Information and Communication Technology

Class Six

Information and Communication Technology

Class Six

Revised for the year 2025

First edition written, edited and translated by

Dr. Muhammed Zafar Iqbal

Mustafa Jabbar

Munir Hasan

Md. Afzal Hossain Sarwar

Md. Mukhlesur Rahman

Dr. Suraiya Pervin

Dr. Abul Kalam Md. Rafiqullah

Farzana Arefin

Shamsuzzahan Lutfa

Md. Munabbir Hossain

Lutfur Rahman

Ainul Huda Atiq

ABM Fakhrul Islam

Preface

The importance of formal education is diversified. The prime goal of modern education is not to impart knowledge only but to build a prosperous nation by developing skilled human resources. At the same time, education is the best means of developing a society free from superstitions and adheres to science and facts. To stand as a developed nation in the science and technology-driven world of the 21st century, we need to ensure quality education. A well-planned education is essential for enabling our new generation to face the challenges of the age and to motivate them with the strength of patriotism, values, and ethics. In this context, the government is determined to ensure education as per the demand of the age.

Education is the backbone of a nation and a curriculum provides the essence of formal education. Again, the most important tool for implementing a curriculum is the textbook. The National Curriculum 2012 has been adopted to achieve the goals of the National Education Policy 2010. In light of this, the National Curriculum and Textbook Board (NCTB) has been persistently working on developing, printing, and distributing quality textbooks. This organization also reviews and revises the curriculum, textbook, and assessment methods according to needs and realities.

Secondary education is a vital stage in our education system. This textbook is catered to the age, aptitude, and endless inquisitiveness of the students at this level, as well as to achieve the aims and objectives of the curriculum. It is believed that the book written and meticulously edited by experienced and skilled teachers and experts will be conducive to a joyful experience for the students. It is hoped that the book will play a significant role in promoting creative and aesthetic spirits among students along with subject knowledge and skills.

The education policy has made Information and Communication Technology compulsory in all streams of the education from grade VI-XII to introduce the concepts as in acquiring literacy in this subject well as to make the students proficient in information and communication technology. The curriculum and textbooks of this subject have been developed in accordance with this. Hopefully, the textbook of Information and Communication Technology for class VI will make students interested in this subject along with acquiring literacy in Information and Communication Technology.

It may be mentioned here that due to the changing situation in 2024 and as per the needs the textbook has been reviewed and revised for the academic year 2025. It is mentionable here that the last version of the textbook developed according to the curriculum 2012 has been taken as the basis. Meticulous attention has been paid to the textbook to make it more learner-friendly and error-free. However, any suggestions for further improvement of this book will be appreciated.

Finally, I would like to thank all of those who have contributed to the book as writers, editors, reviewers, illustrators and graphic designers.

October 2024

Prof. Dr. A K M Reazul Hassan
Chairman
National Curriculum and Textbook Board, Bangladesh

Contents

CHAPTER ONE

Introducing Information and Communication Technology

After reading this chapter, we will be able to:

- describe information and communication technology;
- describe the difference between data and information with examples;
- describe the use of information and communication technology;
- explain the significance of information and communication technology;
- design a poster in our own school by using information and communication technology.

Lesson 1 : Concept of Information and Communication Technology

Information and Communication are very familiar words to us. There are many examples of technology around us. When we use the term "Information and Communication Technology (ICT)", we mean a special concept. Let us imagine some situations to understand the concept.

Incident 1: Masum lives in Char Fashion upzilla of Bhola district. His father runs their family by fishing at the sea. His father always carries a radio while going to the sea for fishing. One day Masum asked, "Father, why do you always take the radio?" His father answered, "If it rains or storms at the sea, I get that news immediately through the radio."

On a boat, fishermen are catching fish in the sea

Tasty strawberry

Incident 2: One day Yunus, a farmer from Netrakona district, was watching a TV programme named "Krishi Dibanishi" in Bangladesh Television. From the programme he came to know that a foreign fruit named 'strawberry' could also be cultivated in Bangladesh. Yunus is a very enthusiastic farmer. He cultivated strawberry in his one acre land by working very hard for four months. The harvest was very good. He earned Tk. 1,50,000.00 by selling this tasty and nutritious food. His life took a new turn from that day.

Exam results can be known through SMS

Incident 3: Shraboni appeared at the final examination in class five. Her parents thought that they would have to go the school to get the result. Shraboni told her parents that her result could be known through a mobile phone. For this, they would have to send an SMS to a specific

number mentioning her roll number. and the name of the board. At first her parents could not believe it; but after sending the SMS, within a short time, they got a return SMS mentioning Sraboni's result. Sraboni got GPA 5.00. She was very happy.

Incident 4: The subject of the national essay competition this year was "Liberation war of Bangladesh". Rashed decided to take part in this competition, but he did not know much about the liberation war. When he was thinking where to find the information, the idea of the internet came to his mind. He sat with a computer and downloaded a lot of information from the internet on liberation war with his father's help. He wrote an essay using these information and sent it to the competition.

Information can easily be accessed from websites by using Internet

Cricked match is being shown on a big screen using a multi-media projector

Incident 5: World cup cricket was being played at Dhaka. Riya and Antu demanded to their father that they would watch the world cup cricket. In spite of a lot of efforts, their father could not manage tickets. Suddenly he remembered that the world cup cricket is shown live in big TV screens at Dhaka University. On the day of the match, father went there with Riya and Antu and thus they could watch the match in a large TV screen. They felt as if they were watching the match sitting at the stadium.

Several incidents have been narrated to you. You may think that there is no connection of among the incidents. But if you think a little, you will understand that all the incidents are connected with one another. There is communication of information in each incident. Masum's father can have information about rain and storm from the radio, Yunus collects information about cultivation of strawberry from the TV, Shraboni gets to know information on her result through

2025

mobile phone, Rashed gets information on the liberation war from the internet and last of all, Riya and Antu get information on cricket match from the big TV screen. Technology of some kind must have been used to transfer this information. The technology that is used in sending, receiving and storing information is called Information Technology.

You can clearly understand that information technology has not come to this stage in one day. There was a time when people could exchange information only by talking. Then they started to transfer and preserve information by writing on clay, stones and barks. The facilities of preserving and transferring information increased when the Chinese invented paper. Information transfer took a new dimension after the invention of telephone. Information transfer through wireless technology brought the entire world in the grip of mankind. And what is the present stage of transferring information? It's a long history to tell!

Activity

1. Make a group of four or five and prepare a list of new instruments mentioned in this chapter. Let's see which group can write the maximum number of instruments.
2. Guess the function of each instrument, and write them on your notebook.

New words: SMS, Internet, Multimedia Projector, Wireless.

Lesson 2: Concept of Information and Communication Technology

There was a time when a letter written in one country took one to two weeks to reach another person in another country. These letters were written on papers and the addresses were written on the envelopes. Then these letters were sent from one country to another either by ship, plane or train. Then these letters were sorted and later manually delivered to the concerned house or persons on the basis of the address written on the envelopes.

Such letters are still written. People eagerly wait to get a letter from the near and dear ones. But many techniques have now been invented to transfer information regarding work. People can now send letters from one country to another in seconds by using these techniques. Not only letters, but voice, picture and video can also be sent with letters. You can say that the entire world has now come to our palm. People can now communicate with each other whenever they want as

if the entire world is a village. Even a new term 'global village' has been coined to express this meaning. Although in reality we are not close, virtually we all are now next to each other.

Everything to this effect has been possible due to information technology. The technology that has greatly helped information transfer technology to come into reality is digital electronics. That's why we sometimes call this age a "digital age". Not only this, we also say that we shall make our country a "Digital Bangladesh." It means that by using modern technology we shall make our lives much more comfortable and lives will be full of joy without any sorrow or misery.

Modern technologies are made through digital electronics

By now you must have understood what we mean by technology. The different instruments, made on the basis of scientific data and information that make human life easy and comfortable are together called technology. In this context, you are to remember one point; Many technologies make human lives complicated in the process of making them comfortable. Many technologies, on one hand, have made human lives easier; but on the other hand, have brought danger by damaging the environment. Again there are many technologies that we do not need at all, but we want to have those and thus bring problems for us.

Activity

Divide yourselves into two groups. One group should talk about good technologies and the other group should talk about dangerous, unnecessary and environment polluting technology.

There was a time when technology was used only by rich countries and organisations. Because all countries and organisations did not have the required number of computers and the ability to use and maintain them. At that time, an entire building was needed to install a computer and the capacity of that computer was very little. Today, those big computers have started becoming smaller, and their capacities have also increased a lot. You will be astonished to

2025

know that one would need lacs of money to purchase a computer then. But now a computer with greater capacity can be found inside a mobile phone.

A big house was required to keep the first computer of the world named ENIAC

Children are using computers

So, you can easily understand that computers are now reaching every home. The information technology that was once used only by a few big organisations and important persons is now being used by common people. Along with computers, new equipments are being manufactured, and new softwares are being made for using these computers and equipments. Also, Optical fibre and satellites are being used to facilitate communication and internet is being used for transferring information. Information super high way has been invented to transfer information as highways are made for buses and trucks. In fine, information transfer from one room to the other room of the world has now become very easy. Any information can be equally shared by both the most influential person and a very ordinary person. So, it can be said that a revolution has started to change the world by using information and communication technology. None can tell where this revolution will lead us.

By now, all of you must have got an idea about what we mean by information and communication technology. Information and communication technology means to transfer, preserve and analyse the information and then properly utilise it in our day-to-day life.

Activity
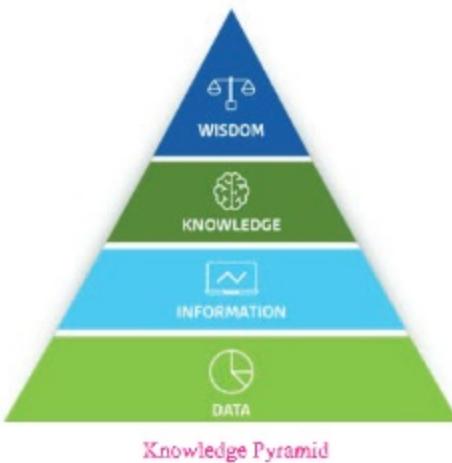
1. Make a group of four or five and prepare a list of technology and instruments used in the implementation of information and communication technology.

2. Try to write the uses of instruments described in this chapter.

New words: Global Village, Virtual, Digital, Electronics, digital age, digital Bangladesh, Technology, Computer, Software, Optical Fibre, Satellite, Information Super Highway.

Lesson 3 : Data and Information

If you are given at the numbers 98, 100, 100, 96, 50 and 95, you will be surprised and you will wonder why these numbers are given to you. However you may try,

Knowledge Pyramid

you will not understand what these numbers mean. But if you are told that these figures are the marks of Bangla, English, Maths, Science, Bangladesh and Global Studies, and Islam and Moral Education obtained by a student of class VI named Rimi, then the meaning of these numbers will be clear to you.

Here 98, 100, 100, 98, 50 and 95 are data. Data without any background give us no meaning. When you are informed that these are the numbers obtained by a student named Rimi, then you will get a meaning of these numbers. Data and context together make information. If we analyse information we can gather some knowledge.

Activity
Activity After analysing Rimi's information can we detect any knowledge? Help: What is her favourite subject? Which subject is she weak in?

Let's try to get better understanding about data and information by the help of some other examples.
If we say-
 Yes, Yes, No, No, Yes, No, Yes, Yes, No, Yes
 89, 70, 65, 73, 75, 50, 90, 64
 19973090422183049
 05.11.2000
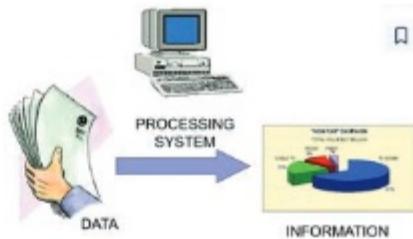
You can find no meaning in this. But these figures will be meaningful when some event or background is added with. Before this, you have already seen that some meaningless figure became meaningful when background was given. If you are told that these data have been taken from a list and the list is like this:

Event or Background	Data									
Ten students of your class were asked whether they brush teeth before going to bed	Nantu	Bilu	Renu	Kona	Prity	Joba	Montu	Sumi	Litu	Eti
	Yes	Yes	No	No	Yes	No	Yes	Yes	No	Yes
Rimi's birth registration number	19973090422183049									
Monto's date of birth	Day		Month			Year				
	05		11			2000				

Now the meaning of the above data must have become clear to you. So we have understood that data becomes meaningful only when it is related to any event or background. Then we can use this meaning and this is called information.

According to computer and information science, the result of processing data for a specific purpose is called information. For example, a student's marks in various subjects are data, while the progress report calculated from these marks is information. Information is derived from data through

processing. It is data transformed into a meaningful form. To be useful, information should be clear, concise, relevant, and necessary. A computer or other processing system can be used to process data and generate information.

Activity
1. Write some data and give it to your friend. Tell him to guess the meaning of the data. If he fails to understand the meaning, he can ask you ten questions. The questions should be such that they may be answered by saying only "Yes" or "No".
2. Prepare a list of all data about yourself.

New words: Information, Data, Knowledge.

