, repair what you can and recycle.

Government can also play its part in combating climate change. The government can take practical and concrete steps like construction of large and small dams, dykes to divert and store flood water, raising heights of embankments and bridges for roads, railways, or even their realignments, improvement of cross drainage structures, in most of the worst clearly identified vulnerable areas by aerial and ground surveys, and shifting of villages to higher ground. The dependence of humans on the ecosystems has already been understood, and our actions in the future will bear testimony to whether or not we did justice to this responsibility when we could.

Post Reading:

- What is our responsibility to save the natural environment?
- How can educational programs influence and develop sense of responsibility toward the natural world?

1. Glossary

Given below are the difficult words from the unit. Look at their meanings and use these words in your own sentences.

biodiversity	the variety of all living things in one area
extinction	dying out, vanishing
habitat	natural environment
encroach	intrude on (a person's territory, rights, personal life, etc.)
alarming	worrying, disturbing
hazards	a danger or risk
ecosystem	environment, habitat in which plants and animals (including humans) live in relationship with each other and with the surrounding physical conditions
degradation	humiliation, shame
grim	gloomy, stern
mitigating	lessening the gravity of an offence or mistake

2. Reading and Critical Thinking Skills

a. Comprehension Questions:

- Our planet is on the verge of a climate crisis. Do you agree?
- Does climate change refer only to an increase in temperature? Explain.
- What are the estimations of "The Ellen MacArthur Foundation" for 2050?
- Explain how human activities are destroying the habitat of various species?
- Which initiatives can be taken to stop the damaging effects of climate change?

3. Vocabulary and Grammar

a. Relative Pronouns

A relative pronoun is a word that is used to connect an independent clause to a relative

clause. Relative pronouns are meant to provide more information about the subject it relates to. Relative pronouns include who, whom, whose, that and which.

Relative Pronouns	Used
who	used for people; replaces subject pronouns such as I, she, he, we, and they
whom	replaces subject pronouns such as me, her, and him
whose	shows possession
which	used for objects and animals
that	used for things

b. Choose the correct relative pronouns.

- i. I am looking at the album _____ we took together.
 - a. Which
 - b. Who
 - c. Whom
- ii. She does not understand a word _____ you are saying.
 - a. What
 - b. That
 - c. Who
- iii. Show me the road _____ leads to the railway station.
 - a. That
 - b. Who
 - c. Which
- iv. My grandfather, _____ I loved, is dead.
 - a. Who
 - b. Whom
 - c. That
5. We bought some apples from _____ we extracted the juice.
 - a. Which
 - b. Whom
 - c. Who

Adjective Clause

- Rule: A subordinate (dependent) clause that modifies, or describes, a noun or pronoun in a complex sentence.
- Adjective Clauses begin with a Relative Pronoun.

Examples of Relative Pronouns are:

- | | |
|---------|-----------|
| - That | - Whose |
| - Which | - Where |
| - Who | - Whoever |
| - Whom | - What |

An adjective clause is a dependent clause that modifies a noun or pronoun. It tells **which one** or **what kind**. Adjective clauses almost always come right after the nouns they modify and it is made up of several words, which, like all clauses, include a subject and a verb.

Example:

- There is the mountain that we are going to climb.
- My blue tennis shoes, which used to be my mom's, were under the bed.
- Daniel, who was late again today, sits next to me in English.
- The car that you bought last year has been stolen.
- The students who secured good marks are appreciated.

c. Identify the adjective clause in each sentence.

- The cake that she bought was delicious.
- The family that lives next door is hospitable.
- I visited the town where they lived.
- Do you know the man who won the trophy?
- The game, which was played yesterday, ended in a tie.

d. In the following sentences replace adjective clauses by adjectives or adjective phrases.

- He is a person who spends money in a wasteful way.
- Which is the road that leads to the airport?
- The answer he gave to the teacher was not appropriate.
- This is the town where our grandparents lived.
- The reason why he failed is apparent.

