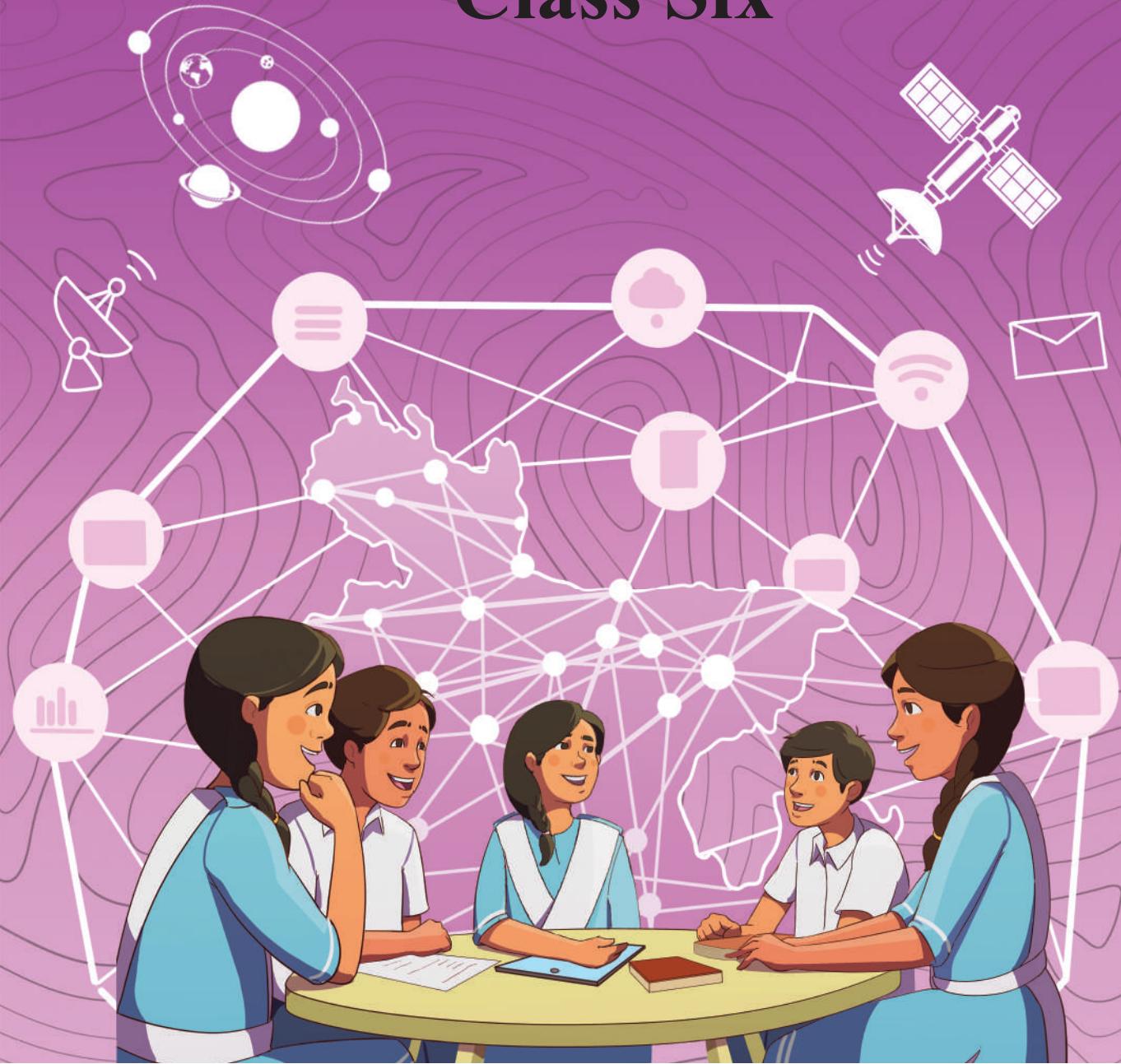


Digital Technology

Class Six



National Curriculum and Textbook Board



‘মুজিববর্ষ’ এর ক্ষণগণনা শুরুর মাহেন্দ্ৰক্ষণ

১৯৭২ এর ১০ই জানুয়ারি বঙ্গবন্ধু শেখ মুজিবুর রহমান ফিরেছিলেন তাঁর স্বাধীন বাংলাদেশে। তেজগাঁও এর পুরাতন বিমানবন্দরে (বর্তমান জাতীয় প্যারেড গ্রাউন্ড) উড়োজাহাজ থেকে নেমে বঙ্গবন্ধু বাংলাদেশের মাটি স্পর্শ করার সাথে সাথে পূর্ণতা পেয়েছিল আমাদের স্বাধীনতা ও বিজয়। ঐতিহাসিক সেই দিন ও স্থানকে বেছে নেওয়া হয়েছে বাংলাদেশের স্বাধীনতার রূপকারের জন্মশতবার্ষিকীর ক্ষণগণনার মাহেন্দ্ৰক্ষণ হিসেবে। ছবিটিতে ১০ই জানুয়ারি, ২০২০ সালে মুজিববর্ষের লোগো উন্মোচন করছেন বঙ্গবন্ধু কন্যা মাননীয় প্রধানমন্ত্রী শেখ হাসিনা। অনুষ্ঠানে উপস্থিত ছিলেন বঙ্গবন্ধু কন্যা শেখ রেহানা ও প্রধানমন্ত্রীর পুত্র সজীব ওয়াজেদ জয়সহ প্রায় ১০ হাজার দর্শক। ২০২০ সালের ১৭ই মার্চ থেকে ২০২২ সালের ৩১শে মার্চ পর্যন্ত জাতির পিতা বঙ্গবন্ধু শেখ মুজিবুর রহমানের জন্মশতবার্ষিকী উদযাপিত হয়েছে।

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Digital Techonology

Class VI (Experimental Version)

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Preface

In this ever-changing world, the concept of livelihood is altering every moment. The advancement of technology, in accordance with knowledge and skill, has accelerated the pace of change. There is no alternative to adapting to this fast changing world. The reason is, the development of technology is at its zenith compared to any time in the human history. In the fourth industrial revolution era, the advancement of artificial intelligence has brought a drastic change in our employment and lifestyles and this will make the relationship among people more and more intimate. Varied employment opportunities will be created in near future which we cannot even predict at this moment. We need to take preparation right now so that we can adapt ourselves to that upcoming future.

Although a huge economic development has taken place throughout the world, the problems of climate change, air pollution, migrations and ethnic violence have become much more intense than before. The epidemics like COVID 19 has appeared and obstructed the normal lifestyle and economic growth of the world. Different challenges and opportunities have been added to our daily life.

Standing on the verge of these challenges and possibilities, implementation of sustainable and effective solutions is required for the transformation of our large population into a resource. It entails global citizens with knowledge, skill, values, vision, positive attitude, sensitivity, capability to adapt, humanity and patriotism. Amidst all these, Bangladesh has graduated into a developing nation from the underdeveloped periphery and is continuously trying to achieve the desired goals in order to become a developed country by 2041. Education is one of the pivotal instruments to attain the goals and there is no alternative to the modernization of our education system. Developing an effective and updated curriculum has become crucial for this modernization.

Developing and revising the curriculum is a regular and vital activity of National Curriculum and Textbook Board. The last revision of the curriculum was done in 2012. Since then, a lot of time has passed. The necessity of curriculum revision and development has emerged. For this purpose, various research and technical exercises were conducted under the supervision of NCTB during the year 2017 to 2019 to analyze the prevalent situation of education and assess the learning needs. Based on the researches and technical exercises, a competency-based incessant curriculum from K-12 has been developed to create a competent generation to survive in the new world situation.

In the light of the competency based curriculum, the textbooks have been prepared for all streams (General, Madrasah and Vocational) of learners for grade VI. The authentic experience driven contents of this textbook were developed in such a way that teaching learning becomes comprehensible and full of merriment. This will connect textbooks with various life related phenomenon and events that are constantly taking place around us. We hope that learning will be profound and life-long now.

Issues like gender, ethnicity, religion, caste, the disadvantaged and students with special needs have been taken into special consideration while developing the textbook. I would like to thank all who have put their best efforts in writing, editing, illustrating and publishing the textbook.

If any one finds any errors or inconsistencies in this experimental version and has any suggestions for improving its quality, we kindly ask them to let us know.

Chairman

Professor Md. Farhadul Islam

National Curriculum and Textbook Board, Bangladesh

Open words to dear students

Dear student,

Happy new year to you.

After finishing an important stage of your educational life, i.e., ‘primary education’, you are going to start the secondary stage. This is undoubtedly a remarkable thing. Congratulations to you! New books, new friends, new schools for some, new school-uniform; All in all, something very interesting is about to begin, isn’t it?