Lesson 4: The Uses of Information and Communication Technology

If you read the previous two chapters carefully, you must know by now that we are very lucky. A great revolution is now going on in the world because of information and communication technology. We are witnessing that revolution. Everything is changing - if we wish, we can lead the new life or we can engage ourselves in the work of changing the world. If we want to do that, we have to know about information and communication technology, and how it is changing our lives. When you grow older, and become scientists or technologists, you will invent new things, and take our country as well as the world forward in information and communication technology.

You can also take part in the task of changing the world if you study Information and Communication Technology

Let's now ask an easy question; which areas branch of our life will change due to the development of information technology?

Perhaps you have started to identity the branches. Some of you may say that development of information technology will greatly change medical treatment. According to some people the answer will be "in the field of science" and to others it may be "in the case of recreation". But what is the real answer?

The real answer is the list is endless. No one can say which areas will change due to the development in information and technology. This development may bring about any little or big change in your known and unknown areas. Then, how will you finish telling its benefit? To tell the truth - how the different field will be

changed due to the improvement of information technology will depend on our creativity. The more creative you are, the greater will be its uses for you.

Do you know the reasons behind this? The reason is – We do not only transfer information by using information and communication technology; we also analyse or process the information. For doing so, we need to use computers. Computer is an extra-ordinary instrument by which we can do many impossible works possible.

There was a time when by computer people imagined a big monitor like a television, a box-like CPU and a keyboard. Now it has become a laptop which is much smaller than the previous computers. Not only that, computers have become smaller like notebooks, tablets or smartphones which we can put into our pockets!

The most interesting matter is that the computer has now been installed in our mobile phone sets. So, today we can do those works by our mobile phone set which we had to do before with a computer! We can even surf the internet through our mobile phones.

Let's now go back to our pervious discussion; in which areas of our lives. Can we bring changes by the help of information and communication technology? Now we will know about the changed fields.

Personal and Social Communication: At present, we can communicate with one another by mobile phones. A great change has been made in respect of social communication. All of these facilities may not be good; many of the present generation spend too much time for making this communication; some of them think that this is the real human communication. So some may become unsocial depending too much on this mechanical communication.

Today, even Internet can be used through an ordinary mobile phone set

Recreation: Recreation also now depends much on information and communication technology. This technology is being used in reading books, watching movies, listening to songs and even playing games in computer. We have already seen how much this technology is used in the football and cricket matches. We can easily watch many big matches sitting at home without going to the field.

We should be a little careful in using information and communication technology in the field of recreation. For the proper growth of the body, a child needs to play in the field. Often it is seen that parents do not allow their children to play outside in the field; rather they prefer to make their children seated at homes in front of a computer for a long time. Children have more interest in computer games instead of playing outside in the field. It is not at all good for the cognitive development of a child. This problem is now being felt throughout the entire world.

Activity
Mention five points for and against playing games in computer
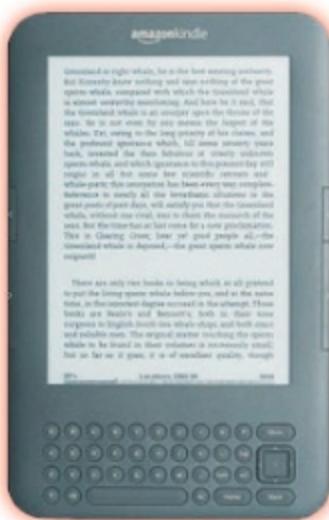
Computer game is a favourite thing to the boys and girls of the present generation; However, this should be limited and controlled.

New words: Laptop, Notebook, Tablet, Smartphone, E-mail, Chatting

Lesson 5 : The Uses of Information and Communication Technology

We have cited two examples of Information and Communication Technology (ICT) in the previous lesson. We all are using these two examples with or without having known about them. We shall learn in this lesson about the uses of information and communication technology in some other fields.

Several thousands books can be stored in an e-book device

In the Field of Education: Can you tell what the happiest sound to a student is? The answer may vary from people to people, but we all know that the ringing of the final bell of school is the happiest sound to a student. When the final bell rings, all students feel relaxed and make cheerful noises all over the world. Even the educational thinkers know this. Therefore, they try to make a student's life a bit more interesting. This task has started to become easy with the use of ICT in teaching-learning. Now, a learner does not need to listen to his teacher's lecture all the time nor he/she is to memorise without understanding.

Many interesting items of education can now be shown by multimedia, scientific matters can be displayed on screen and even one can appear at the examination through computer without writing anything in examination scripts. Now, a student has to go to school carrying a bag full of books; this will not be needed after some days. Students will be able to keep thousands of books along with his textbooks in an e-book device.

In the Field of Medical Treatment: Today we cannot think of medical treatment without using ICT. In earlier times, doctors had to minutely diagnose all symptoms of a patient before detecting diseases. Now diagnosis has become easier with the use of modern instruments. Not only this, all particulars of a

patient and the case history of his diseases can be well maintained with the help of ICT. Even one can get medical services over telephone; this is called telemedicine and it has already been introduced in our country.

In the Field of Science and Research: Perhaps ICT is used the most in this sector. Scientists can now easily conduct many complex research works by the help of ICT. Scientists of our country also used ICT when they discovered the genome sequence of jute.

It is possible to take such a clear picture of our heart from outside

Scientists of our country discovered genome sequence of jute by using ICT
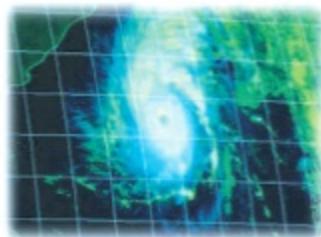
In the Field of Agriculture: Our country is mainly an agricultural country. Bangladesh is becoming self-sufficient in food by using modem cultivation method. In this field, ICT is working to the benefit of our farmers. Programmes on agriculture are being broadcasted on radio and television. New websites have been made on the internet on agriculture. Our farmers can even have the solution to their agriculture-related problems through mobile phones.

Farmers are getting solution of their problems through Internet

Environment and Weather: There was a time when many people would die due to storms in our country. About 0.5 million of people died in devastating cyclonic storms in our country in 1970. Now the death rate in the storm has come down; because we can now get the advance news of rain and storm from weather forecast by the help of ICT. Again the coastal people can be warned through radio and television.

Picture of cyclonic storm received from a satellite

New words: E-book, Telemedicine, Genome, Research

Lesson 6 : The Uses of Information and Communication Technology

If you make a list of the areas where ICT can be used, it will be endless. We are now going to discuss some matters that may have on effect on your family life.

Advertising and Mass Media:

Radio, television, newspaper or online-news - all are called mass media. These things have developed a lot in today's world. We not only get any news from any corner of the world, but also get the video of the incident. These have become possible only for ICT.

Nobel Laureate Prof Muhammad Yunus was the Torchbearer for the Rio 2016 Olympic Games, Brazil.

Publication: New books are given to students every year by the government in our country. The number of these books is about 35 crores. Such a large number of books with correct and attractive materials can be published only by using ICT. Besides, by the help of ICT, published books are kept on the website so that anybody can download those at any moment. For example, you can download any textbook from NCTB website (www.nctb.gov.bd).
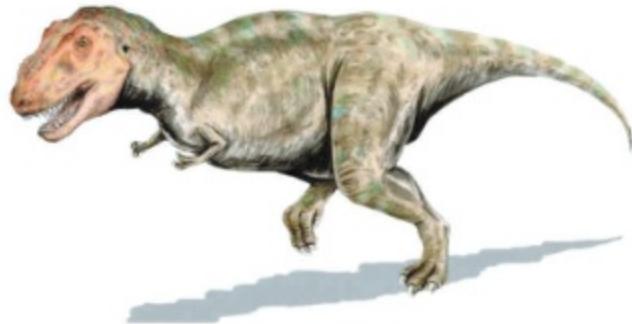
Withdrawing money by using an ATM card

Banking Service: There was a time when a man had to go to the specific branch of his bank to withdraw money; now we do not need to do that. The banks that have the online services now allow the account holders to deposit and collect money from any of the branches. Not only this, one can withdraw money at any moment by using the bank card where ATM is available. To matter it even easier, now people can use their mobile phones for banking services.

2025

Business and Culture:

ICT is also largely used in business and cultural sector. There was a time when 26 pictures were needed to make a one-second cartoon movie. Today, the labour of doing this has greatly been minimized by the use of ICT. Not only this, sometimes animation pictures are made in such a way that they seem to be real.

Dinosaur T-rex, a extinct animal, can be produced as if it is real by using animation.

ICT in Daily Life : We have discussed some uses of ICT that you may experience in your life; but do not think that there is no other use beyond this. There may be unlimited uses of ICT beyond our discussion.

ICT is used in different sectors of the country which you may not find in your day-to-day life. ICT is used in trade and commerce. A word named e-commerce has been introduced. By this system, we can do shopping on the internet instead of going to shops and markets. There was a time when too much time was spent to perform official work. Today, official works can be quickly performed by using ICT. This system is called e-governance. The police department largely uses the ICT to arrest culprits. ICT is also used in the army for the defense of the country. Mills and factories, transport and communication - these sectors will be inactive without the use of ICT.

Any area can be closely monitored by using close-circuit cameras

Activity

1. Make a list of works where ICT can be used other than what has been told.

New words: Online news media, online bank, ATM machine, animation, e-commerce, e-governance.
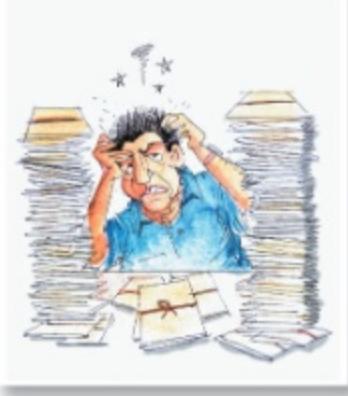
Lessons 7 & 8 : Significance of Information and Communication Technology

In the previous lesson, we have given many examples of sectors where ICT can be used. Not only this, you have also been reminded that there are many fields where ICT can be used other than the examples we have described.

In this lesson, a discussion will be made on the significance of ICT. Those who have studied the previous lessons attentively, they may have realised the significance of ICT. ICT has not only many uses; it can completely change the sector where it is used. In fact, we shall lag behind in this present world if we do not perform our functions by the help of ICT.

We can make our lives much easier by using ICT. Tasks that earlier used to take a long time to finish can now be completed in the twinkling of an eye with the help of ICT. The time thus saved can be used in performing the works of joy and pleasure. So the people of this time are very efficient in doing works and they can do many things within a short time.

Activity

Explain what is going on in these two pictures.

We can not only make our lives easy by using ICT; we can also change the condition of our country. Petrolium, iron-mine or gold mine, large mill-factories etc, were once considered as the main resources of the world. So the countries with a lot of these were treated to be rich countries. Now, this idea has completely changed. Now it is thought that knowledge is the best asset of a nation. The country that has educated people, the country where knowledge is practiced is the most resourceful country. The door of learning ICT is open to all. The sooner we can learn ICT, the sooner we can build prosperous Bangladesh and make our country resourceful.

Use of ICT:

Contact through mobile phone

Taking photos with a digital camera

Working on a personal computer

Watching news of home and abroad on TV

Withdrawing money from ATM

Washing clothes in washing machine

Cooking in microwave oven

Reading the latest book by using e-book

Doing diagnosis by CT scanning

Driving car by using GPS

Activity :

Group task:
From groups of four or five find out how your teaching and learning can be made more interesting. Draw a poster explaining how ICT can be used in those sectors.

* This poster is to be made in a class (Lesson-8)

New words: GPS, Microwave, Washing Machine

2025

Sample Questions

1. Which invention helped information transfer to step into a new world?
    a. Computer
    b. Telephone
    c. Mobile phone
    d. Optical fibre

2. What has connected the world into a global village?
    a. Computer
    b. Internet
    c. Land phone
    d. Mobile phone

3. Where is ATM card used?
    a. Advertising and mass media
    b. Publication
    c. Recreation
    d. Banking

4. Which one is used to make communication easier?
    a. Digital camera
    b. CCTV
    c. Optical fibre
    d. Online news media

5. Information and communication technology is -
    i. To innovate new hardware and software.
    ii. The facility of getting information in any place of the world.
    iii. Unlimited scope of information transfer.
   Which one is correct?
    a. i
    b. i and ii
    c. ii and iii
    d. i, ii and iii.
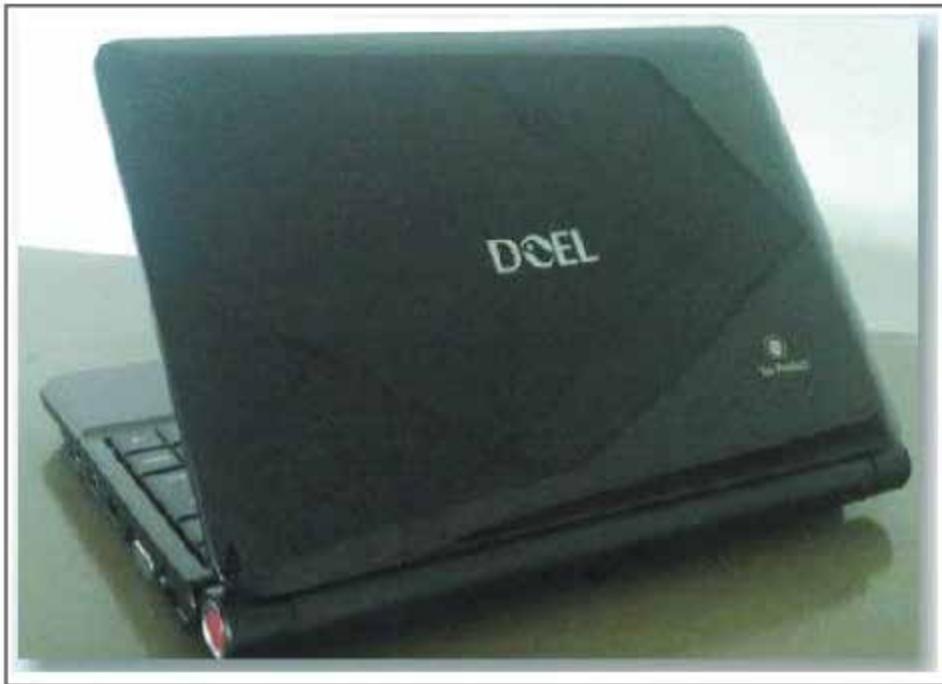
Read the following passage and attempt the questions no 7-8.

