

Unit 2

SCIENCE AND TECHNOLOGY

Students Learning Outcomes

On the completion of this unit, the students will be able to:

- scan the text to answer the comprehension questions.
- give personal opinion and justify stance related to viewpoints/ideas and issues in the text read.
- read silently with comprehension and extract main idea and supporting detail.
- identify correct spellings.
- write an essay on a general subject.
- use a thesaurus to locate the synonyms closest to the meaning of the given word in the context.
- Illustrate use of adverbs learnt earlier.
- apply rules of change of number of nouns learnt earlier.

Pre-reading

- How have latest inventions and discoveries changed our lives?
- Name some of the modern inventions which are used at your homes.

The modern age is the age of science and technology. The influence of modern technology can easily be seen in every walk of life and much of human happiness depends on the way in which man makes use of the vast power that science has placed in his hands. In fact, it is impossible to survive in the absence of the various discoveries and inventions.

The influence of modern technology can easily be seen and felt in our daily life. Think of electricity, the aeroplanes, the railways, the motor



cars and means of communication which have become **indispensable** in our daily life. These inventions have brought happiness and comforts for us. Let's take the example of electricity. This great discovery has added greatly to the joy and comfort of life. Electronic machines have largely **supplanted** manual labour and are producing better necessities of life in great **abundance** at a much lower cost of production. This discovery has not only added to our physical comforts but also has played a great role in our mental and intellectual development.



Latest inventions have made our domestic life very comfortable and easy. Now our females at homes can enjoy the benefits of modern technology in the form of refrigerator, ovens, juicers, blenders, freezers and washing machines.



Travelling has become very fast and comfortable. Now-a- days we can travel by trains, motor cars, buses, motor bikes and aeroplanes. Aeroplanes have brought a revolution in the field of travelling. They are the fastest means of transportation in modern era. These modern means of travelling have helped us in covering the distance of months in days, even in hours.

We can also see that latest technology has revolutionized the means of communication. We can talk with our relatives and friends thousands of miles away from us with the help of modern scientific devices like telephone, cell phone and computer. Due to these latest devices, our world has become a

global village. If anything important happens in any part of the world, the news can be conveyed within seconds with the help of radio, television or social media.



The modern technology has also helped mankind to fight against fatal diseases. Once there was a time when certain diseases were considered to be **incurable** but now with the help of modern technology, the researchers have discovered different medicines which can cure different diseases. Even in the field of surgery, the transplantation of heart, liver and kidney has also become possible, because of **tremendous** achievements in the field of medical sciences.

With the advancements in telecommunication technology, distance education programs have rapidly expanded. Distance education is inevitably linked to media and technology. The distance education offers flexible learning through both online (internet) and print-based materials. Distance education courses are designed to provide one of the study options to students and others who are unable to attend scheduled classes at campus.

With the fast growth of the Internet, and the fast progress of communication, the World Wide Web is a new medium for distance learning. With the enormous number of resources available online, and the increasing number of people, who have access to the Internet, web-based instruction is considered one of the fastest media for teaching and learning.

Apart from it, computer conferencing is another option of learning and sharing information. It allows students and instructors to interact via a computer

network more easily and effectively. This interaction can be through e-mail messages, file transfer, chat rooms and real audio and video exchange. With



the fast progress in computer technology, computer conferencing is taking most important place in teaching learning process.

There is a negative side of modern technology as well and that is the invention of hydrogen bomb and atom bomb, which have caused new fears among the people. As we know that in August 1945, America dropped atomic bombs on Hiroshima and Nagasaki, Japan, which resulted in killing of thousands of people and destruction of property at large scale. The impact of this destruction left the people of the world stunned and confused. The scientists were also **bewildered** by the power which science had placed in the hands of people.

We can say that modern age is the age of comforts and destruction as well. It depends upon the usage of modern discoveries and inventions. We need to use them for the welfare and betterment of humanity, rather than using them for the destruction, chaos and uncertainty.

Reading and thinking skills

Comprehension

1. Answer the following questions.

- i. How have scientific inventions increased our happiness?
- ii. How has science influenced our domestic lives?
- iii. How has modern age made our world a global village?