You are really lucky, because you are growing up at a time when new technologies are being invented all around, which are making our lives easier and also transforming it. This period is called the period of technological revolution. Technology is the material that makes human work easier. Electric fans to keep the house cool, printing machines

to produce many books in a short time, wheels and vehicles to reach a place quickly, etc are instances of technology. There are many possibilities ahead of you. As new technologies make our lives easier, so also we need to know how to use them. Not only that, technology has to be used to solve various problems of life. In this way, technology has opened the doors to various possibilities in our life, and so we need to understand technology more deeply without fearing it.

Some of you may think, you don’t have computer and internet at home, then how can you understand technology! Let me tell you, the electric lamp that is in the house or school, or the mobile phone that your family member has, these are also technology. If you are interested in

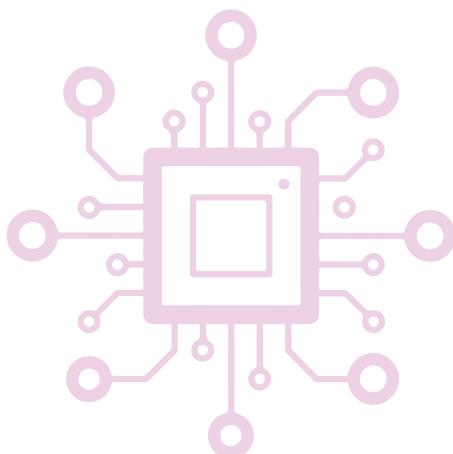


technology, if you want to explore, technology does not have to be in your hand at once. So this book is designed for you in a slightly different way, here **you will get** qualified through real experience of how technology works and how to solve life problems with it, even if technology is not at hand. Knowing and experiencing is not only in the classroom, but you have the opportunity to experience on the way to and from school, on the playground, around the school and at home. So work together to learn and experience with everyone around you.

You shall not compete with your friends; rather, through cooperation, everyone will know together. Our school, society, country will prosper only when we all prosper together, all contribute together. Good luck to you.

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A problem is not a bother, let us solve it together

We face different problems every day, most of which we can solve by having proper information. At the very beginning of digital technology studies, we will find some problems around us. We will also try to find solutions for them by having proper information and make others aware.

● Session-1: Let's find out a daily-life problem

Discuss with your friend about what problems you have faced in last one week. Identify 10 problems together. We said that we would solve our problems through information. So, first we will discuss what is information, what is the source of information and different ways to search for it.

Your name, age, height, what school do you go to, what class are you in - all these are information. Look around you. Everyone is your friend. You have something in common with them and you have some differences too. Let's get some information quickly.

Here is a table below to make it easier for you. You can collect information from a person in it.

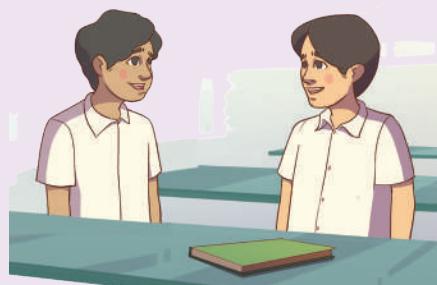


 Table 1.1

Name of the Form	First Survey of the First Class Session
What is your birth month	
How many pets do you have at home?	
Who is your favourite athlete?	

Necessity of information: Information is needed in every step of our daily life. We look at the clock when we wake up and we check our school bags and routines before going to sleep - everything requires information. In everyday life, we have to make big or small decisions at every moment. We are not even aware of it most of the time. Let's

assume we have three routes leading from our home to school. We need information to decide which route we should take today to go to school. Another example can be, some of our friends have come home. We want to play a game together. If the weather is good, we will go and play in the field. If it rains, we will play at home. In that case, we will decide which game we should play depending on our number.

What game we can play will also depend on the required tools and if we have them. So, what information do we need here? Weather information and the game tools we have.

Let's do some exercises. If you are asked from the previous example:

You have to decide what to take in your bag before you go to school tomorrow.

The information you need is which sessions will be held tomorrow.

Your information source is your class/session routine.

 **Let's identify some problems. We need information to solve those.**
Let's write down the proper source of information.

 **Table 1.2**

Decision/Problem	Information Needed	Source of Information
Example 1: What learning materials will we take in the school bag for tomorrow's session?	What subjects will be taught in tomorrow's session?	My session routine
Example 2: Which of the three roads from home to school should I take today?	Which road is closed due to development work/Which road is under water/Which route has more traffic/ Which road takes less time?	Television/newspaper/ Google Map/ opinion of someone who uses the road regularly.
Example 3: A picnic is being arranged at the end of winter. TV news reports that it is raining in some districts. Now should the picnic date be postponed?	Will it rain on the date of the picnic?	Weather reports of TV/ newspaper/Google Weather or other weather related apps/website.
Example 4: Will you go on a tour during Pahela Baishakh?	When is Pahela Baishakh this year?	Bangla Calendar.

5:		
6:		

→ **From this exercise we have understood that we need different types of information depending on our problems or needs and different types of information have different sources.**

Preparation for next session and homework

We have found out today that every day we face many small problems. We have to take decisions to solve them. We have learned that information helps us solve problems. After going home today, we will think about the problems around us related to our life. We have questions about those problems and can solve those if we have the right information. We will also discuss them with our family members. We will discuss these problems at the next session in our classroom.

If we do not understand the task, we can ask the teacher.

● Session- 2 : Found a problem, now time to find a solution!

In our last session we realised that we need different types of information depending on the type of everyday problems. Do we remember we will solve a problem and make people around us aware by that solution? In today's session we will try to understand where these solutions lie. Where is the information that we need now? What are the sources?

Sources of information can be of two kinds -

1. Human source
2. Non-human source

Suppose someone came to your house and informed about you the necessity of vaccination. Your parents received information in their phones when and where to get the vaccines. Here the person who came to your house is a human source. The mobile phone is the non-human source.

- ★ A human source is when a human being actively gives you information.
- ★ A non-human source is when you have to observe actively to get the information.

Do we know that information is analysed differently while surveying or preparing news? In this case, the sources of information can be divided into two other kinds. They are-

- 1.Primary or main source
- 2.Secondary or second-hand source.

From the names of information ‘human source’ and ‘non-human source’, we can assume which source is human and which is non-human. Human sources can be of different types. Let’s take a look into the human sources in the Cell below and think if we have ever taken information from any of these sources.

Cell 1.1

1.Expert: An expert has enough knowledge about the subject, from which you are looking for information. For example, if health related information is needed, there is a specialised doctor. For agricultural information there is upazila agricultural specialists.

2.Experienced person: One who has experience in the field from where information is needed. Such as a farmer for agricultural information or a patient for a certain disease.

3.Witness: Someone who witnessed an incident. For example, in case of information about the Liberation War, a freedom fighter can be a source.

4.Victim: Someone who has suffered directly because of an incident you are searching information for. If the subject is child marriage, the victim bride or her guardians will be the source.

Let's fill up the cell together.

Cell: 1.2



Jewel googled in his father's laptop/tablet for Sheikh Russel Digital Lab in his area where he could learn computer operation. Now he got information from a website or the internet which became his source of necessary information. What type of source is this?

Answer: Non-human source.



Mitu asked her mother if mangoes were sold in the market. Her mother answered. What type of source is this?

Answer: Human source.

Can it be said after further thinking what type of source is mother?
(Put a tick mark)

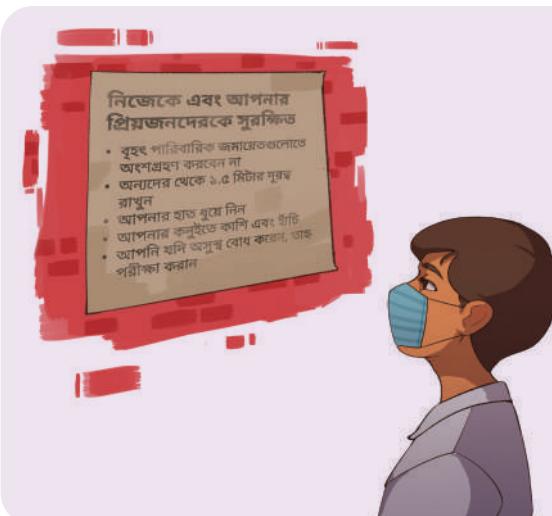
Expert/ Experienced/Witness/
Victim

Mitu and her friends decided to develop a garden in their school. But they do not know which plants are suitable for local soil and weather or how to take care of plants. Their school gardener helped them with necessary information. What kind of source is the school gardener?

Answer: ?

Can it be said after further thinking what type of source is the gardener?
(Put a tick mark)

Expert/ Experienced/Witness/Victim



On the way to school, you noticed a poster about coronavirus. You had some questions in your mind regarding coronavirus. You got your answers from reading the poster. What kind of source was the poster?