A commercial Bank gives Farjana a scholarship of Tk. 1 000 monthly for her good results. Farjana needs to open an account in that bank to withdraw her scholarship money. At the time of opening the account, she needs to fill in an application form containing name, date of birth, names of father and mother, address and signature.

6. Name, date of birth, names of father and mother, address and signature in the application form are together called -
    a. Information
    b. Incident
    c. Data
    d. Background

7. Which one of the following will Farjana use for quick and easy banking?
    a. Pay order
    b. Cheque
    c. Bank draft
    d. ATM card

8. Which one of the following technology can best help the Bangladeshi farmers to protect them their problems?
    a. Radio
    b. Mobile
    c. Land phone
    d. Television

9. Explain with reason why you have chosen the particular answer in question number 8.

CHAPTER TWO

Instruments related to Information and Communication Technology

After reading this chapter, we will be able to:

- describe how a computer works;
- describe the instruments used in ICT;
- explain the functions performed by different instruments used in ICT;
- explain hardware and software.

Lesson 1: Instruments Related to ICT: Computer

The device which is behind the great change of the entire world that started with the use of information and communication technology is computer. It has been told earlier that when we say the word computer, a picture of a TV-like monitor, a box of CPU and keyboard come to our mind. Because we all are used to seeing this. Now a days we visualize the picture of a laptop, like an open book, when we say computer. But there are many more types of computers those are shown in the following pictures.

Super computer


Mini computer

Desktop

Laptop
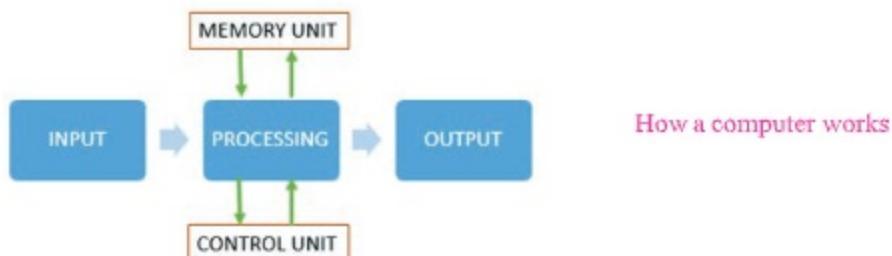
Tablet PC

Smartphone

We have already told you how the computer can bring a change in the entire world. An instrument is made to perform a particular task. For example, screw drivers are used to open screw; people travel by vehicles. We can neither open screws by vehicles nor can we travel by screw drivers. But computers are a different type of instrument; it can perform unlimited number of different tasks. In one side, a computer can perform complex calculations, on the other side it can also be used to draw pictures. So, it is no surprise that a device that can do so many things can bring a revolution in the world.

Surely you all want to know how a computer works. Many of you may think that the process of how a computer works is very complex, but that's not at all true. The main process of how a computer works is very easy. The following picture shows you the process:

How a computer works
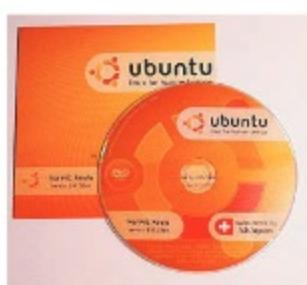
You can see in the picture that it has four major parts: input, output, memory and processor. When you give information and data to a computer through input, they are stored in the memory of the computer. The processor receives information and data from the memory uses them and stores the results in the memory. When the work is complete, the computer returns you information and data through output. This is the process of work of all computers of the world.

Those of you who have either seen or used the computer, may have understood that the keyboard or the mouse is the means of giving input. We send data to the computer by this. The computer shows the result on the monitor after finishing the work or gives us a print through the printer. Therefore, these are the media of sending output. We see neither the memory nor the processor of a computer from outside; these are installed inside the computer.

We have talked about keyboard, mouse, monitor and printer as the input and the output devices of a computer. You must have understood that a computer may have many instruments other than these. We shall discuss those instruments in the next lessons.

We have told you how a computer works. But we have not told you how the same computer can sometimes be used for drawing pictures, for listening to songs, and again for doing complex accounting work. If you do not know how that happens, then your knowledge regarding computers will be incomplete.

To activate a computer, softwares are necessary along with hardwares.

Input, output, memory and processor that we have just discussed are instruments of some sort. These parts of a computer's instruments are called hardwares. We need to keep specific data in the memory of a computer if we want computer to do something for us. This data goes to the processor

2025

and the processor can do many different functions. These are called softwares. So, we need to use accounting related softwares when we want to do some complex calculations. Similarly, when we want to draw pictures, we need to use drawing related softwares. Human intelligence is the most powerful in the world, it is more powerful than the powerful super computer. So, we should never compare a human brain with a computer. Even then, to give the example of hardware and software, it can be easily said that - a child can do nothing by himself just after birth; because his brain is like a hardware without any software. When the child comes to your age, then he can do many things like you. It can be said that now many softwares have been inserted into his hardware which is why he can do many things which he could not do before.

Again you are reminded that it is an insult to human brain if human brain is compared with a computer. Human brain is wonderful and extra-ordinary thing of the world.

Activity

1. Make a group of four. One will play the role of an input device and the other will play the role of an output device. Of the remaining two, one will be memory and the other will be processor. Your teacher will supply two numbers to the input device. He will inform that to the memory. Processor will collect these two numbers from memory and then will send it back to memory after adding these two numbers. Output device will collect it from the memory device and then will return it to the teacher. All the groups should start at the same time. See which group can do it in shortest time.

New words: Super Computer, Mainframe, Tablet PC, Hardware.

Lesson 2 : Let's Play Computer

In this lesson, learners will act as computers. First, write the following software on a piece of paper.

Boys and girls are playing computer

1. Receive the first number from input to memory .
2. Memory will give this number to processor for adding 10 to it.
3. Processor will send the result to memory.
4. Memory will send the result to processor for multiplying by 2.
5. Receive the multiplication result to memory from the processor.
6. Give the multiplication-result to processor from memory for deducting the first number from it.
7. Receive the deduction - result in the memory from the processor.
8. Give the deduction-result to processor from the memory for deducting the first number from it.
9. Receive the deduction - result in the memory from the processor.
10. Give the deduction-result to the output from the memory.

One student will act as input, one as output, one as memory and another as processor. All learners of the class will be divided into many groups of four.

At first, the teacher will give the software to input. Input will give this software to memory.

Teacher will give input any number after the software is loaded in the memory. Input will give the number to memory. Memory will receive the number and then will inform the processor all the steps of the software. Memory will give the result to output after finishing the 10 steps. Output will inform the teacher that number.

The teacher will examine whether the result is correct. (for right answer: 20)

When the learners understand how things are done, they are to be encouraged to write some softwares and then use them in a way.

Here the software is written in easy English. In real computers, it is written in computer language. This is called computer programming. When you will study in colleges or universities, you will be able to write many good programmes by yourselves.

```c
#include<stdio.h>
#include<conio.h>
int main() {
        int var1, var2, result;

        printf("Enter first number: ");
        scanf ("%d", &var1);

        printf ("Enter second number: ");
        scanf ("%d", &var2);

        result = var1+var2;

        printf ("result of %d and %d is %d", var1, var2, result);
        getch();
        return 0;
}
```

We cannot read and understand the above programme, but a computer can.

Lesson 3 : Input Device

From the last two lessons we have come to know that an input device is needed for making entries of information and data in the computer. We have already mentioned that the keyboard and the mouse are such input devices.

We can write in Bangla or English or in various languages of the world using a keyboard. When any button is pressed in the keyboard, a particular letter of that button appears on the screen of the computer.

It is not that we always write either letters or words; very often we need to do some other things. For example, if we want to draw a picture, we cannot do it by the keyboard. We can do it by moving the mouse.

Sometimes we need to insert a full picture in the computer. If the picture is taken on a digital camera, that picture can be directly inserted into the computer from the camera. If the picture is in print form, we have to scan it using a scanner if we want to insert it in the computer. So, the digital camera and the scanner are also input devices.

Different input devices

Keyboard

Mouse

Digital Camera

Scanner

Video Camera

Web Camera

Like digital camera, video camera or web camera is also an input device. We can insert video into the computer from these cameras. Those who play

computer games, sometimes use a joystick; they insert game-related information into the computer by this stick; therefore these are also input devices. Many of you have seen how circles are filled in examination scripts. The instruments that can read the filled circles of the scripts are also input devices, because these instruments insert the information of the exam scripts into the computer. Some pictures of input devices are shown below:

Joystick

OMR

Microphone

Barcode Reader

Activity

1. Think and write name of some input devices other than those that have been discussed here.
2. An input device only supplies information and data to the computer; no information can come out of an input device. Can you think of any input device that can simultaneously work as an output device?

New words: Keyboard, Mouse, Digital Camera, Scanner, Video Camera, Webcam, Joystick , OMR, Barcode Reader

Lesson 4 : Memory and Storage Device

From the careful reading of the previous lessons you might have understood by now that a very important part of a computer is the memory, where information and data are stored. The processor collects information and data from the memory and then works on it. So, if we want to perform any operation on the computer, we need to keep it in the memory. We cannot see the memory as it is inside the computer. So the picture of a memory has been given in your book. Information and data are serially arranged in the memory. If we access any information and data at anytime from anywhere in the device, it is called RAM (Random Access Memory). So you can easily understand that the data kept in the RAM is not permanent. New data can be stored anytime; then the old data gets erased.

Picture of a RAM: A one giga RAM can keep
information equivalent to one million words

Perhaps you have become worried to know that one information erases another information in the memory. The reason of the worry is that you may have prepared a particular software after a lot of hard work and you may have kept that in the memory and will you are doing many works by using this. Now if another person sets another software in the memory, will your software be erased? Will you hard labour be fruitless? No, that cannot be allowed to happen.

Actually, that does not happen. Information and data are kept in the RAM temporarily. If you need to keep them permanently, you need to keep them somewhere else. Those are called storage devices. At the time of use, the information and data are brought to memory from the storage device. The name of the most familiar storage device is hard disc drive. The information kept in the RAM is temporary; it vanishes the moment

The disc of the hard drive moves from 5400 to
7200 times in a minute!

you shut down the computer. The information kept in the hard disc does not vanish when you shut down the computer. But you can erase one information and keep another if you want to.

The easiest way to carry information of a computer is through a pendrive. The pendrives are so small that you can keep them in your pocket just like a pen; yet you can store ten to twenty thousand books in one pen drive!

SSD   pendrive

SSD or Solid State Drive: Solid State Drives (SSDs) have become a popular alternative to traditional hard disk drives (HDDs). They use flash memory to store data and are compatible with various digital devices, including servers, workstations, laptops, mobile devices, and media players. SSDs are available in different form factors: 3.5-inch, 2.5-inch, and 1.8-inch. Capacities range from 128 gigabytes (GB) and 256 gigabytes (GB) to 1 Terabyte (TB) and 2 Terabytes (TB). Some standalone SSD models offer even higher capacities, up to 8 Terabytes (TB).

New words: Storage device, RAM, Hard Disc, Pendrive, SSD

Lesson 5 : Processor and Motherboard

Every part of a computer is very important. Computer cannot work in absence of any part. Even then, the most important part is the processor. We have already discussed that the processor of a computer takes information from the memory, processes them, and gives them back to the memory. Processor is also inside the computer as the memory and that's why we cannot see it from outside. But if we dismantle a computer, the processor will clearly be noticed.

If we open a computer, we will normally find a board with innumerable small electronic parts attached to it. The board is called the motherboard and it is the most significant part of a computer. This board holds and protects all the parts of the computer as a mother does to all her children. So this board has been named "Motherboard". We can find a fairly big device in all motherboards with a big fan attached to it. That is the processor. A large amount of electricity flows through a processor as it does millions of calculations every moment. So, the processor becomes so hot that it needs to be cooled down with a fan; otherwise the processor may be burnt down.

Motherboard

Processor

The processor is the biggest and the most important of all the electronic parts of a motherboard.