The Second Conditional

The second conditional uses the SIMPLE PAST tense after if, then 'would' and the infinitive:

if + past simple, ...would + infinitive

- if a won the lottery, I would buy a big house.
- if I met the King of England, I would say hello.

The second conditional sentence is used to express the consequence of an unrealistic action or situation in the present or future. The situation can be very improbable or completely unrealistic.

Examples:

- If I won the lottery, I would travel around the world.
- If I had more free time, I would play more sport.
- If I were you, I wouldn't trust her again.

To make a sentence in the second conditional, we use,

If + past simple, would/wouldn't + verb.

When we use the verb 'to be' in the second conditional, the past form is always were and not was for the subjects I, he, she and it. For example,

If I were rich, I would spend all my time travelling.

We normally use the second conditional when we talk about imaginary situations, dreaming about possible situations and how we would act consequently. For example,

What would you do, if you won a lot of money?

e. Put in the correct second conditional verb form.

- If he _____ (speak) English fluently, he _____ (get) the job.
- They _____ (go) to Europe if they _____ (want).
- My father _____ (not/be) angry with me if I _____ (come) home early.
- He _____ (help) me if he _____ (have) time.
- If she _____ (pass) the paper, she _____ (be) able to go to the next class.

4. Oral Communication skills**a. Form groups in class and discuss the following:**

According to the writer, "The impacts of climate change on different sectors of society are interrelated". Elaborate the statement by giving relevant examples from real life scenarios and make effective choices for meaning or style while reading, listening and writing.

i. Divide the students in pairs and ask them to discuss the following:

Climate change is not a myth. It has become a reality. Do you agree? Support your answer with examples. You can use the expressions given below to state your opinion.

Agreement	Disagreement
■ There are many reasons for... ■ There is no doubt about it that... ■ I am of the same opinion... ■ I absolutely agree with...	■ The problem is that... ■ I doubt whether... ■ I am of a different opinion... ■ I cannot agree with this idea...

5. Writing Skills

A. Letter to Editor

Write a letter to the editor about Kathmandu's drinking water crisis and other problem

Sender's Address →	Balaju-16, Kathmandu
Date →	09/05/2023
Receiver's Designation & Address →	To, The Editor, The Rising Nepal Daily, New Road, Kathmandu
Subject Statement →	Subject: Problem of Drinking Water
Salutation →	Dear Sir,
Problem →	I'd like to attract the attention of the city authorities, via your newspaper, to the poor quality and insufficient quantity of water in our neighborhood of Balaju in Kathmandu.
Problem's effects →	It is sad that the local government doesn't care to give the people even the most basic conveniences, such a reliable and sufficient water supply. In our neighborhood, water is only provided twice a week in the early morning for an hour; on the other days, the tap is left dripping. Additionally, the water source has very low quality. Since the residents consume water, they have been afflicted with a number of water-related diseases like diarrhea, typhoid, etc. It is anticipated that these illnesses may become endemic if clean water is not provided.
Needed Action →	Instead of ignoring such a problem, it is anticipated that the authorities will take quick action to assure an adequate supply of high-quality water in our neighborhood, Balaju. We all are awaiting your quick and positive action.
Subscription and Sign	Yours faithfully, ABD

- B. Write a letter to the editor of a newspaper about the need to build a canteen in your school. Apply knowledge of parts of speech, tenses, sentence structure and other features of grammar and vocabulary to understand how language functions in different contexts. Make effective choices for meaning or style

- C. Make a kitchen garden in your school/ home. Give directions and write a manual about setting up a kitchen garden.
- D. Write an argumentative essay on "Water Resources Management" (200-250 words). Construct complex sentences and paragraphs using main and subordinate clauses with appropriate transitional devices and correct punctuation in varying degrees of complexity First, outline the essay. The following instructions have been given for guidance.
- Give basic information in introduction to contextualize the issue.
 - Clearly state your main point of view or argument regarding the issue.
 - Start each body passage with a reasonable subject sentence that presents the central matter of the section.
 - Give proof with examples.
 - Address counterarguments strongly.

Argumentative Essay Outline