Answer: ?

Things to keep in mind while searching for information in Internet

If you have access to Internet and family's permission to use it, you can use it to search for information. But remember, do not be sad if you do not have access to the internet. Even without the internet we can learn about this topic. Those who invented this technology did not have access to it at your age. Some of you may invent the future technologies that we cannot even imagine right now.

We usually use search engines to search for information in the internet. Search engine is a medium by which we can find the necessary information from the internet. Google is the most popular search engine. There are also Bing, Bajdu, Yahoo!, Yandex, Ask.com, etc.

Keyword: From its vast collection of information, internet uses keywords to find information for us. Let's assume, I want to know the name of the smallest river in Bangladesh. 'Bangladesh', 'small' and 'river' are the keywords in this sentence. We can test if we want. The same information appears if we search either by the whole sentence or the three words. So, if you search by a precise keyword, you will get quick and effective information.

After the search you will see the result of plenty of websites or suggestions. In most cases you will get Wikipedia first. Not all the information in Wikipedia is reliable. So, after getting information from Wikipedia, you should browse few other websites to check if everyone is giving the same information.

Besides information, commercial websites also appear often. You will not find necessary information if you click those links.

It is important to determine which website to take information from. If you need any information about Bangladesh, it will be smart to get it from the government website Bangladesh National Porter. If you do not find it in the national porter, check if any reliable news media, books or magazines, etc. is available.

It is also important to check when the information was last published in the website. The information might be so outdated that it won't be effective anymore.



Homework: To solve the problem we found out last time as our homework, we will find out what might be the source of information (newspaper/television/internet/books/any persons, etc.) to do it.

● Session- 3 : Let's decide as a group which problem we want to solve

In our last session we were supposed to find a problem of our daily life and sources of information related to it. In today's session we will sort out the problems in order of their importance. We will also try to profoundly understand a certain problem and plan to solve it. We will be divided into groups to do these tasks. There is nothing more delightful than working in a group together. All the great deeds of the world are accomplished through cooperation, not competition.



Now we will be divided into groups and each group will choose one problem. Let's read Cell 1.3 before proceeding.

Cell: 1.3

Things to be prioritised while selecting a topic

- The topic should be a little unique or different.
- We will select a topic after being certain that it has lot of information and we can find it.
- We will not have a lot of time in our hands to search for information on the topic and arrange to present them. We will present it after an other session, so we should not choose a complicated topic.
- We should consider that we do not have to spend any money while doing this work.
- Finally, we will inform our teacher which topic we have selected and finalise it after taking his/her opinion.



Group discussion and finalising problem/topic

After deciding the problem or topic to work about, we will distribute the tasks among us in the group. We will decide who will search for which information.

Let us fill up the table below for our own group:



Table: 1.3

Name of the group	
Selected problem to deal with	
Possible list of sources of information for the problem	
Preparation	



When we take interviews of an experienced person, expert, witness or a victim for necessary information, we must ensure that their privacy is protected.

First we will take their permission if they want to talk/provide information.

If they are willing, we will assure them that they can keep their identity secret if they want. We will ask them if they want to keep their identities secret. If they want to do that, we will present their quotation/statement/speech while writing, speaking or publishing it in this way- ‘A doctor who does not want to be named said...’



Homework: We have probably collected some information as a group while working in the classroom. As homework, we will distribute the work among us who will look for which parts of the information. The next day we will bring the respective information in the classroom.

● Session- 4: Let us weed out the wrong information to finalise our collected information

We have already decided the problem we want to work with. We also have gathered some information on it. We have many types of information around us, from which we collect the necessary one. When we collect the information, we have to be sure that the information is hundred percent correct. Because we will use this information to raise awareness outside our classroom. If we use wrong information, it can have a dangerous consequence.

- So, we will use today's session time to explore our group's assigned topic to organise the information brought in and prepare it for presentation in the classroom. Note here that we need to verify the information that we are presenting.
- If needed, we will verify the information we have already collected with the help of the teacher. We will get an idea about how to verify information if we keep in mind the things in the table below.



Some general rules to verify information

If we get our information from a human source, we have to notice first how reliable our source is. For example, on the way to school a stranger gives me information about my school. Again, on the way to school my teacher gives me information about the school. Now who should I believe more? In different cases like this, when we get different kinds of information, we have to evaluate which person is more reliable.

If a less reliable person gives us information face-to-face, over phone or through internet, we will verify and crosscheck it with others.

We also have to keep in mind if the source has any self-interest regarding sharing the information. If there is anything like that, we have to consider how much should we believe the information.

Sometimes trusted persons may unknowingly give wrong information. Many people easily believe the information found in the internet. So, if a trusted person provides me with information that s/he got in the internet, I have to make sure about the source of information. Is it from a reliable website or news portal?

It is often seen that a video clip is being telecast in the internet using the logo of a newspaper or TV channel who do not own it. How will I realise that it does not belong to that TV or newspaper? I can search in their website or YouTube channel using the date in the video if they really telecast it that day.

Table 1.4

Let us fill up the table below after the information is verified:

Information collected	Information after verification

Things to keep in mind during presentation next session

After information verification we will plan for the presentation in the next session. For the presentation of our topic in the classroom, we will keep in mind that we can complete it within a short time. We should present our group's topic to everyone properly. In that case, we can use wall magazine, posters, PowerPoint presentation, etc. for the presentation



What will be in our presentation: selected problem, its solution, sources of collected information, how our information has been verified.

● Session- 5 and 6: Let us present the problem together in the group

We are very close to our target. We have solved the problem with appropriate information. Now our goal is to raise awareness about the problem among the people around us. But before that, we will present the problem in front of us so that we can appreciate our own work and correct the mistakes, if any. We will present our topics in the classroom in groups in today's and tomorrow's sessions. If the number of groups in the classroom is less, the presentations may be done in one day.



► Things to notice before the presentation:

► In today's session we will evaluate every group. Our teacher has an evaluation table. We will get that from him/her and fill up one for every group. If we are five groups in the classroom, each group will evaluate four other groups. We will write the name of the group that we are evaluating on top of the evaluation table.

► We will ensure that every member of the group has a chance to present.

If any member of the group feels shy to present or makes mistakes during presentation, we will not make fun of them. We must remember that there is no right or wrong in the classroom. If there is a mistake, we will help each other to correct it.



Preparation for next session:

We have found a solution to our selected problem and presented it. During the process, we have even corrected some of the mistakes that we had. We have found solutions to problems that other people face as well. If so, it is our duty to inform the solutions to other people. In that case, they can overcome the problems in future. In the next session we will decide how we want to inform the solutions to people around us, friends, university's senior brothers and sisters, family members and relatives and make them aware. We can make beautiful awareness-raising posters, compose nursery rhymes, draw cartoon/comic strips, write short stories. Each group will finalise a different awareness-raising material in the next session. So, today we will decide group-wise what material we want to make and distribute the work. We must prepare most of the materials before the next session. We will finalise our materials together in the classroom after taking opinions of our teacher.

● Session- 7: We found a solution ourselves, now time to make others aware

We are almost at the end of our target. Today we will finalise our awareness raising materials in groups in the classroom. We will also try to prepare most of the materials. We will notice that everyone should enjoy our material with an interest. At the same time, they should be aware about the topic. When the materials are finalised with the help of the teacher, we will fix the time and venue for presentation. It might be the school assembly, any other classroom (7 to 10), your home or any other place. In consultation with the teacher, we will decide where and before whom the presentation will be most effective and amusing. But the presentation must happen outside the classroom.

The teacher will give us a chart, which will be filled up by those who have seen our materials. We will take the chart from the teacher. Each group will get the forms filled by at least five members from the audience and submit it to the teacher next session.

● Session- 8: Let's make a guideline for ourselves

We have gathered new experiences in the last 6/7 sessions. We have learned new things through these experiences. Now we can say that if we know the right way and have the right information, we can solve many problems. And if we work together, it becomes fun. We have learned many new things while getting these experiences which will come in handy later on in our lives. Now along with our friends we will list the new experiences we had and how we can use them in our lives. This will be a guideline for us, made by us.