Activity
A processor needs to be cooled down with a fan when it becomes too hot. There are thousands of processors in a super computer which cannot be cooled down only with fans. Give a solution of your own regarding how that can be kept cold.

New words: Motherboard, Electricity Flow, Processor.

Lesson 6 : Output Device

By now you have learnt that information and data are entered into a computer using input devices. Computer works on those information and data by the help of the memory and the processor. After completing the task, computer sends out the result through output devices. From the previous lessons you have learnt that monitor and printer are output devices.

Those of you who have either seen or used the computer or have seen the picture of a computer, can identify the monitor separately, as it looks very much like a television. What happens inside a computer appears on the monitor. So those who use the computer, always keep their eyes on the monitor while working on

the computer. If you write something in the computer, you can see that on the monitor; if you draw any picture, you will also see it on the monitor.

What appears on the monitor of a computer is not at all permanent. When anything new comes, the previous ones vanish. Therefore, need to use something else if we want to store something permanently, and for doing this the printer is the easiest solution. Everything that has been written in this book was first printed with a printer. We can print books or letters on papers of a definite size, but we cannot use the general printer for printing a posters, banners, big advertisements or designs of a house. For these, we need a plotter.

It is not that we want to always print something permanently by using output devices. Sometimes we want sounds as an output. For instance, we may want to listen to a song. So we can attach a speaker with the computer if we want to get sound as an output. So, a speaker is also a type of output device.

We can see on the monitor and hear from the speaker. So the computer has now become a great means of recreation. Only one person can watch in the small monitor of a computer; sometimes it is not sufficient; instead we need to see together. The picture in the monitor needs to be enlarged when somebody delivers a lecture or gives a presentation in a seminar. Similarly, to

Monitor

watch the world cup or enjoy a movie, the output of the monitor must be made bigger. Multimedia projector is used in these cases. The picture in the monitor can be made much bigger on the screen of a video projector.

There was a time when the monitor of a computer used to occupy largest space; today's monitors are very light and thin.

While discussing the input device you were asked whether there can be any

device that can act both as an input and an output device at the same time. Surely there can be, and the name of such a device is touch screen! The touch screen works like a monitor and we can feed information inside that screen by touching it. Now, touch screen is not only used for the computer; it is also used for mobile phones.

Printer
Printer does not only print brightly, it also can do colour printing

Plotter
Plotter is there for printing big pictures, banners and posters

Speaker
Even sounds can be the output; then the speaker becomes the output device

Multimedia Projector
We have the video or the multimedia projector to show the screen of the monitor in a much bigger size

Touch Screen
Touch screen is both as input and an output device at the same time

Activity
Can you imagine a new output device with which we can do something other than seeing or listening?

New words: Monitor, Printer, Plotter, Speaker, Multimedia Projector, Touch Screen.

Lesson 7 : Software

Input, output, memory and processor - all these are hardwares. These hardwares become active and meaningful in the computer by the help of softwares. We will make a brief discussion about these in this lesson.

Generally softwares of a computer can be divided into two types. One type has already been discussed. We have already mentioned that we can write, draw pictures, listen to songs, browse internet and do many such works and applications by the help of a computer. So this type of software is called application software.

But this application software cannot be used directly in a computer. If we want to use these application softwares, we need to keep the computer active by the help of another type of software. The name of that software is "Operating system software", in short "Operating System", or OS. The moment a computer is turned on the operating system starts working. It examines all hardwares of the computer, connects one hardware with the other and activates the input and the output systems. It also manages how information is to be stored in the computer.

So, the operating system keeps a computer active and makes it ready for work. Operating system makes a lot of things ready in the computer so that application softwares can use them.

Super computers have their own operating systems. The names of the operating systems of our familiar PC or personal computer are WINDOWS, MAC OS, UNIX etc. We need to buy the operating system just like the hardware of a computer, and these are very costly. So, many computer scientists of the world have jointly prepared one type of open source operating system which is available free of cost. You should not think that as they are available free of cost, they are not effective. Those are very good operating systems. The name of such an operating system is "LINUX", which is a very popular operating system in the world.

| WINDOWS | MAC | LINUX |

Android

iOS

Windows Logo for Smart Phone or Tab
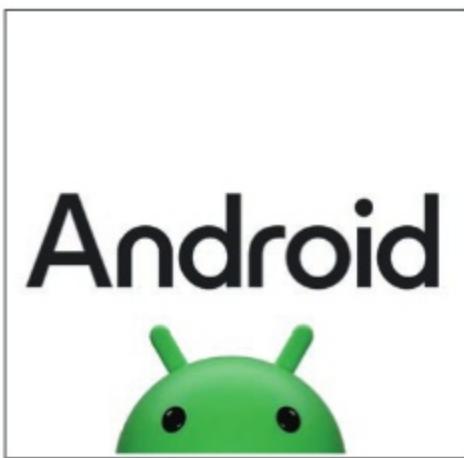
chromeOS

KaiOS

There is no significant difference between using Windows, Mac and the open software Linux. Various operating systems such as android, iOS, ChromeOS and KaiOS are used in smartphones, tablets, and ipads.

Activity
Debate among yourselves in 3 groups about which one is better; to buy windows software with a lot of money, or to use it by collecting it illegally, or to use the Linux software free of cost.

New words: Windows, Mac, UNIX, LINUX, Operating System, Application Software.

Lesson 8 : Application Software

Those who have studied the previous chapters, have already known what application softwares mean. We have already mentioned that the use of computers depends on our creativity. Finding a task to do, we can develop an application software for that task.

There are two types of application softwares: Package Software and Customized Software.

Many people separately prepare application softwares for the works that most people need to do; for example – the application software for writing which is called "Word Processor". Many interesting word processors have been created as everyone wants to use them. Similarly, specific softwares have been made for drawing pictures, listening to music, watching videos, playing different computer games and for browsing internet. These softwares are called package softwares. Just as how many companies produce TV, car and camera, and sell them in the market and earn money, many companies develop package softwares and sell them to people and earn money. You will be astonished to hear that many of the richest people of the world have become rich by selling package softwares.

We have just told you that there are application softwares for all types of work. Then the question is- "Is there a software for making softwares"? Surely, there is; we have told you before that when you grow a bit older and learn how to do programming, you will be able to create softwares for making other softwares and create special softwares of different types. When a special software is prepared for doing a particular work, it is called a "customised software".
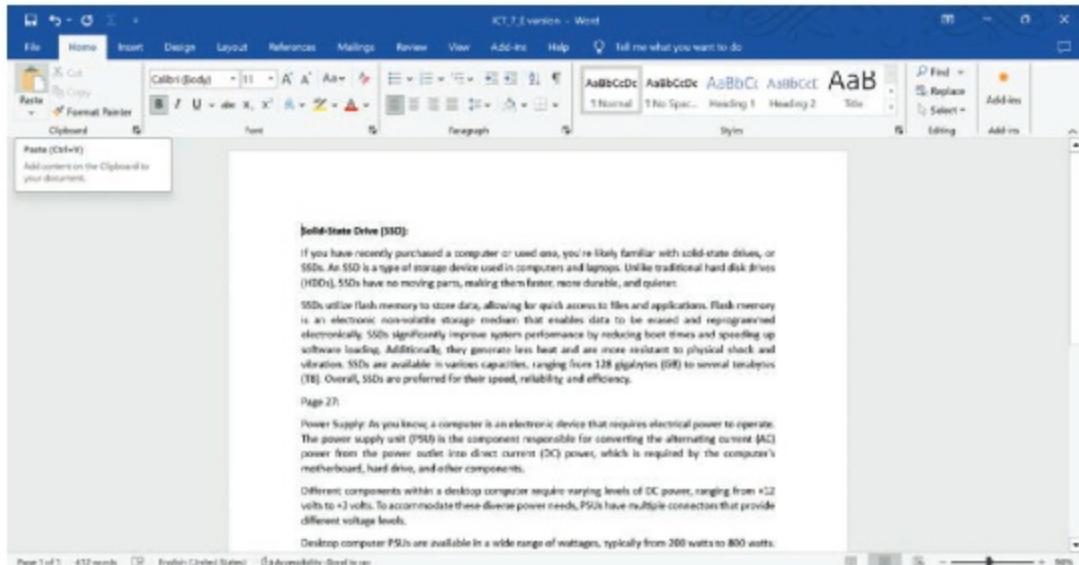
The great computer scientists of the world have created operating systems so that people can get those without any cost. Package softwares have also been created for the same reason.

You can get these package softwares almost free of cost for your use.
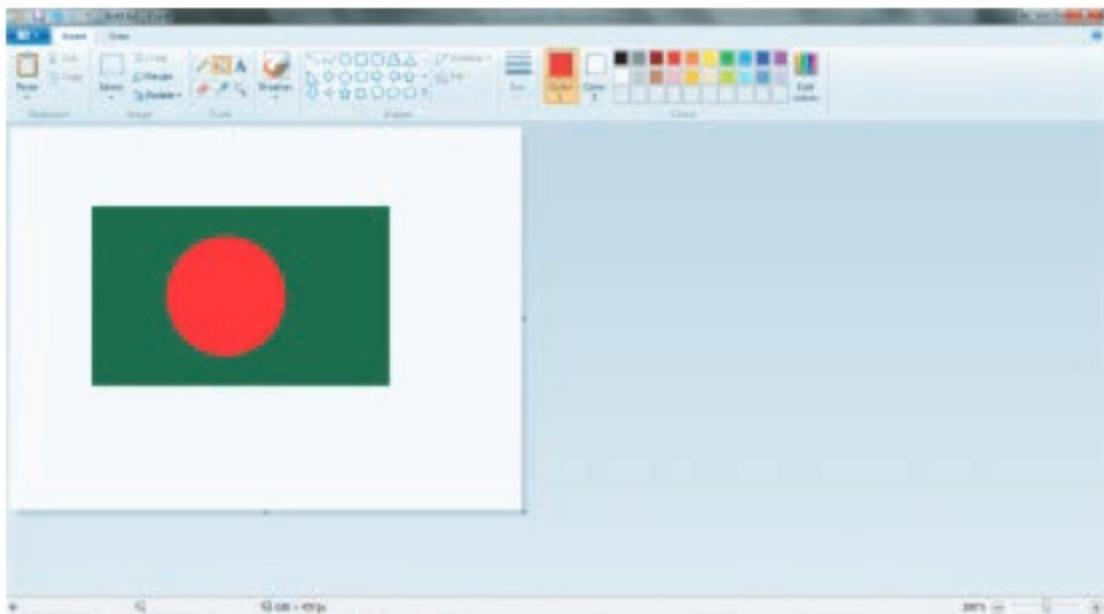
Scientists all over the world are trying to reach all types of softwares to all people

almost free of cost. When you grow older, you may also join in this effort!

The view of a monitor at the time of using different types of application softwares:

Software for writing

Software for drawing pictures

Software for playing games

Activity
- Make a list of work that can be done by using application softwares.
- Everyone in the class should try to include at least ten application softwares in the list.

New words: Package Software, Customised Software, Word Processor

Lesson 9 : Some More Machinery of Information and Communication Technology

In our attempt to discuss the instruments used in information and communication technology, we have discussed the hardware and the software, which are the most important parts of this technology. Now we are going to discuss some other instruments used in information technology.

Land Phone and Mobile Phone: There was a time when electric wires were used to transfer our phone conversations from one place to another. Our conversations commuted as electric signals through the wire. As the signals had to be sent through electric wires, the telephone always had to be connected with the wire; these phones are called land phones.

Due to the advancement of technology we now can send wireless signals if we desire. Since this phone does not need to be connected through wires, we can carry it in our pocket, and move around. That's why we call this phone "mobile phone". The price of this phone has come down significantly, so even the ordinary people of the country can use this phone.

It is not only that the price of the mobile phone has come down; mobile

phone has been gradually become "smartphone". We can take pictures, listen to songs , listen to radio programmes, travel with GPS, play games, even use internet with this smartphone.

So, we can imagine that this mobile phone in the future will be able to perform the functions of a computer.


Mobile Phone

Modem
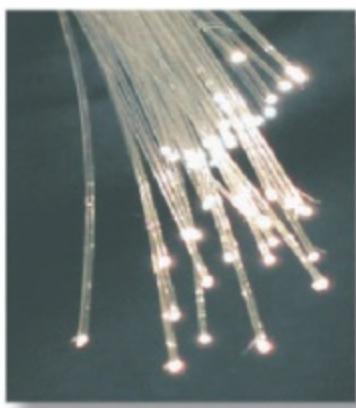
Modem: A modem is a device that connects your computers, smartphones, tablets, and other devices to the internet. It converts digital signals from these devices into analog signals, allowing them to be transmitted over telephone lines or cable networks.

Satellite: We sometimes use a satellite for sending information from one place to another place of the earth. Data can be sent to the

Launching Bangabandhu Satellite-1

satellite through an antenna facing the space. The satellite receives the signal and sends it to another direction. Unlimited number of TV channels are broadcasted in the whole world by this process. The first satellite of Bangladesh named "Bangabandhu Satellite-1" was sent to the space on the 12th May 2018. Bangladesh stands at fifty seven of the satellite owning countries of the world.

Optical fibre
Optical fibre; it is possible to send unimaginable numbers of information through the fine fibre of glass.