- iv. How is modern technology being used in the field of medical science?
- v. What is distance education?
- vi. How has internet contributed in the field of distance education?
- vii. What is the role of computer conferencing in teaching learning process?
- viii. What are the negative aspects of modern technology?
- ix. When and where were atomic bombs dropped by America?
- x. How should we use modern discoveries and inventions?

2. Re-read the lesson and complete the following sentences by choosing the correct option.

- i. The influence of modern _____ can be seen in every walk of life.
 - a) generation
 - b) weapons
 - c) technology
 - d) cars
- ii. Scientific inventions have _____ happiness and comforts of human beings greatly.
 - a) decreased
 - b) widened
 - c) closed
 - d) increased
- iii. The latest technology has revolutionized the _____ of communication.
 - a) cell phones
 - b) telephones
 - c) radios
 - d) means
- iv. Hydrogen bomb and atom bomb have caused new _____ among the people.
 - a) fears
 - b) hopes
 - c) talent
 - d) equipment
- v. We need to use _____ for the welfare and betterment of humanity.
 - a) modern inventions
 - b) phones
 - c) transport
 - d) food
- vi. America dropped _____ on Hiroshima and Nagasaki, Japan in August 1945.
 - a) hydrogen bombs
 - b) nitrogen bombs
 - c) atomic bombs
 - d) chemical bombs

- vii. Due to these latest devices, our world has become a _____ village.
a) small b) big
c) African d) global
- viii. Once there was a time when certain _____ were considered to be incurable.
a) diseases b) persons
c) animals d) accidents
- ix. Latest inventions have made our _____ life very comfortable and easy.
a) political b) economic
c) domestic d) business
- x. scientific inventions and achievements have also given us scientific _____ which is essential for future development and progress.
a) inlook b) outlook
c) look d) book

Critical thinking

3. What is your personal point of view about the modern inventions and their use in present day life?
4. Read silently any paragraph from the text and extract main idea and supporting details.

Use of Dictionary

- ### 5. Consult dictionary and identify correct spellings.

desease	disease	echievement	achievement
kaite	kite	receve	receive
wapon	weapon	indispensible	indispensable

Writing

- 6. Write an essay on 'Uses and misuses of science and technology'.**

Writing

7. Use a thesaurus to locate the synonyms closest to the meaning of the given words in the context.

Words

bounties
indispensable
abundance
incurable
tremendous

Synonyms

Adverbs

Remember

An adverb is a word that describes or gives more information about a verb, adjective, or other adverb.

Examples

- i. He fought **bravely**. ('bravely' qualifies the verb 'fought'.)
- ii. The tower was **surprisingly** tall. ('surprisingly' qualifies the adjective 'tall'.)
- iii. They cried very **loudly**. ('very' qualifies the adverb 'loudly'.)

Recall Adverbs learnt earlier

i. Adverbs of manner

honestly, strictly, beautifully, happily, etc.

These adverbs answer the question 'how', for example, how do they run?

They run quickly.

ii. Adverbs of time

today, yesterday, late, before, etc.

These adverbs answer the question 'when', for example, when will your brother come from Karachi? *He will come today.*

iii. Adverbs of place

here, there, out, up, etc.

These adverbs answer the question 'where', for example, where is Hamza? *He is sitting here.*

iv. Adverbs of Quantity

very, enough, quite, almost, etc

These adverbs answer the question 'how much', for example, How much money do you have? *I have enough money.*

v. Adverbs of frequency

usually, regularly, often, sometimes, etc.

These adverbs answer the question 'how often', for example, How often does he play football? He usually plays football.

8. Use the following adverbs in your sentences.

honestly

early

quite

out

yesterday

enough

sometimes

Nouns

9. Change number of the following nouns.

Singular	Plural	Singular	Plural
stone	_____	stitch	_____
piano	_____	photo	_____
lady	_____	leaf	_____
chief	_____	man	_____
goose	_____	foot	_____
deer	_____	child	_____
grandparent	_____	daughter-in-law	_____