One or two of us will take the responsibility to write everyone's opinions on board, flipchart or a piece of paper. Some examples are given below for the sake of discussion:

 **Table 1.5**

Earned Experience	How we can use it later
1.Understanding what will be the appropriate source has taken a lot of time.	<ol style="list-style-type: none"> <li data-bbox="428 731 1254 835">1. We will ask the teacher, elder brothers or sisters or relatives what can be an appropriate source. <li data-bbox="428 835 1254 939">2. We will select such a topic that has enough information from multiple sources. If one source fails, we will try another source. <li data-bbox="428 939 1254 1043">3. <li data-bbox="428 1043 1254 1090">4.
2. We took wrong information while searching for it in the internet.	<ol style="list-style-type: none"> <li data-bbox="428 1090 1254 1231">1. We will take information from one website and crosscheck it with a few more sites to see if everyone is giving the same information. <li data-bbox="428 1231 1254 1382">2. First of all, we will visit the government website or the website of the certain person, organisation or state whose information we are looking for. <li data-bbox="428 1382 1254 1564">3. We will check if the website we are taking information from provides same type of information or different types of information in different times. If it exaggerates information to make it more attractive, we will not take anything from it.
	<ol style="list-style-type: none"> <li data-bbox="428 1309 1254 1619">4.
	<ol style="list-style-type: none"> <li data-bbox="428 1619 1254 1712">5.

From the classroom discussion, we have already found several ways to correct our mistakes. Now we will make a poster about information verification and responsible use of information. The poster will be made from the things we have identified in the table above. We will try to follow these rules made by us later

In the poster, priority will be given on:

- 1.What to do and not to do while collecting information.
- 2.What to do and not to do while using information.



We need to keep in mind that we will write the things we learned from this experience on the poster. We will not copy or memorise anything from anywhere to use it on the poster

We can request our teacher to share our posters with the teachers of other schools. If our teacher can manage to collect the posters made by other class six students from different schools, it will be really a great learning experience for all of us.

Let's make a gift!



In this learning experience called 'Let's make a gift box', we will do a fun activity. We will make a gift box for a very close person. To make this gift box, we need to know what this close person likes and dislikes. If we make it knowing their likes and dislikes, we can make a perfect gift box for them. Our gift box can be a digital gift such as digital picture, information or audio records. It can be a non-digital, handmade gift. For this, first we have to select a gift item and its recipient, an individual or a group. Then we have to make the gift box for them as per their choice. Let us make the gift box then.

● Session- 1: Let's reassess the selected problems and materials of previous session

We have certainly enjoyed the activity of the last session. We have understood very well how necessary information is in our life. We also know that by using proper information we can accomplish some wonderful work. We can find solutions to many of our everyday problems if we can collect proper information from the right sources and use them responsibly. But we have to remember another important thing for the use of information. That is, if the person whom I am giving information is using it properly.



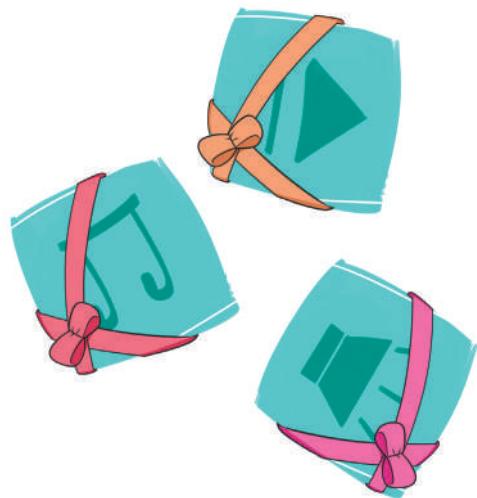
Jewel sees an elderly person begging for money from everyone in his neighbourhood every day. The old man uses the begged money to buy food. Jewel also wanted to help him so that he did not have to beg. Jewel looked into different sources of information and found in one proper source that there was a support centre beside their locality. The centre provided help to the elderly persons like the old man. Jewel went to their website and collected their address. He printed the address and gave it to the elderly person. The next day Jewel again saw the elderly man begging for money. He went to the old man and asked why he was still begging. He said, 'Son! You gave me a piece of paper. But I cannot read!'

So, we have realised that we need to give someone information in their way. Otherwise, it will not help them. We have to keep this in mind while making the gift box.

Gift! What a wonderful thing! Isn't it? Who does not like giving and getting gifts! When someone is given a gift, the smile on their faces makes everyone happy. The happiness knows no bound when the gift is made by you. Look at the picture of a gift box in the book. We can also make a gift box like this. Or we can make a hand-made gift. Then we can send it to the one for whom we have made it.

The gift will be very beautiful if we observe and learn some techniques and then make it.

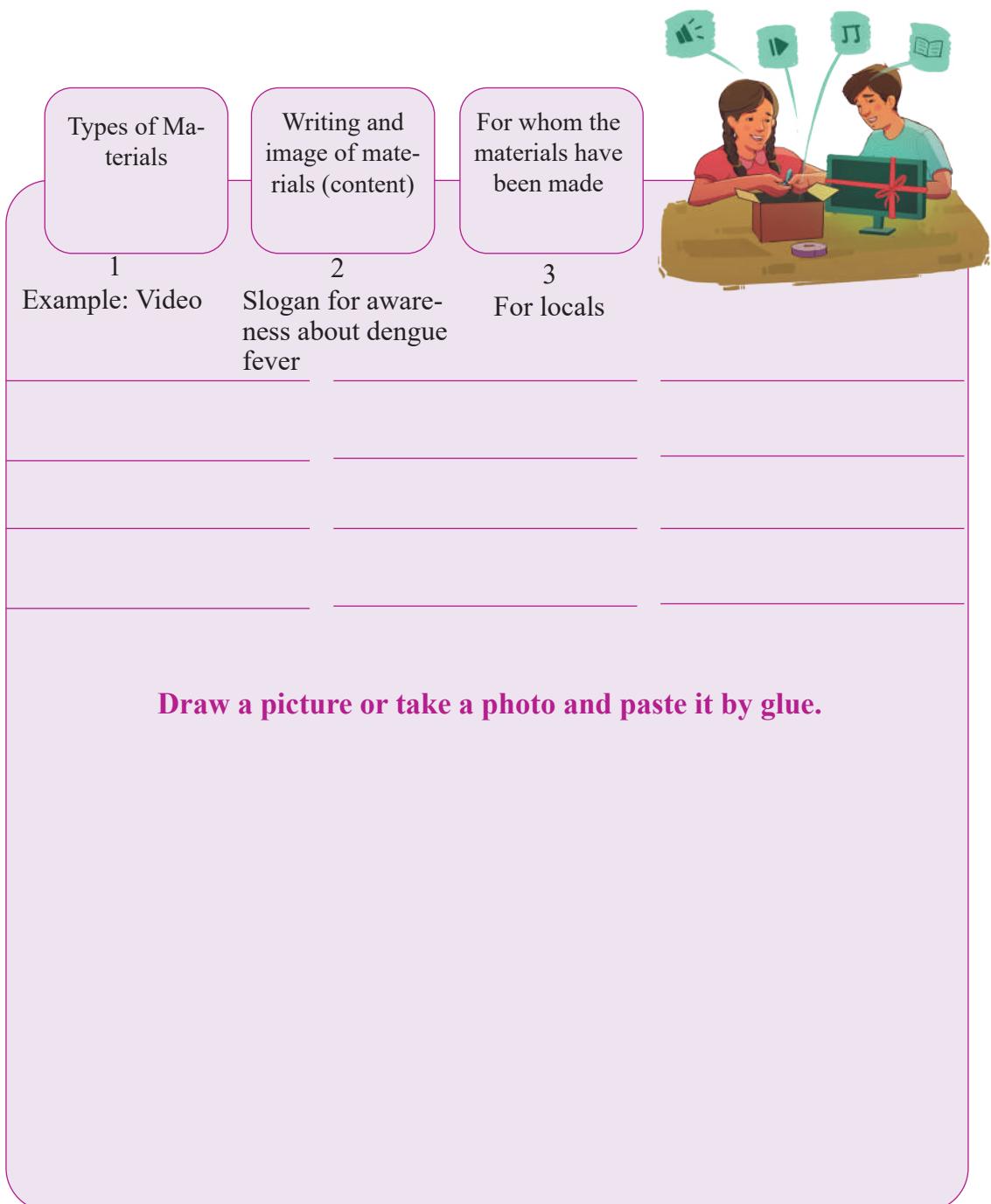
Otherwise, it will be similar to the story above. We will make a gift for someone but they won't like it or it won't be useful to them too like the story above. So, we have to learn some skills. Firstly, we will work with what we learned from the last session - using information to raise awareness. We will use the same group as we did during the last session and discuss why we picked that problem to solve. Everyone in the group should put a thought on why we picked that problem. Let's write the reasons in the table below:



Reasons for picking the problem



Now it is time to take a good look into the writings/images and materials we used to solve the problem. We will analyse in groups the materials used to raise awareness about the problem and use the chart in the next page to do it.



We have gathered some concepts by analysing our last learning experience's problem and the materials we used to solve it. That is, whatever we do, there will be a certain theme for our work and we make our materials depending on the theme. But there is another concept that we will learn while making the gift box.

● Session- 2: Let's learn about the theme and target group of the gift

We analysed the theme and materials of our first learning experience in our last session. See! We have learned the concept of some themes while filling up the charts in the last session. Can we say what concept of themes we have learned? Let's write down our answer in the chart below.