Optical Fibre: There was a time when any information was sent anywhere in the world as electric signals through wires or as wireless signals. Now, a new technology has come up throughout the world for sending information and data, and that is "optical fibre technology". Actually optical fibre is a transparent fibre of glass; it is as thin as hair, and data can be transmitted through this in the form of light-signals. Laser light is used in the light-signals. You will be surprised to know that this light cannot be seen with our eyes. It is possible to send as much information with an optical fibre as can be done with one crore telephone lines. So, optical fibre is now used throughout the world as a means of communication.

Activity
Draw a picture of how information can be sent from one computer to another by using Optical fibre, Modem and Computer.

New words: Modem, Satellite, Antenna, Optical Fibre, Laser

Sample Questions

1. At present, which one of the following is the most important wireless means of communication?
    a. Radio
    b. Television
    c. Mobile Phone
    d. Land Phone

2. Processor is called the brain of a computer, because-
    i. It is connected with the motherboard.
    ii. It acts as the director of the computer.
    iii. It processes information.

Which is correct?

    a. i
    b. ii
    c. iii
    d. i, ii and iii

3. Suppose you want to save your written poems in the computer for a long time. Which device will you use for this?
    a. RAM
    b. Hard disc drive
    c. Processor
    d. Pen drive

4. Which one act as both input and output device?
    a. Monitor
    b. Touch screen
    c. Keyboard
    d. Motherboard

5. The main function of the operating system is-

    a. Input output operation

    b. Controlling file system

    c. To arrange a set up for running programmes

    d. To detect problems in other devices

Read the following passage and answer questions No 6 and 7:

Mr. Hasan was talking to his grandchildren about various scientific inventions. He said, "Many things have now been invented; interesting programmes can be watched, heard, and recorded to be enjoyed later on using the same device. It has now become very easy to send any news anywhere at any time. But there was a

time when we did not have any of these things. It used to take several months to get any urgent news".

6. In the discussion of Mr. Hasan, which development of science has been given importance?

    i.   Satellite television.
    ii. Postal development.
    iii. Information and communication technology.

Which one of the following is correct ?

    a. i   b. ii
    c. i and iii   d. ii and iii

7. Which means will Mr. Hasan use to send any information anywhere at anytime?

    a. Internet   b. Land phone
    c. Radio   d. Mobile phone

8. Which technology is used to send information from one place of the earth to another?

    a. Optical fibre   b.   Internet
    c. Mobile phone   d.   Satellite.

CHAPTER THREE

Safe Use of Information and Communication Technology

After reading this chapter, we will be able to :

- explain how some devices of ICT can be protected;

- explain safe use of ICT;

- describe whether there is any problem if too much time is spent in using computer.

Lesson 1: The Safe Use of Information and Communication Technology

There was a time when little boys and girls were kept way from any instrument. You can see that, the time has changed. Instead of keeping boys and girls of your age away from using instruments of ICT, they are encouraged to use those instruments. This chapter has been written to teach you how you can use computer, printer or modem safely and fearlessly.

Those who manufacture computer know it well that today not only the adults but also the young children use computers. So, all computers are made in such way that there is no danger or health risk in using them. The only thing about which everyone needs to be careful is the electric connection of the computer. Desktop computers always need electric connection and laptop computers need electric connection only during the time of charging the battery. We can feel the electricity when its voltage is more than 50 volts. The voltage of electricity-flow in our country is 220 volts; so we will feel a strong electric shock if the electric wire touches our body in any way. Signals are sent from our brain through the nerves to make our heart beat or to move hands and legs by using our muscles. You will be surprised to know that these are electric signals which are very low. When a person gets an electric shock, huge electricity flows through his/her body; small signals sent from the brain get suppressed by this strong electric flow. So, a person cannot move his hands and legs when he becomes electrocuted; if it lasts for a long time, his heart-beat may stop. So, electric connections should never be neglected. We cannot do even for a single moment without electricity in present age. But we should use electricity carefully. We always need to use the right socket and the right plug in using electric connection. We should never give electric connection from an open wire by removing its plastic and then entering the plug. We must also stop anyone who does this type of work.

When the electric connection is proper, we need to be careful about only one more thing regarding the computer. We have already mentioned that the processor of a computer may sometimes become very hot and so now-a-days separate fans are set on a processor. Other ICs of the motherboard may also become hot. So the inside temperature of a computer may be much higher than the outside temperature. So, fans are set in every computer to push out the hot air from the computer. This fan pulls in air from outside and pushes out hot air from inside.

When you use a computer, find the passages for inlet and outlet of airflow. You need to ensure that airflow is never blocked. You will be able to use your computer for a long time if you remain careful about this matter.

You might have heard some people saying that there should be an air conditioner in the room for using computer to keep the room cold; this is not at all true. Your computer can tolerate a much higher temperature than what you can.

Dangerous/risky electric connection   Proper and safe electric connection

Activity

1. Check all electric connections in your school and see whether they are properly done. If the connection is not proper in any point, inform your teacher.

2. Find out the direction in which cold air enters and hot air comes out in the desktop and the laptop computers of your school.

Fan is set over the processor to keep it cool

Proper airflow inside the computer must be ensured

New words: Voltage, Nerve, Socket, Airflow, Plug

Lesson 2 : Maintenance of ICT Instruments

Those who drive cars need to change engine oil of their cars after some days. The car will not only be damaged within a short time but also be dangerous for the passengers if the maintenance of the car is not proper. Like cars, other instruments also have to be maintained properly; but we are lucky that we do not need to take that much care of a computer. Yet you can use your computer for a long time if you are a little bit careful about some small matters regarding the use of computer.

Cleaning of the monitor: At present, most of the computer monitors are LCD or LED monitors and it is better if you do not attempt to clean them. Its surface is not made of glass; so there may be scratches if you try to clean them. Not only this, the pixels inside the monitor may be damaged if you rub during cleaning.

However, you can clean the CRT monitor with a soft cotton cloth if it becomes dirty. If it stills remains dirty, then you can put a little glass cleaner on the cloth to clean it.

You need to the clean monitor with a soft cotton cloth

If the glass cleaner is not available, you can prepare an alternative glass-cleaner by mixing one spoon of vinegar with a glass of water.

You must remember that the computer must be turned off by disconnecting electric connection at the time of cleaning any part of a computer.

Water or Liquid: It is better not to keep water or any type of drinks near a computer while using it; because, if the water or any liquid suddenly falls on your computer, your computer may be damaged. Water or any other drink is conductive; if it enters into the computer, there may be a short-circuit. If such type of incident happens, switch off the computer immediately and keep it under a fan for a long time so that the water is evaporated.

Dusts: There is a lot of dust in our country. The fan of a computer draws in air; there may be some dust in that air. The computer may become very hot if the airflow gets blocked with dusts. So, you should frequently check whether there are dusts over that passage. Clean the passage if it is dirty; but never try to open a computer for cleaning the inside.

Cleaning Keyboard: It is good to clean the keyboard often because germs may spring up there as it is used with our fingers. Keys can be rubbed with a piece of dry soft cotton cloth and the surrounding of each key can be cleaned with a cotton bud. After this, you can make it upside down and give a few mild jerkings, and the keyboard will be fairly clean.

You can clean the keyboard by putting some cotton on a stick, or by using a cotton bud. Later you need to wipe the keyboard with a soft cotton cloth

Cleaning Mouse: At present almost all mouses are optical mouses; it functions when light is reflected. So if the lens of a mouse becomes dirty, it may not work properly. If dusts accumulate in the mouse, detach the mouse from the computer, turn it over and clean the dirty spots with a cotton bud and then rub with a soft cotton cloth.

Dust of the mouse may be cleaned either with a stick with cotton or with a cotton bud.

Activity

1. Students of the class will check the computers of their lab or any other place and find out whether their monitor, keyboard and mouse need cleaning.

2. They will also check whether the passage of the airflow is blocked due to dust.
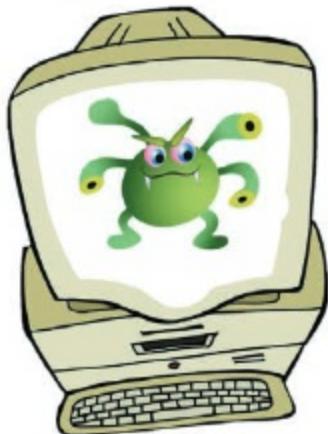
New words: Cotton bud, LCD Monitor, Pixel, Short-circuit, Vinegar

Lesson 3 : Software Maintenance

We have learnt that a computer has two parts; one is hardware and the other is software. We have talked about the maintenance of hardwares in the previous two lessons. Now, you may ask whether there is any necessity for the maintenance of softwares.

Certainly, there is a need for the proper maintenance of softwares. Those who use computer know it well that the improper maintenance of softwares creates greater problem than the improper maintenance of hardwares.

The cause of this problem is the virus of the computer. You must have heard about viruses and germs of diseases. We sometimes fall sick due to the germs and the virus; computer virus is just like a computer programme of that type for which a computer cannot work properly. The germ of a disease or a virus can spread from one person to another and make him/her sick. The computer virus may also spread from one computer to another. When a real virus attacks a human body, it multiplies its number and gives birth to innumerable

viruses; the virus of a computer is just like that. If a computer virus somehow enters into a computer, it turns into innumerable viruses. The real virus attacks a person without his/her knowledge; the computer virus also attacks a computer without every one's knowledge.

The only difference between the real virus and the computer virus is that, one already exists in the nature and the other is made by dishonest people to harass others.

Computer virus may cause us many problems if we are not careful about the use of computer.

Man-made computer virus is nothing but a little programme. It can easily spread from one computer to the other through computer network.

When you make a copy of something from a computer in a pendrive,

the virus may also be copied even without your knowledge. So, you should always remain very careful when you copy anything from any computer.

Computer virus is not like a germ-carrying virus– it cannot make us sick. This virus cannot also go from one computer to the other on its own. This can go from one computer to the other only at the time of copying information and data or only through the network.

Today, many types of anti-virus programmes are available to protect the computer from computer viruses. But, there are a lot of wicked people in this world who regularly develop new viruses and spread them. So, those who want to protect their computers from viruses need to purchase updated anti-virus programmes. That is quite expensive for general people.

But virus is not created for the open source software; so one can remain safe from this problem if he/she uses operating systems run through open source software programmes.

Activity
Make a list of similarities and differences between real and the computer viruses.

New words: Virus, Computer Virus, Anti-virus.

Lessons 4 & 5 : Health Hazards and Consciousness Regarding ICT Application

Milk is a very nutritious food; it is good for children to drink milk regularly. But, if we throw a child into a milk drum, then there is a fear for the child to be drowned in the milk. That means, though a thing may be very good but it is dangerous when it is used excessively. It is also true in the case of computer.

Computer has been made for help in our daily life, and it should be used accordingly. But if we start using it excessively then it can cause a danger.

Some amount of intelligence is required to use computer. For this reason, many

parents allow their children to play on it as a toy. It is often seen that many children are addicted to computer games and they play computer games all day and night. It is harmful for children. They may fall sick sitting in front of the computer for hours at an age when they should play in the field with their friends. Mental sickness is more dangerous than physical sickness.

Children should play regularly by swimming or running

Many physical problems may arise if someone sits in front of computer for a long time. In this regards back pain, pain in fingers, problems in eye can be caused commonly.

A different type of problem has been noticed with the grown up youths using computer. A person can now make social contacts with others using a computer. Even though it is an easy way for collecting ordinary information, often it is seen that many people take it to an extreme stage. Many people think that it is an actual social relationship. So, they forget about normal relationships with others. In most cases, these boys and girls grow up as unsocial human beings.
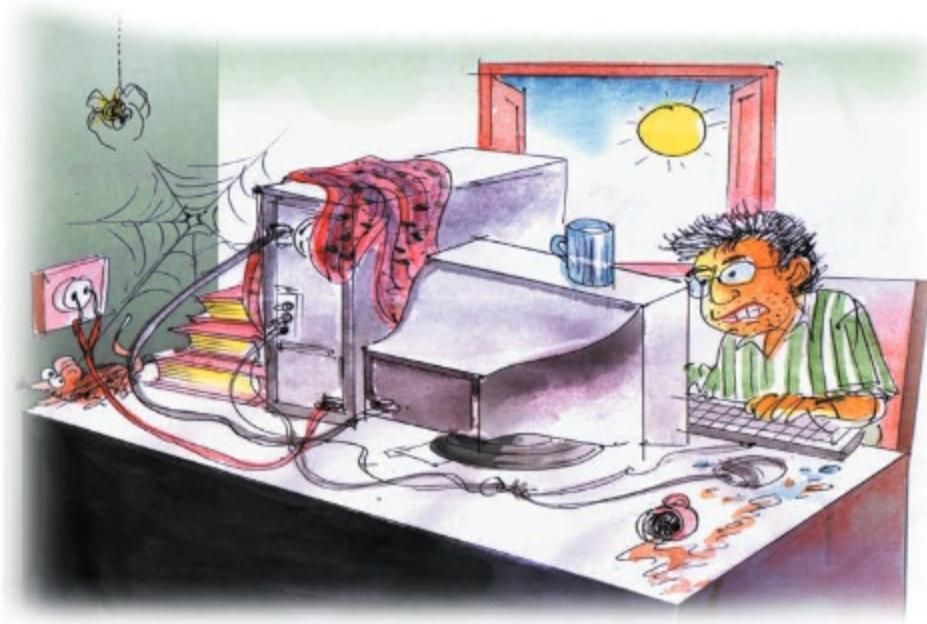
Information and communication technology is comparatively a very new technology. That's why we have not fully understood its capabilities yet. We are getting to know about some of its good capabilities, in one side. But we also need to be careful so that it cannot harm us that it may not make harm to us subconsciously.