Concept

We can surely realise now that we and our classmates will make some gift boxes in a few days which will have a particular theme and a target individual or group who will receive the gift. This theme is called context and the people who will get the gift are called the target group. We do not have to memorise these two difficult words. But we should only keep in mind that the people, for whom we are making the gifts, will realise it and be happy.

Let us know a bit more about context and target group. Since these two topics will help us a lot in making the gift, we need to have a clear idea about these. Let us think of an imaginary scenario. Say, Mitu and some of her friends noticed that their school yard had become dirty. They decided to clean it up. They went to their class teacher and expressed their intention. The teacher said, it would be a huge task and would require a big team to accomplish it. Mitu and her friends thought of people who would agree to help them. If they help, together they can clean up the school yard.

Mitu and her friends thought that since all classmates were her friends, it would be easy to make them agree to do this good deed. Now she thought how would they be persuaded. One of Mitu's friends said, 'Let's go to the classroom and give a speech about importance of cleanliness.' Another said, 'Let's request the teacher to issue a notice so that everyone is bound to work.' Someone else pointed out, 'No, should not force. Let's stage a short drama on importance of cleanliness. After the drama ends, we all will all take an oath to clean our school premises and keep it clean in the future.'



Context: Mitu and her friends' school's unclean premises

Goal: Everyone's participation to clean the school premises

Target Group: All the classmates of Mitu

Content: 'Speech', 'Notice', 'Short Drama', 'Oath'

When we create a content for a particular group of people to make them aware, inform them something, inspire them, entertain them or for other purposes, that specific people or group is our target people or target group.

Our surroundings, necessity or goals determine who will be our target group. For example, our classmates will go to a picnic together. We want to go too. So, we need to discuss it with our family guardians. In this case, our context is 'picnic', target is to get permission from our families to go to picnic and target group is our guardians.



Now we will do an exercise to evaluate our concept.



We will send lovely greetings on the occasion of the Victory Day through SMS to our near and dear ones.

Here, context is:

Here, target person/group is:



We are unhappy at the state of cleanliness in the toilets of our school. We will file a complaint to both the class teacher and the headteacher.

Here, context is:

Here, target person/group is:

We can compare our answers with those of our classmates and friends. We should congratulate ourselves if we have done the task right. Let's paint the star below with the colour of our choice and gift it to myself.



● Session- 3: Let's decide on the theme and target group of my gift and ask them question

In our last session we realised that to accomplish something, we need to fix a theme and there will be a target individual or group according to that. After we think of a theme, we may have more than one target group. For example, if we decide to give our gift box to someone inside the school, we have to decide who it will be. We can give gifts to the students of Class 10 on their farewell. Or we can give the gift to our headteacher thanking her/him for doing the good deeds. We can give the gift box to the cleaners who keep our school clean, to express our gratitude towards them. Of if any of our friends has recovered from sickness, we can give them the gift box as a get-well present. Let us now select a theme and a target group according to it. We should determine why we are giving the gift to that individual or target group. But to make the process easier it is best to select our school as the context of the gift box. We have to work as a team to determine the target group. Let's think of some individuals or groups in our school and decide about our group's target group. We should write the names of the target group of our group in the following table.

Now let us write the reasons why we will give the gift to that target group.

Reasons identified by our group

Now we will have a detailed idea about what gift to make for which target group. We will also get the idea how gifts can differ on the basis of target group and medium. Let's assume we will make a gift for a friend who lives abroad and cannot read Bangla. Can we write him/her a letter and give him/her a Bangla story book? Even if we do, can s/he read them? Certainly not. We will make her/him something which s/he can read or understand by listening or seeing. We will read out our favourite story book or letter and record it in a family member's mobile phone or any other device. Then we will send our friend that recording through email, any social media, pen drive or DVD. When our friend listens to the recording of the nice book, s/he will also enjoy the book, won't s/he?

As we are learning about digital technology, we need to give importance on using digital technology while making our gift. That means, if the school has digital technology, we must use it to make our gift. If our school does not have it, it does not matter. We can still make our materials the same way. But it will be made by pen, paper or any other medium instead of digital technology. For our comfort, there are some examples of some gifts as per target groups below. Let us discuss what digital or manual gifts we can make with our classmates and fill up the empty cells below.

Target Group	Concept of gift
Farewell gift to Class 10 students	Non-digital: We can make them a badge resembling the school badge, draw a picture of the school, make a card with the names of every student of class 10 on it, etc.
	Digital: We can compose a nice song and upload it to the school website. If we have a laptop or smartphone, we can arrange some pictures and write our feelings about them on those.
Gift to the headteacher revealing our opinions about school management	<p>Non-digital: To write everyone's opinions/feelings on a diary or a box of slips and gift it.</p> <p>Digital: To make a video of everyone voicing their opinions and gift it.</p>
Gift to a school staff expressing gratitude	<p>Non-digital:</p> <hr/> <hr/> <p>Digital:</p> <hr/> <hr/>
A get-well gift to a friend recovering from sickness	<p>Non-digital:</p> <hr/> <hr/> <p>Digital:</p> <hr/> <hr/>

We have selected our theme and target group. Now we have to determine what gift we will make for our target group. We will collect some information about our target group and then start making our gifts. While collecting information we must keep in mind that the target group should not realise we are collecting information to make gifts for them. We will collect information through a questionnaire. For this, our group will compile some questions to make the questionnaire. Let's write down the questions below:

Now we will use the questionnaire before the next session to collect information and bring it to the classroom.

Information gathering questionnaire

Theme: _____

Decided Target Group: _____

Questions: _____

1.

2.

3.

● Session- 4:Verifying the gift

Information collection is done! Let's now discuss among the group in the class about the information we have gathered. We will discuss what type of material or content is needed to make a gift for our target groups and write the summary below.

Type of gift	<ul style="list-style-type: none"> ● _____ ● _____
Type of content (text/audio/picture)	<ul style="list-style-type: none"> ● _____ ● _____
Materials to use to make the gift	<ul style="list-style-type: none"> ● _____ ● _____

To make a gift, determining the theme and target group and making the gift with contents and materials according to that is very important. After completing the above task, we are one step closer to making the gift. Now we will do another task. Can we guess what it is? Let's discuss with your classmate and write down the idea on the chart beside. Now it is time to make a presentation on the gathered ideas of materials and contents to make the gifts in front of other groups. The 3 fields we have filled up above is enough to do the presentation. Let us write the topics of our presentation on a poster paper in groups. Two members from the group will do the presentation. Other groups will do the presentation too. Have we noticed something? Each group has a different theme and target group and their intended gifts are different too.

Concept



Preparation for the next session

We will make the intended gift in the next session. We have to determine as a group what materials we need. If possible, we will accomplish some of the work at home. If not, then we will bring the materials to the classroom and make the gift.

● Session- 5: Let's Make the Gift Box



Name of the gift:

Now is the time to make the gift! We have already decided the theme and the target group to make the gift. We have to make an appropriate gift for the target group. We can give a name to our gift box. For example, 'Memory Box' for class 10 students, 'Thank You' for the headteacher, etc. Let's write the name of our group's gift in the next cell. We have to keep in mind some other things while making the gift. Such as-

- Make the gift with materials readily available.
- Do not spend extra money on making the gift.
- Make sure the gift looks beautiful.
- Do not spend much time making the gift.

Let us write a short summary about the contents and materials we have made as a group as the gift below:

Materials and contents of the gift

Contents	Types of Materials

● Session-6: Present the gift quickly, enjoy the time happily

We will take our teacher with us to present the gift to the person or target group. We can ask for their opinions about the gift. Thus ends the process of making the gift box.

We will make many more gifts in our life. We will always think of the person's choice and occasion for the gift before making it.

Let's now write down the experience and what we have learned from this session below.



Most liked part of the entire work:

Disliked part of the entire work:



Part of the work that should be changed:



Our School Magazine

'We will make a school magazine in the learning experience titled 'Our School Magazine'. We will be divided into some groups and each group will select some topics to make the school magazine. We will write a report each on a certain topic at home and bring it to the class. We will analyse our reports properly, play some games, do some fun activities while making the magazine. Besides these, if we use writing, songs, poems or pictures by others in the magazine, we will give them due credit. We must have permission before we use them. If we cannot get permission, at least we should mention their names. This is a very good practice.'

Do we know how to make a school magazine? Or how does a school magazine look? It does not matter if we do not have any idea. While making the school magazine, our teachers will give us necessary instructions. Before that, let us see what a school magazine looks like. See the picture below. It is of a school magazine. It contains stories, poems, tales and reports written by the school students.