Those of you, who will use information technology in life, always need to remember that you should use the technology but never let the technology use you.

Activity (Lesson-4)

Doctors have invented a back exercise for those who work a lot on computers. If you want you can also try it.

- Stretch your arms to the front, and move them up and down several times. You can do this by standing or sitting down.

- Spreading and squeezing the fingers of both hands 10 times.

- Entering the fingers of one hand through the others holding it strongly and moving them back and forth.

- Stand up, and lean your head to the right. Hold it for a few seconds, and bring it back to the straight position. Then lean your head to the left, and do the same as before. Do the same for the left shoulder. In this way practice several times.

- With shoulders leaned forward touch your chest with your chin, keep them for few seconds and try go leaning back as much as you can. Practice this several times.

Activity (Lesson-5)

Find out the mistakes in the use of ICT in the picture above.
- Draw another picture including some more mistakes.
- Learners will do this work during a whole period.

New words: Social Network

Sample Questions

1. What is the voltage of electricity flow in our country?
   a. 200   b. 220
   c. 240   d. 260

2. While using computer everybody should be careful about-
   a. Time   b. Electric connection
   c. Mental fatigue   d. Inclement weather

3. Which things should be used first to clean a CRT monitor?
   a. Soft cotton cloth   b. Thick cotton cloth
   c. Wet cotton cloth   d. Glass cleaner

4. What do you understand by safe use of ICT instrument?
   i.   Maintenance of ICT instrument
   ii. Safe use of ICT avoiding health risks
   iii. Taking preventive measures of ICT instruments

Which one is correct?
   a. i and ii   b. i and iii
   c. ii and iii   d. i, ii and iii

5. What needs to be done first during cleaning hardwares?
   a. Disconnect the electric connection of room
   b. Disconnect the electric connection of computer
   c. Ensure the presence of a fire extinguisher
   d. Switching off the computer

Read the following passage and attempt questions No. 6 and 7:

Salma went to Cox's Bazar with her parents keeping the window open by mistake. After returning home, she finds that the keyboard and the mouse of her computer are not functioning properly.

6. The keyboard and the mouse of Salma's computer are not functioning properly because of-
   i. The access of a lot of dust in the room
   ii. No use of air-condition in the room
   iii. The carelessness maintenance of the computer

Which one is correct?
   a. i and ii   b. i and iii
   c. ii and iii   d. i, ii and iii

7. What can Salma use first to clean her mouse?
   a. Glass cleaner   b. Soft wet cloth
   c. Cotton cloth   d. Cotton bud

CHAPTER FOUR

Word Processing

After reading this chapter, we will be able to:

- describe word processing ;

- describe the relation between ICT and word processor ;

- describe the importance of word processing in ICT;

- create a file for saving something written;

- write simple English using word processor.

Lesson 1 : What is Word Processor?

You have to write a lot for study. You write down on the papers of notebooks or on plain papers with pens or pencils. Students whose handwritings are good, who can write clearly, have clean notebooks. There are some students who do not have good handwritings, has a lot of over-writing, and cannot write in an organized manner. Their notebooks do not look good.

Sometimes you need good handwriting; what will you do if you want to publish a school magazine or write an address of honour or submit an essay for a national competition? Actually, we had nothing to do in the past in such situations, other than getting it typed in a typewriter. Now we can get it beautifully printed after composing it in a computer application. The software made for writing is called a word processor. To write something, words need to be written, and arranged in a specific written system, which is called processing. These two make word processing and the software that processes is called a word processor.

You can easily find out in the next lesson what you can do using a word processor. When you will write something using word processor in a real computer, you will learn its details, which can be difficult to learn by just reading books. However, a few words about word processor must be added here. Firstly, the main difference between normal writing or typewriter and word processor is that in word processor editing or changing is possible. After writing on typewriter if we find an error, we can really do nothing except cursing ourselves. We have to write it again if we want to correct the mistake. On the other hand, nothing can be easier than correcting the mistakes in word processor. Not only mistakes, any other editing can be done if we wish; a new part can be added, discarding the old one.

The second major difference between normal writing and word processor is document saving. It is not so easy to preserve something hand written .We often cannot remember where we have kept it. It may not be found when required. Even if we can find it, it may be damaged by insects.

Word processors have no such problems. All writings can be saved as files in a hard drive. If required it can be copied in pen drive or CD. It can also be saved in others' computer if someone wants to be cautious.

As word processor is very useful and a popular software, all renowned software companies have made good word processors. Microsoft Word (MS Word) developed by Microsoft Company is such an application software. If anybody wants to have a word processor free of cost, there is a software for him called Open Office Writer.

So you can understand that the invention of paper was obviously a milestone for human civilization. Thousand years later, now it is possible to write without papers which has added a new dimension to human civilization.

Type of word processors:

PAID	FREE	ONLINE	
Microsoft Word	LibreOffice OpenOffice Writer	Google Docs	Office 365

Activity
Make two groups with the students of the class. One group will argue the benefit of using word processor by totally stopping the use of papers. The other group will argue why we should continue the use of papers. Observe and identity whose arguments are better.

New words: **Word Processing, Word Processor, Microsoft Word, Open Office Writer, File.**

Lesson 2 : Importance of Word Processor in ICT

It is said that a picture is equal to 100 words. We will try to see whether this saying is true or not. What can be done with a word processor? Why is it so important? You will be shown two pictures without telling anything more. In one picture there is a hand written page. You are shown the same page typed in word processor. After seeing the two pictures you will see for yourselves what you can do with the word processor.

Hand written page

New form of the write up in the word processor

সড়ক দুর্ঘটনা: একটি অভিশাপ
(Road Accident: A Curse)

আমাদের দেশে সড়ক দুর্ঘটনা একটি অভিশাপের মতো। খবরের কাগজে যখন আমরা দুর্ঘটনার খবর পড়ি, তখন মানুষগুলোকে চিনি না বলে তাদের আপনজনের দুঃখটা আমরা সব সময় বুঝতে পারি না। শুধু যে মনে দুঃখ পায় তা নয়-অনেক সময় পরিবারের যে মানুষটি রোজগার করতো, হয়তো সেই মানুষটি দুর্ঘটনায় মারা যায় বলে পুরো পরিবারটিই পথে বসে যায়। দুর্ঘটনায় যারা আহত হয় তাদের চিকিৎসা করতে গিয়ে অনেক পরিবার সর্বস্বান্ত হয়ে যায়।

সড়ক দুর্ঘটনা কমানোর জন্যে আমাদের সবারই দায়িত্ব আছে, সেই দায়িত্বগুলো এভাবে লেখা যায়:

ক্রমিক নং	সংশ্লিষ্ট মানুষ	দায়িত্ব
১	পথচারী	রাস্তা পার হওয়ার সময় দুই পাশে দেখে পার হবে। সবসময় ওভার ব্রীজ দিয়ে রাস্তা পার হবে।
২	যাত্রী	গাড়ির ছাদে ভ্রমণ করবে না। ড্রাইভার ঝুঁকিপূর্ণভাবে গাড়ি চালালে তাকে সতর্ক করে দেবে।
৩	ড্রাইভার	সঠিক ড্রাইভিং লাইসেন্স ছাড়া গাড়ি চালাবে না। ড্রাইভিংয়ের সমস্ত নিয়ম মেনে গাড়ি চালাবে।
৪	গাড়ির মালিক	যেসব গাড়ি চলাচলের উপযোগী নয়, সেগুলো পথে নামাবে না।
৫	পুলিশ	সঠিকভাবে আইন প্রয়োগ করবে।
৬	মিডিয়া	গণসচেতনতা তৈরি করবে।

সড়ক দুর্ঘটনার অভিশাপ থেকে মুক্তি পাওয়ার জন্যে আমাদের সবাইকে কাজ করে যেতে হবে। একেবারে ছোট থেকে আমরা সতর্ক থাকব, যেন আমাদের পরিচিত আর কাউকে সড়ক দুর্ঘটনায় মারা যেতে না হয়।

19 September 2011
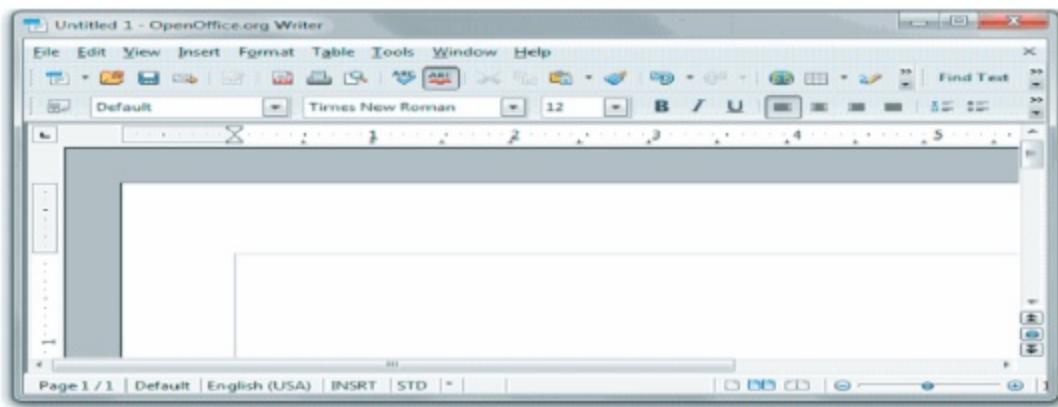
Lessons 3-28 : Opening a New File and Writing in It by Using Word Processor

So far we have studied computer and ICT only in the book. Now, it is time to work practically with the computer. We will first use the word processor.
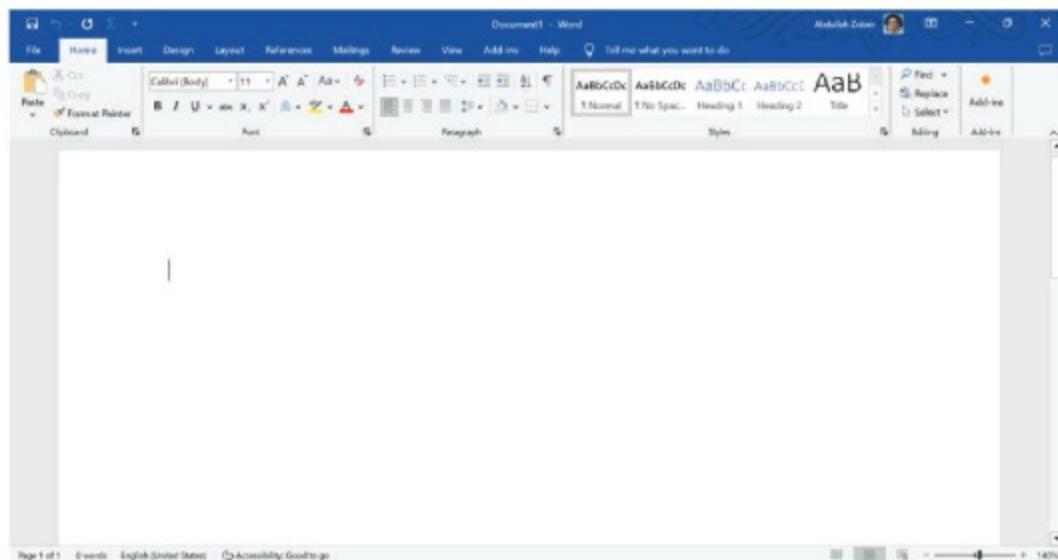
It is not possible to tell which operating system and word processor are there in the computer of your school lab; so we cannot discuss the use of any particular word processor; but this will not be a problem for two reasons. The first reason is - all word processors are more or less of the same type. The second reason is - learners of your age have an excellent skill in using computer. Children of your age can easily do and understand what the older people cannot. Now, let's start:

First of all, switch on the power of computer. Operating system will start functioning when the power is on if the electric connection is proper. After checking when you find that everything is okay, and the computer can be used, you will see some icons on the monitor. Icon means a small picture. The picture of icon appears with the writing, because it is easier to understand from a picture than from a writing. If you now move the mouse, you will find a sign moving in the monitor. Those who have not used a mouse before, will have to learn it. You should learn first in which direction the sign moves when the mouse is moved. Now, set the sign or the mouse on the word processor. You may take help of your teacher to know which the icon of word processor is. If the mouse is properly set on the icon of the processor, its character will change a little.

Now click the left button of the mouse twice. New learners may initially have some problems but don't worry about that. The word processor will start functioning if you can properly click the mouse twice without moving it. In computer language, it will be 'open'.

Open Office

Microsoft Word

Microsoft Word and the Open Office Writer look quite similar though they are completely different word processors.

Whichever word processor you may use, you will find a page, looking like a white paper, open in the entire monitor. A vertical straight line (cursor) will start "blinking" at the beginning of the page which means that your word processor is ready for writing. Now you may start writing.