We will have to go through some short class and home activities to create a beautiful school magazine like this. Only then can we make a beautiful school magazine following all the rules and regulations. After the magazine is ready, we all can present it to our headteacher or the head of the school management committee or the owner of the book shop near our school



● Session- 1: Play a game, read a report



Preparing a report will be the first step of making the school magazine. Our teacher gave us an instruction on how to write a report at the end of last session. We have to write the report on one page of our notebook. The guideline is given here for our convenience.

Guidelines to write a report

- We need to make a group of 5-8 members. We can work in the same Gift Box group if we want.
- Each group will select a theme.
- We will write a one-page report on the theme.
- We will attach story/picture/poem or information of others in the report. We will use our own opinions to write the report.
- We can take support from our family, neighbours, teachers, senior students, digital media, union resource centres or any other source to write the report.
- We will give a name/title to the report.

Surely, we have written the report following the teacher's instruction. We need to remember, the written report should be kept in the classroom until our school magazine is complete. Let us write the title of our report in the cell below.



Shopping Game: Now there will be a fun game in the classroom. We can ask the teacher to learn about the game. We all have to play the game together. We have to maintain discipline and show our respect to each other while playing the game. While playing the game, we can evaluate one of the reports we have seen with his/her name and some questions. We can use tick marks in the chart below to evaluate the classmate's report. We can also paste or draw his/her photo on the following circle of the report we have just evaluated.

	Did the classmate use his/her own name in the report?	While using someone else's writings/poems, did the classmate mention their names?	While using photographs taken by others, did the classmate mention their names?	While using information from a human source, did the classmate mention the individual's or organisation's name?
My classmate	Yes <input type="checkbox"/> No <input type="checkbox"/>	Yes <input type="checkbox"/> No <input type="checkbox"/>	Yes <input type="checkbox"/> No <input type="checkbox"/>	Yes <input type="checkbox"/> No <input type="checkbox"/>

We have certainly noticed that the teacher has marked something important from our answers. Let us write down the thing the teacher has marked as important.



Preparatory work for the next session

As part of preparatory work for the next session, we have to find out why the teacher has said it is very important to mention names of an individual or organisation while using their information. We can find out the reason behind it with the help of our school teachers or senior students. Let us write down the reasons in the box below.

In our opinion, why the marked thing is important

● Session- 2: Let's learn about others' property, be aware

We exchanged reports with our classmates in the last session. We also learned through a questionnaire that when we want to use texts/image/information of an individual or an organisation, we should give them due credit. We should keep this in mind when we make our school magazine. The teacher will ask many of us for answers from our homework in this session. That is, s/he will ask for the reason why it is important to mention someone's name while using something made by them. We can write down some of the reasons mentioned by our classmates in the cell below.

Answers by classmates

1. _____
2. _____
3. _____
4. _____

Let's read the next part.

When someone applies their intelligence and creativity to produce something, it is simply called their intellectual property. For example, a story written, a picture drawn or a mobile phone application made by someone, etc.

Now the question may arise in our mind that by property we mean cash, land, furniture, etc. Then how can a story, poem or photo be property? It is because an individual or an organisation has created these with their intellect and ideas and they can earn money by selling these.

We need to learn about two ideas here.

1. Copyright 2. Patent

Copyright means no-one other than the creator of a content/product is allowed to copy it. For example, if a writer writes a story and copyrights it, it means no one except him can publish it.

Patent means, people other than the creator can use the created thing. But in that case, the creator's name has to be mentioned and payment must be made for business purposes. For example, a scientist has invented a formula that can control mosquito population. If anyone else wants to use this formula, they have to pay the scientist and mention his/her name.

Let's think little differently. Say, you have an idea of a fun story. It has not yet become intellectual property. A thought becomes intellectual property when it is published. If it is not published, no-one in the society can use it. So, it does not add any value to the society or economy. When someone uses their skill, intellect and creativity to create an asset and publishes it for the benefit of people and society, then it is called intellectual property.

Let us do some exercise on which can be called intellectual property and which cannot. There are some pictures below. There are some assumptions given beside the pictures. We have to see the pictures, read the assumptions and put our answer in the next column. Let's discuss the picture with our classmate for 2 minutes and then complete the task.

Exercise:



This picture is called the 'Monalisa'. This was painted by Leonardo da Vinci. Mr. Rahim is using a copy of the picture.

Here, is this picture intellectual property? If yes, whom intellectual property it is?

Answer: This is intellectual property and it belongs to Leonardo da Vinci.

Answer:

Name of the book: Amar Bondhu Rashed

Read by: Abdur Rahman

Written by: Muhammed Zafar Iqbal

Is this book intellectual property?

If yes, whose intellectual property?

Is the cover of the book intellectual property?





This mobile phone set is manufactured by a company. Alam Mobile Phone Store sells it. Is this phone intellectual property? If yes, whose intellectual property?

Answer:

Answer:

During the paddy season, a farmer grows paddy here. Subrata Barua is the owner of the land. Is this crop land intellectual property? If yes, whose intellectual property?



We can compare our answers with our classmates. Surely, we have all the correct answers! Excellent! Not a problem if not. We should congratulate ourselves if we can do the task right. Let's paint the star here in colours of our own choice and gift it to ourselves.



● Session- 3: Treasure hunt

We got idea about intellectual property and exercised it in the last session. This idea of intellectual property will help us a lot in making our school magazine. Now we will play a game to understand the types of intellectual property. Let's learn from our teacher the name and how to play the game.

Let's write the name of the game

While playing the game we have found some chits. Let's write down what and how many notes we all have found together beside the chits below. We can add extra pages if needed.



Detailed information on the chit



Detailed information on the chit



Detailed information on the chit**Detailed information on the chit****Detailed information on the chit****Detailed information on the chit**

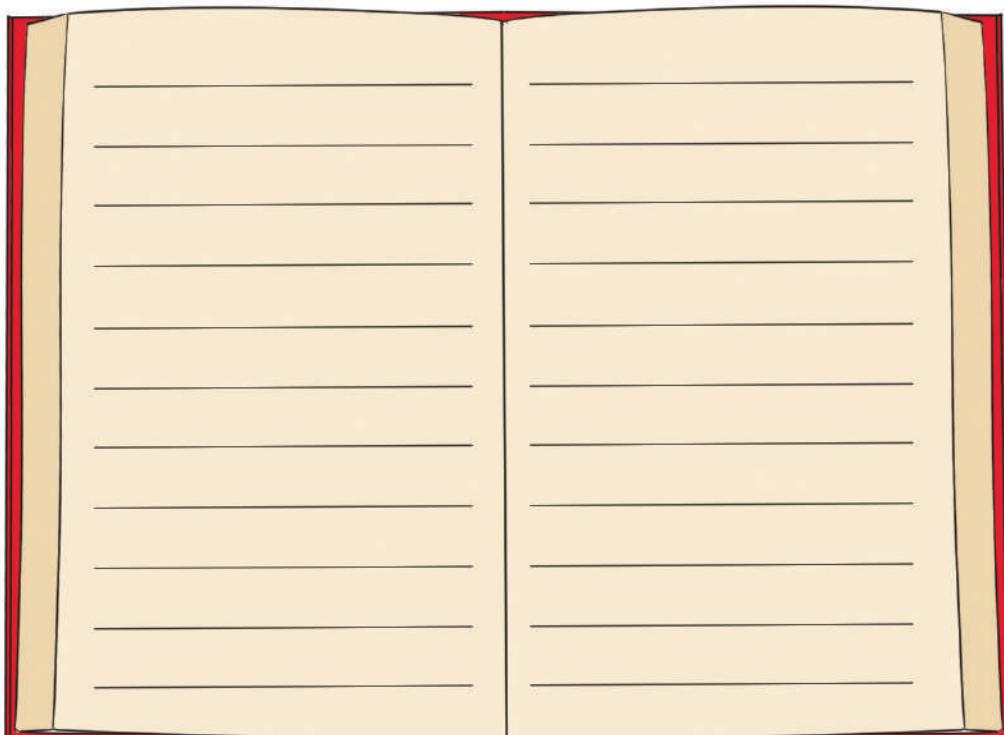
We will notice that while searching and finding the chits, we and our classmates are getting ideas about different types of intellectual property. Let's now match it with the report we prepared for the first session and find out how many types of intellectual property we used in it. Different types of intellectual property are described in details in a box below to match with our report. If we cannot finish this task in the classroom, we may take help of our guardians or senior family members at home. And if we do it in the classroom, we can take help from the teacher and our classmates.

Idea of the types of intellectual property

- 1.Art and literature related property or copyright: songs, stories, poems, dramas, movies, books, etc.
- 2.Industry related or industrial property: company name, logo, package design, secret formula to make the products, etc.
- 3.Geographical identity: unique identity of a country or geographical area, like, hilsha fish and jute of Bangladesh, etc.
- 4.Scientific invention: Any scientific invention like invention of COVID vaccine, electricity, etc.



Let's now write down in the book below how many of these intellectual property types are reflected in our report



● Session- 4: Give value to work, get value in return

We found different types of intellectual property and got its idea through games in the last session. Now that all these have been revealed before us, what should we do while using intellectual property? We had written the answer before. Let's put our answers below.

Answer:



Let us now learn about copyright owner, rights of a copyright owner and what might happen if we do not mention them.

Mitu made a mobile phone application, by which people can locate the police around them and ask for support from the nearest policeperson. In order to launch the application, Mitu got a licence from the government that she developed the app. It means the government has recognised her as the creator of the app. Mitu will be called the copyright owner of this application. As the copyright owner, Mitu has the complete right to determine who gets to use her application and who doesn't. Besides, anyone who wants to use the application needs her permission. If anyone wants to recreate the app, they need her permission too. We should keep one thing in mind that only if someone wants to make something entirely like Mitu's app, they need her permission. But if someone makes the same thing differently or adds more features, like locating nearby doctors alongside police, then they can do it.

Now the point is, what can Mitu do if someone uses her intellectual property without her permission? She can collect evidence and use her licence to file a case with the court. The person will be punished on charge of stealing her intellectual property. Now tell me, what will happen to us if we use someone else's intellectual property without their permission or use it by others' name? Yes, we may be punished too.

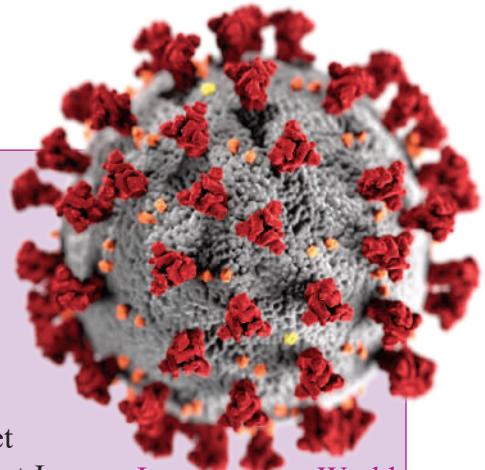
Let's say, Jewel wrote a poem which is his intellectual property. What can he do to protect his rights? He wrote the poem in his notebook for its preservation but neither wrote his name or date nor published it. In this case Jewel cannot claim that it is his poem. If someone else claims that it is their poem, Jewel cannot say anything or ask for legal support.

So, we can protect our intellectual property only when it is published. In some cases, we can register our intellectual property under the Bangladesh Copyright Act without publication. But it is difficult for you at this young age to go through such a huge process. So, let's find an alternate. When we become the owner of intellectual property by clicking a photograph, writing a short drama or a poem, we will send it with our name and date to our friends or parents through email, SMS or letter. If someone ever claims that property's ownership, we can prove that we have published it on an earlier date.

Let us now do another exercise. It is about the harm to be done to copyright owners if we do not use their names. Let's discuss it with our classmates sitting beside us and write down our assumptions in the cell below.

Serial	Types of copyright owners	Types of harm
1.	Singer	Singer will lose interest in singing. They will be victim of financial loss.
2.	Writer	
3.	Researcher	
4.		
5.		
6.		

A sample report is given below so that we can understand how to mention the name of the copyright owners. Parts of the text in the sample report are in orange colour which are mainly name and date. This is how to mention the copyright owner's name in a report. But this report does not show how to write the names of the copyright owners of every intellectual property. If it is a poem, the poet's name, if it is a painting, the artist's name should be mentioned. If it is a formula, the scientist's name and in case of a country's product or national anthem, the country's name should be mentioned too.



Sample report

My experience of taking COVID-19 vaccine

Anjana Ahsan

December 5, 2021

I first learned about coronavirus when our school was closed indefinitely through a notice. Most of my friends are my classmates. So I was very upset when suddenly I could not meet them anymore. But I learned some fun activities instead of sitting idle at home. For example, I can write with invisible ink by using lime juice. Besides this, I have finished reading 'Dipu Number Two' by Muhammed Zafar Iqbal and many other books. I wanted to read some more books but could not find them. When classes will resume, I'll have to check if my friends have those. I have heard that the school will open very soon. We have been asked to get vaccines from the vaccine centre (Bangladesh Television 2021). I got my vaccine with my parents yesterday. I went to the centre following proper hygiene (Health Directorate, 2021) and wearing a mask. My elder sister tried to scare me but I did not feel any pain. The needle was very thin too. I don't have any problems today after the vaccination. I want to return to my school and meet my friends. I want to sing like Firoz Shai, "Ischool khuilachhe re mawla, ischool khuilachhe" [The school has opened, o Lord, the school **has** opened.]

Image source: World Health Organization



Preparation for the next session

Let's now find where the copyright owner's name should be mentioned in our report and circle them. We have to find out the rightful owners of the copyrights we have circled and write them down in our reports. We will rewrite our reports if needed. This time, we will observe how the sample report uses the name of the copyright owner. To find the copyright owners' names, we can get support from our family, neighbours, teachers, senior students, digital media, union resource centres or any other reliable sources. By rewriting the report and making the proper use of the copyright owners' names, we are one step closer to our goal of making the school magazine

● Session- 5: Make the school magazine!

We will make the school magazine now. At the beginning of this learning experience, we selected our theme and were divided into groups to make the magazine. We will sit in our own groups and make the magazine by our prepared reports. We have to follow the guidelines below the make the school magazine:

- The school magazine will be created in participation of all students. Students of all sexes as well as mentally and physically challenged ones will take part
- Each group will make materials based on their selected themes. Materials may consist of different pieces of information, photographs, stories, poems, reports, etc.
- The school magazine will be a compilation of every group's works.
- The school magazine should have a relevant name or title.
- Some contents of the school magazine will be created by the students and some will be collected from different sources.
- Both types of contents will mention the copyright owners.
- A separate section/page will be dedicated for the names of all the copyright owners' names. This section can be named as List/Identity of Copyright Owners.

Now we can take a photo of the final school magazine and paste it below. If we cannot do it, then we can draw the picture of the cover page here.



Many thanks to you for following the guidelines and creating such a beautiful magazine. After the school magazine is prepared, we can gift it to our headteacher, head of the school management committee or to owner of the nearest bookshop.

In this learning experience, we have selected a theme as a group and each member of the group collected information, photos and wrote a report on that theme with their own opinions. We observed each other's reports and realised that we should mention the names of people if we use their information. After that, through a fun game we have got the ideas of different types of intellectual property, how to mention the name of the property owner and what harm can we do if we do not mention the names. Then we wrote our reports to include the names of the copyright owners and made our school magazine as a theme. We have realised that it is our responsibility to ensure the rights of a copyright owner always in our future life



Human chain to address information risk

‘Address information risk, make our life safe’

General Statement: Exchanging information in our day-to-day life bears many risks. To reduce this risk and protect our personal interest, we need to maintain privacy. We will form a human chain for this.

● Session- 1: Identifying the media for information exchange

We will perform some fun activities in the next few days. Through these activities we will create a work plan for what to do to deal with the risks of information exchange and breach of privacy. We will form a human chain to raise awareness about this. Let us prepare for the human chain.

Do we remember our last learning experience? We made a school magazine there. In our last few sessions, we made the school magazine. Let us list the intellectual property that we used as information for the magazine in the table below.

List of intellectual property

1. _____
2. _____
3. _____
4. _____

The school magazine is a medium for exchanging information. We can use similar media for exchanging information. The media can be digital or non-digital. We worked in digital media and also manually while making the school magazine. We will discuss those in groups and write in the list below. We will present our work to everyone in the classroom.

Media or platform for information exchange

Serial	Digital	Non-digital
1.	Mobile Phone	Newspaper
2.		
3.		

Let us first learn what is personal information.

Personal information: In the beginning of this book we have learned that our name, age, which class we are in - all of these are information. These can be called personal information too. If I want to introduce myself to the teacher, what information should I mention? My name, my parents' name, my age, my address, etc. It means this information is my identity and my personal information. To define more clearly, a set of information that can identify a particular person is called personal information.

Besides, phone number, email address, signature, birth certificate or passport, bank account number also belong to personal information. Nobody should know these kinds of information unless I share it with them. They need my permission to know any of these

Let us write our possible personal information in the list below:

List of personal information
Personal photo

● Session- 2:Assessing risk in information exchange through survey

We have identified the information exchange media in the last session. But we do not exchange all information with everyone. Sometimes information can be exchanged due to our mistake, carelessness or without permission. What can we say about this situation? This is the risk associated with information exchange. We can surely understand why this is risky. These risks can cause to us social, financial and mental harm. So we have to be very careful. We will now discuss with our classmates and find out the potential risks associated with information exchange. We can conduct a survey for this. We will prepare a questionnaire outlining the risks involved in information exchange. We should keep in mind that our goal is to learn three pieces of information below from the interviews:

- How can information exchanges be risky;
- What type of personal information can be risky;
- What harm can be done if exchange of information is risky.