You will need some time to learn how to write by using keyboard. But there is no need to write something meaningful at this stage. Press the buttons of the keyboard and you will find writings on the white screen. You may pay attention to the writings that appear after pressing the different buttons. You will have an advantage if you know some rules. These are:

a. If you press the **shift key**, writings will be in capital letters, not in small letters.

b. After writing a word, press the **"space bar"** and you will get a blank space.

c. If you press **"Enter"** button after finishing a paragraph a new paragraph will start.

d. When you write something, the **cursor** remains at the end of your writing; if you move the mouse, the cursor will also go there. You may start writing from that place by clicking the mouse.

e. If you press the **"Delete"** button, writings after the cursor will be deleted. If

you press **"backspace"** writings before the cursor will be deleted.

(You may do many other things with the Control, Alt or Function keys of the keyboard; but it is better not to press those keys at this moment)

It is possible for you to write everything by using the word processor if you know the five rules mentioned above. You can go to the second phase of using the word processor when you have learnt to write something (either meaningful or meaningless). The second phase is to know how to save what you have written.

The system of saving your writings is almost the same in all word processors. If you look at the top of the word processor, you will find a ribon. If you click the mouse on `File` button of the left comer of the ribbon, a menu will open. Many things may be written there. Find the word save and click; word processor will start to save what you have written. When you save what you have written, it becomes a file; each file is saved after giving if a particular name. When you save something for the first time, it is not named; so the word processor will ask you to give it a name. Then you will have to type a name (it is better to give your own name to your file if the computers of your school lab are used by many students). When the file is saved, it will be written in the hard drive of the computer.

Now **close** your word processor. There are many ways of doing that; for the time being, select the **Exit** option by clicking on `File` button. Take the cursor of the mouse there and click; the word processor will be closed.

Congratulations to you; you have opened a file for the first time by using the word processor of the computer.

Now, we can go to the third phase. Let's, open the file that you saved in your name and do some work here. You can do it in many ways. Let's use the method which is familiar to us.

Let's double click on the icon of the word processor just as we did earlier. The word processor will open a file as before, but we will not write anything there. We will again click on the `File` button. If you click "Open", the names of all files that have been prepared will appear. You now look for the file in your name and click the file twice; thus you can open your file. The works that you have done there till the last time, will all be there; nothing will be been lost or deleted.

You may write some other things in your file. Save it again when you finish writing.

Congratulations once again. You have learnt the primary matters of using the word processor. You now have to practice only. You may also check the menu to find out what else can be done.

Activity

1. Open a file and write **"The quick brown fox jumps over a lazy dog."** Can you tell the specially of this sentence?

2. Write the above sentence again and again and see how quickly you can write how many times. Start a competition among yourselves and see who can write most quickly.

The above sentence contains all the letters of English alphabet. So if any one can write this sentence, it means that he/she can write all letters.

New words: Menu, Option, Cursor, File, Save, Icon

Sample Questions

1. Which software is used for writing on the computer?

    a. Graphics software   b. Utility software

    c. Word processing software d. Spreadsheet software

2. What is the function of "Enter" in the word processor?

    a. To delete selected parts

    b. To put the cursor in the following line

    c. To delete the letters in the left side of the cursor

    d. To cancel menu or dialog box.

3. What is ribon?

    a. Direction of arranged title

    b. List of commands serialised by picture

    c. List of commands according to the task

    d. List of editing commands arranged by the picture

4. Where do you click to open an old file using **File** button?

    a. New   b. File

    c. Save   d. Text

5. Where do you click to save a written document using **File** button?

    a. New   b. Close

    c. Save   d. File

6. Where do you click to close a file using **File** button?

    a. Exit   b. Save

    c. File   d. Open

Read the following passage and attempt the questions Nos. 7 - 9:

Mina learnt that the condition of the women are miserable in five countries of the world. She decided that she would do research and present the results in a seminar. Besides, she thought that she would exchange her views with the intellectuals.

7. Which of the following softwares can Mina use for her work?

    a. Customized software   b.   Graphics software

    c. Word processing software d.   Utility software

8. Which of the following medium can be appropriate for exchanging the views with the intellectual persons?

    a. Mobile phone   b. Land phone

    c. Internet   d. Fax

9. Give reasons in favor of your answer of question no.8

....

....

....

CHAPTER FIVE
Introducing Internet
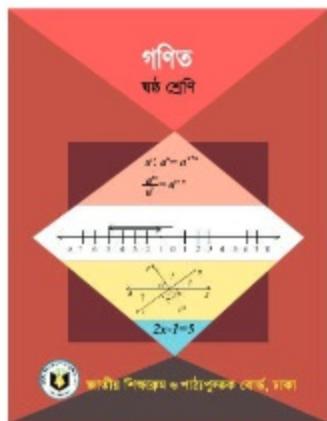
After reading this chapter, we will be able to:

- describe internet;
- describe website;
- visit websites using a browser;
- describe search engine;
- find out information searching internet by using a search engine.

Lesson 1 : Internet

In this book we have mentioned several times that the entire world is going through a change caused by information and communication technology, and we are observing these changes which are happening in front of our eyes. Internet is the most important among the factors for which the revolution of ICT is happening. So, you have to know about the Internet. All of you will have to use Internet at some point. Let us now imagine some incidents to understand this clearly.

Incident 1: One day, while Rahat was coming back from school it began to rain cats and dogs. Rahat was very happy. "Is there any country where rain is so beautiful like Bangladesh"? Rahat thought. He likes getting wet in the rain. So, he returned home getting wet. After a while he remembered that he had come home with the school bag. This bag must have got wet. He found that it was really so. His mother rebuked him a bit and kept the books under the fan to dry. But the

Textbook can be downloaded from Internet

Mathematics book was completely damaged. Rahat became so sad that he could not but cry. His mother said, "It's okay. Don't worry. After downloading your Mathematics book from NCTB's website, (www.nctb.gov.bd), I will get it printed and bind it for you.

Perfect map of National Monument can be viewed through Internet (in the courtesy of "Google Earth")

You will get a new book". His mother really did that. Within one hour Rahat got a new book.

Incident 2: Two friends need to go to a place for an important business. But the problem is that none of them went to the place before. They even don't know where there is a way to go there. As they were

thinking about it they remembered that they could find the map of that place on Internet. Within a short period, they found the ins and outs of the place. They found out that they could go there by the road next to a marshy land. Next day, they reached there.

Incident 3: A wounded freedom fighter along with his two daughters was returning home by train. A foreigner was sitting in front of him. While traveling they began to talk. From the conversation the foreigner came to know about the liberation war of Bangladesh. He said "I am interested to know the history of your liberation war. Is there any book on this"? The freedom fighter replied, "Of course. There is an Internet link here. Please, try it. You will find everything". The foreigner sat with his laptop and logged on to the link. Within a minute, he could read the golden history of the liberation war of Bangladesh.

Incident 4: In the school's annual cultural programme, Mily wants to dance on the song "Ami Tak dum tak dum bajai Bangladesher dhol". But the problem is that she does not have any cassette or CD of this song. She was very sad and about to give up her hopes. Then her teacher Rawsan Ara said to her "Mily, don't worry, I will search in the net for the song and download the MP3 copy of it'. Accordingly, Rawsan Ara downloaded the song and in the prize giving ceremony, Mily danced on the song that impressed every one present there.

Incident 5: Those who have written this book for the students of class six, suddenly, noticed that the name of the super computer has already been mentioned in this book but there is no picture of a super computer there. Will children get interested in reading this book without attractive pictures? Writers of this book did not worry about the picture because they knew that, they could find some pictures in the large encyclopedia named "Wikipedia". They actually got it - you have already seen it.

We can cite thousands of incidents like these are very easily. But is there any need for this? You must have already understood that Internet is a place where you can find any type of information of the world. You must be surprised to think that who has collected so much information in a particular place? How has he done this? How can anybody of the world use this information?

The answer is very simple. Internet was not invented with a single computer of a person. Internet is the network of millions of computers of the world! Those who are connected with the internet can communicate with millions of computers if they wish; they can also download the information from any computer. Can you imagine how big the information storehouse will be, even if there is only a few information in the millions of computers?

Activity

Divide the whole class in some groups. One group makes a list of how we can use Internet in education. Another group makes a list of how we can use Internet in the health sector. Regarding games or recreation another group makes a list. After combining all the lists, you will see that the list has become very long!
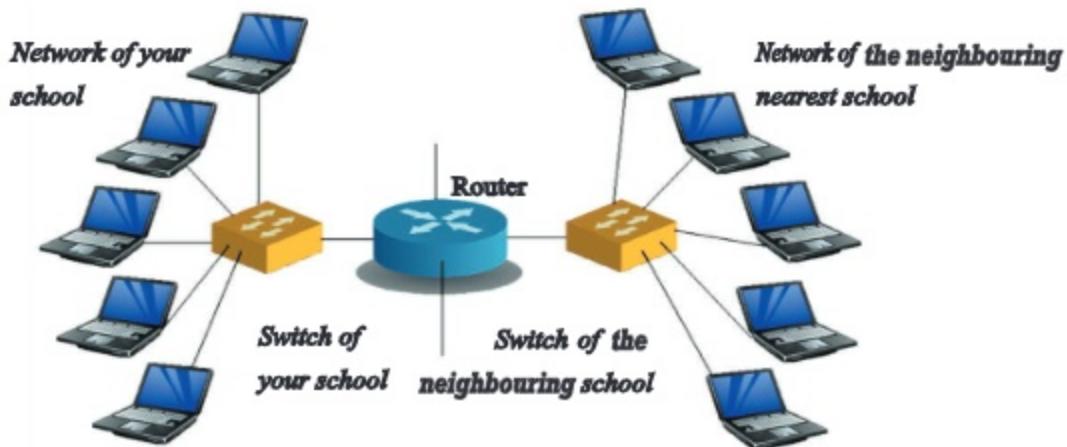
New words: Website, Download, MP3

Lessons 2-3 :Internet Connection and Playing with Network

In the previous chapter, we have learnt about the various functions of Internet. You must be very interested to know how it works.

We have already mentioned before that Internet is the worldwide computer's network. We need to discuss what we mean by network. Suppose, there are many computers in your school's computer lab and all computers are connected with a machine called 'switch'. Then one computer will be able to communicate with another, and we will say that, your school has a computer network.

Two networks connected with one another to setup a network's network.

Suppose there is another school beside your school. They became surprised to see your computer network. Then they also requested their teachers to have a computer network. Their teachers also setup a computer network by using a lot of computers. Now the students of that school too can connect one computer with another computer within the network.
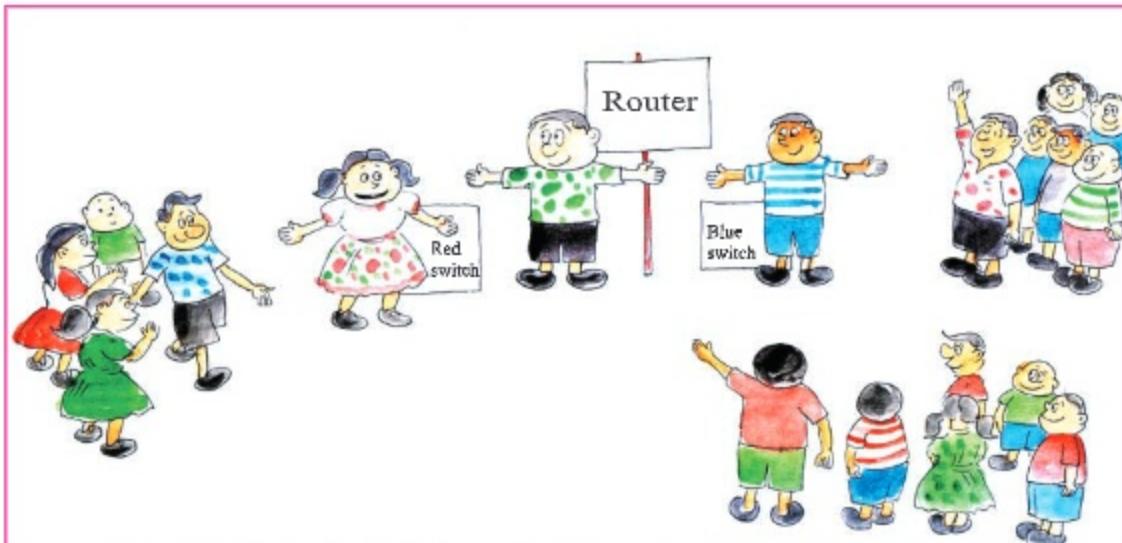
Few days later, you may notice that you can communicate with the computers of your school network, but you cannot communicate with the computers of other schools. Sometimes, you would like to do so. If you want to do this, you will need to connect your school's computer network with the other school's computer network. For connecting the two networks, the device which is used is called a "Router". It has been drawn in the above picture how your school's computer network can be connected with your nearest school's computer network.

If you connect your school network with your nearest school network, with your local college network, your medical college network, then it will be a network's network. It is the mystery of Internet's invention. The word "Internet" originated from "Interconnected Network". Inter from the first word Interconnected and 'Net' from the second word Network together make the word Internet! There were only four computers in the first Internet in 1969. Now, there are billions of computers.

Activity (lesson-2)
Two networks are connected in the picture of your book. Suppose, there are two more networks; draw a picture connecting them all.

Let us play the Network game (Lesson 3)

The students should divide themselves in groups, and play the 'network' game

For playing this game, one will be router, some will be switches and the rest of the class will be computers. Number will be given to each computer. Names of the switches will be- red, blue, green etc.

Some computers along with the red switch will make the red network. Similarly, some computers along with the blue switch will make the blue network, and the green network will be made by the green switch.

One switch will not communicate with the other switches directly. If it is needed it will be done through a router.

Computers, now start communication with another computer. Write the name of the computer on a paper with which you would like to communicate (for example, green 13 or red 7). Send the paper to your network switch.

If the switch sees that the paper is for a computer within the network, it will be sent immediately. If the switch sees that the paper is for another network, it will send it to the router. The router will send that paper to the appropriate network switch. Then the switch will send it to the specific computer.

Find out how quickly you can communicate from one computer to another.

New words: Network, Switch, Router

Lesson 4 : Website

We have seen that Internet is the network of networks. In this way a lot of computers can connect with one another. When computers are connected with one another then all people want to get the benefits in many ways. The easiest opportunity is the presentation of individual information in front of others. The processes which is adopted for this purpose is called a 'Website'. If anyone wants to collect information from others, he has to visit their 'website'. All information are presented in an organised manner in the website.

For example, the universities write down the names of all departments, admission requirements, list of the teachers and their research areas are also given in their websites.

Those who design websites try to arrange all necessary information properly. You can collect information easily from there. If you want, you can read the newspaper from their websites, enjoy music from music websites and enjoy movies from the movie websites.
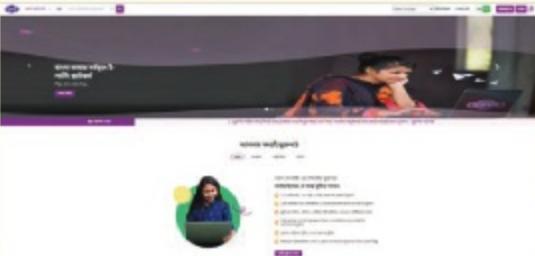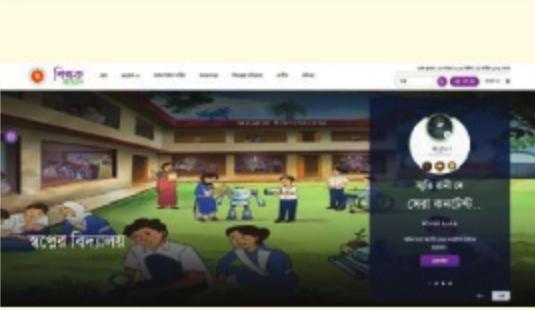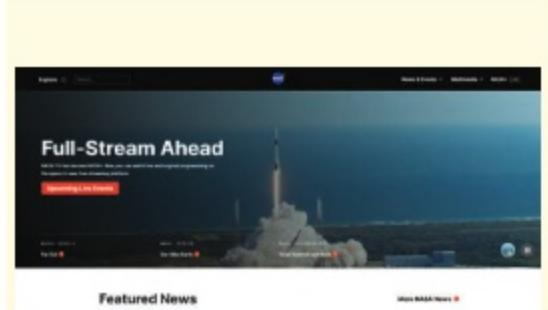
Those who are involved in business, give information of their products on their websites. Institutions inform their institutional news. Nowadays   you

can buy and sell products from the websites. Every website has a simple name; you will be able to search the website by that name. Necessary steps have been taken so that websites can be found easily. Special application softwares can do that for you. Its name is "Search Engine". We will learn more about search engines in the next chapter.

National Web Portal of Bangladesh


BBC (www.bbc.com)

bdjobs (www.bdjobs.com)

muktopaath.gov.bd

BCB (www.tigercricket.com.bd)

www.teachers.gov.bd

NASA (www.nasa.gov)

Activity

Suppose you want to make your school's website. What types of information do you want to preserve there?

Form groups consisting of four or five students in each, make the list and present it to the class.
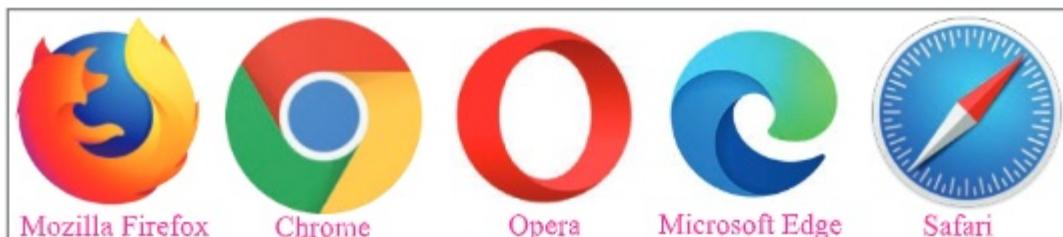
New words: URL, Website

Lessons 5-20 : Web Browser and Search Engine

Web Browser: For finding websites in the Internet two things are needed: (1) Internet connection with your computer, (2) a special application software which can search the web and bring information from that.

You can think of, the Internet as an imaginary world. Websites are the information stores of that imaginary world! If someone sees the websites, it may seem to him like visiting the imaginary world! It is called "browsing". Browser is the name of the special application software used for browsing websites.

At this moment, the largely used browsers are -   Google Chrome, Mozilla Firefox, Microsoft Edge, Opera, Safari etc.

Popular browser icons

For moving around the websites or browsing the web, using a browser is very simple. To open, you need to just click the browser icon twice. If there is already any web address on the address bar, it will open automatically. Now you need to type the name of the website you want to visit at a particular place. For writing the website's address, each browser has a distinct place on the top (this is known as address bar). You need to just press the enter key after completing your typing. Nothing else! How quickly the website opens, depends on your Internet connection speed.

When you use a browser for the first time, you will not be able to visit anywhere, because you do not know the address of any website. That's why some website addresses are given below. You can type these addresses:

National Web Portal of Bangladesh: www.bangladesh.gov.bd

To visit the interesting places of Bangladesh: www.parjatan.gov.bd

To see the liberation war museum: www.liberationwarmuseum.org

To see the NASA's web site: www.nasa.gov

To have the view of an area from a satellite: maps. google.com

Remember that, after typing a website addresses, you will visit the website. But information is classified in different layers of websites. You will need to find them out!

Activity
Find out the name of ten interesting places of Bangladesh from website. Find out the pictures of seven planets from NASA's website. Find out the map of your upazila / thana.

The internet contains many websites. Some websites will become your favourite. Often you would like to visit those websites. You can teach your browser to remember these websites so that you do not need to type them again and again. Your browsers will remember these addresses and when you want to visit those, it will take you there.
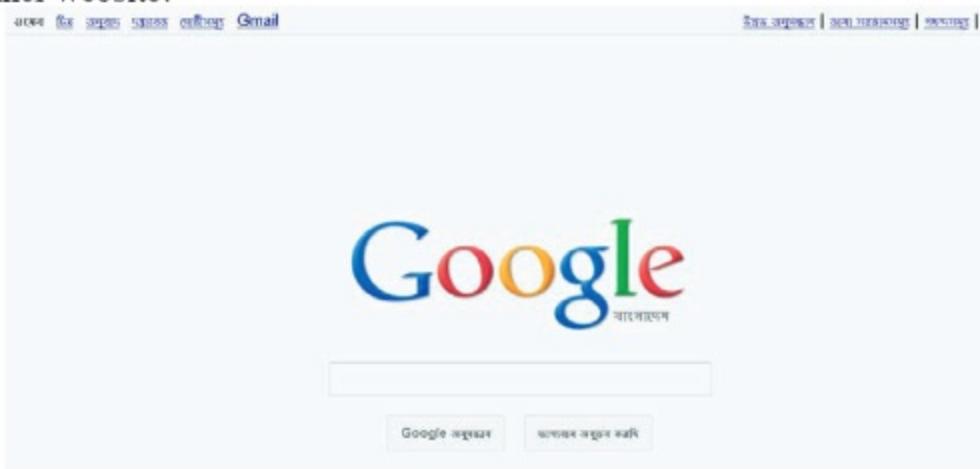
Search Engine : Now you might have understood that, Internet is a vast place where there are millions of computers and thousands of websites. All websites are not good. Some websites have been invented with negligence, some have been invented for illegal purposes. Since there is no owner of the internet, it is running by itself. If you want to find out information from the internet by yourself, you will be tired within a few minutes. It may seem to you that you are caught in a puzzle. That's why for collecting information you can take help of a special application software. The name of that software is search engine. It can bring the desired softwares to you. At this moment the most popular search engines in the world are:

> Google: http://www.google.com/
> Yahoo: http://www.yahoo.com/
> Bing: http://www.bing.com/
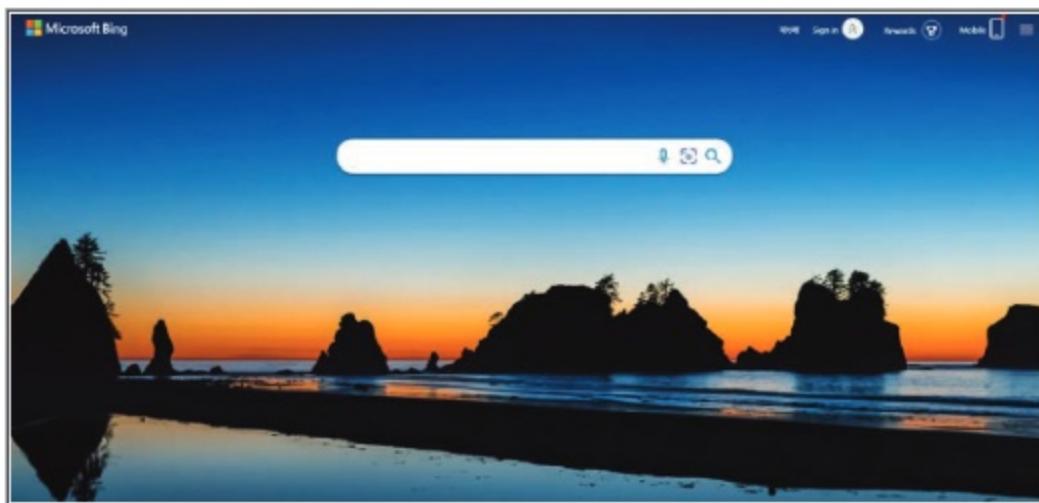
These are very easy to use. First you need to open the browser, and type the address of the search engine you want to use in the browser's address bar. Then press enter, instantly the search engine will come. Every search engine has a specific place to write what you want to search. You will have to write the name of the desired topic at that place. Those websites which contain your desired information will be visible in a huge list of information after pressing the Enter button. Now you can visit the websites one after the other from the list to check whether your desired information is there or not. If it is not available, search another website!

Homepage of Google search engine

Homepage of Yahoo search engine

Homepage of the bing search engine

Acivity

Internet is very useful for research. Boys and girls of the class need to be divided in threes. Each group will select any one of the following topics:

· Planets	· Liberation war of the Bangladesh	· T-Rex
· Spiders	· Snakes	· Cricket
· Football	· Black hole	· Tiger

Use any one search engine to find out a list of different websites to get your necessary information. Write a report on the basis of this information.

The report should contain the following items:

➢ Title of report   ➢ Research result (you can attach pictures)

➢ Your Name, class, roll, school   ➢ Conclusion

➢ Introduction   ➢ Website list from where you have collected the information.

New words: **Browser, Internet Explorer, Mozilla Firefox, Google Chrome, Opera, Safari, Search engine, Google, Yahoo, Bing.**

Sample Questions

1. What is the name of the large network which is created by connecting many computers in the world?

   a. Mobile network   b. Land phone network

   c. Internet   d. Hyperlink

2. When was the internet introduced?

   a. 1959   b. 1969

   c. 1979   d. 1989

3. What do you need to use to find a specific information from the internet?

   a. Web browser   b. Search engine

   c. Hyperlink   d. E-mail

4. Which one is called the Information Super Highway?

   a. E-mail   b. Mobile phone

   c. Internet   d. Land phone

5. Internet is called "Interconnected Network" because: -

   i. It is connected with many computers in the world.

   ii. There is a facility of personal communication with many people in the world.

   iii. There is an opportunity to communicate with anyone in the world.

   Which one is correct?

   a. i   b. i and ii

   c. ii and iii   d. i, ii and iii

Read the following passage and attempt the questions No. 6 and 7:

Deepa is a student who lives in Australia. After many years Deepa comes to Bangladesh with her parents. Before leaving for Bangladesh, her teacher gives her a task to send a report on the "Interesting places of Bangladesh".

6. How can Deepa quickly collect the information regarding the interesting places of Bangladesh from her home?

    a. By reading newspapers

    b. By reading books on Bangladesh

    c. By using a mobile phone

    d. By using the internet

7. How can Deepa send her report to her teacher easily?

    a. By post

    b. By Fax

    c. Through an E-mail

    d. Through a Mobile Phone

The End

2025 Academic Year
Six–ICT

সব সমস্যার প্রতিকার হচ্ছে ধৈর্য।
– হোয়াটলি