Three sample questions have been added here for your convenience to prepare the survey questionnaire. We will prepare the rest of the questions in a group. You can ask for your teacher's help if needed in this regard. The questions should have yes/no, multiple choice or brief answers. This will make it easier to get information from the information providers

We will finalise the interview form based on everyone's opinions. We will write down the final questionnaire in our books so that we can use them separately for different interviewees

Name of the interviewee:

Age: Occupation: Gender:
Male/Female

1.What type of medium do you mostly use for exchanging information?

Digital General/Non-digital

2.Which of these modes of information exchange do you use the most?

Verbal SMS Letter Leaflet Poster

Email

Social media Others _____

3.Who do you exchange information? (multiple answers)

Friend Teacher Relative Others _____

4. _____

5. _____

6. _____

7. _____

8. _____

[activity outside classroom: information collection]

The questionnaire has certainly been prepared for the survey. Now we will conduct the survey on total 10 persons including our school teachers and senior students during break, after school or at any convenient time.



If the interviewee cannot understand a question, we will explain it to them. If someone has a problem in filling up the questionnaire, we will help them or do it ourselves after getting the information. All of the group will not go to the same person. Each member will collect information from different persons. We will collect information quickly this way. We will consider human source to collect information in the number 1 experience.

● Session- 3 : Analysing information and presenting result

We surely remember that we will form a human chain to raise awareness about the risks of information exchange after understanding it. We have got an idea of the risks of information exchanges through the survey. The idea I have got is based on the survey of our group. I need to know what the other groups have found. We also need to let them know our findings. That is why first we have to analyse the findings of our survey.

We will work in the same group as before.

We may consider two things before analysing the information:

- Make a list of how many people spoke of using which media.
- If a brief answer to a question has several opinions, make a list of them, especially a list of which risks they have faced.

We will present our findings from the survey by writing those on a poster paper or blank page from a calendar. If possible, we will use presentation software to do it. If poster or calendar paper is not available, we can present the findings by writing them on pages from our notebooks. A member from each group will do the presentation. Since we have to finish all groups' presentation within a session, we will finish it in five minutes each.

As we will form an awareness raising human chain, the more we learn about the risks of information exchange, the better. So, we have identified many risks through the group presentation.

We have identified some risks of information exchange through our survey. The interviewees of our survey are experienced people, meaning they have experience in information exchange. So, they have given their opinion based on their own experiences. As we are trying to conduct an awareness-raising programme, we need an expert's opinion too. What kind of experts are we looking for here?

Answer: An expert in digital technology

A digital technology expert is someone who has studied digital technology. S/he may have done research in this field too. Or s/he has been working in this field for a long time. S/he may be a teacher of digital technology as well.

We all will discuss which digital technology expert we know and invite him/her in our next session. Our teacher will help us communicate and invite the ICT expert. We will ask the expert in light of the questions we considered for our survey and take his/her opinions.

The questions we had considered during our survey were-

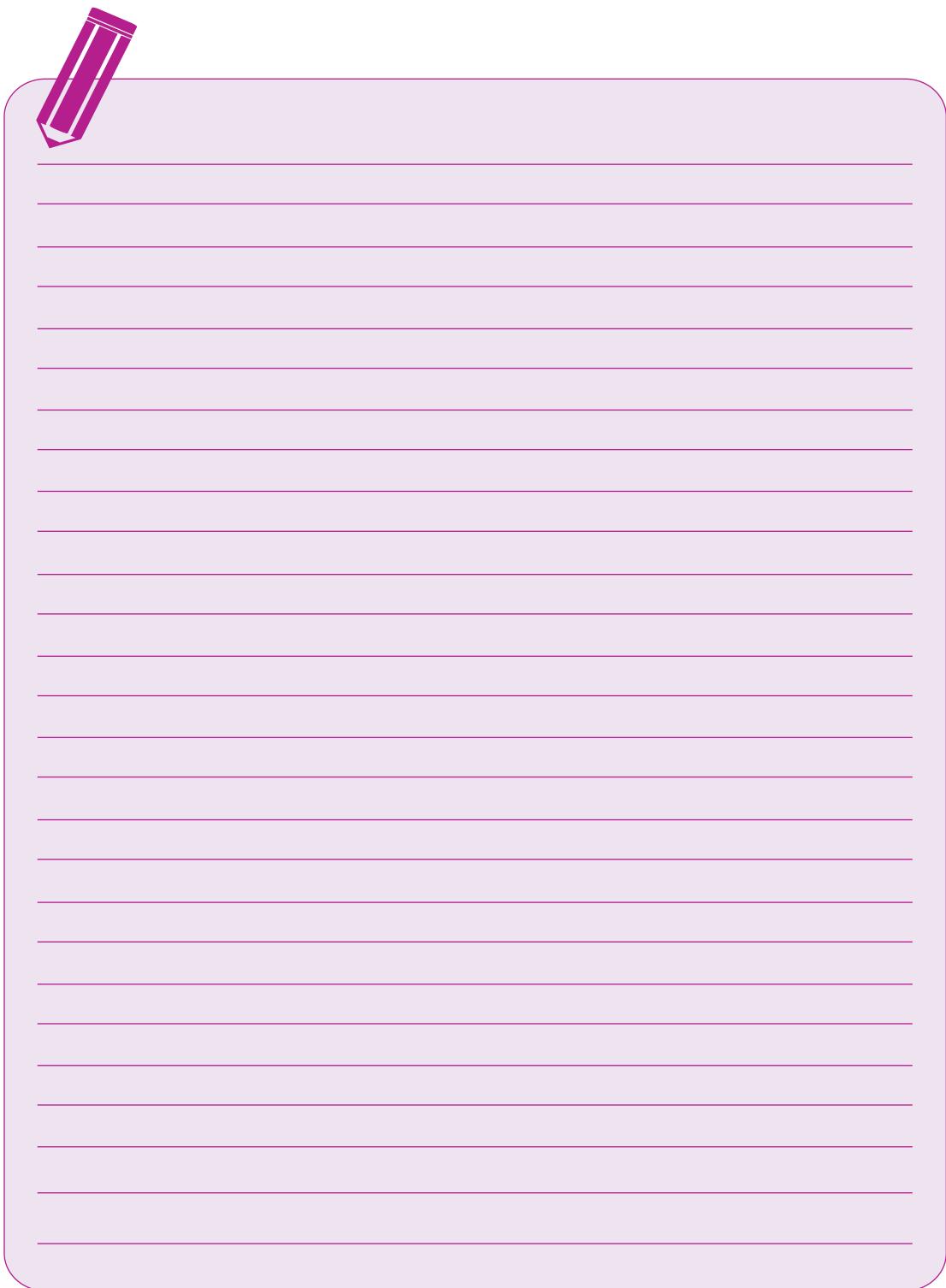
- How can information exchanges be risky?
- What type of personal information can be risky?
- What harm can be done if exchange of information is risky?

● **Session- 4: Interview of an ICT expert about the risk in information exchange**

Today is a special day for us as we are having a guest in our classroom. We will ask him/her the questions set earlier and get the answers one at a time. More questions may appear in our minds from his/her answers. If the question is good for our awareness-raising activity, we will definitely ask it. Because we want the human chain to be informative and fun and to be helpful to others.



- ★ We will write down the important information we got from the discussion and Q&A session with the expert in the chart below:

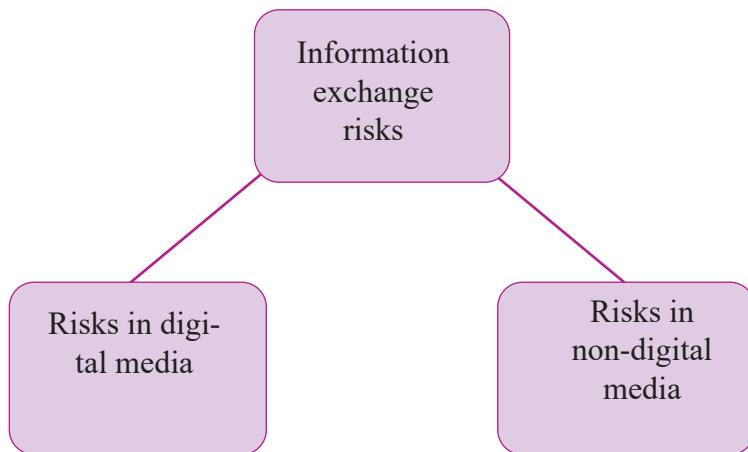


● Session- 5: Classification of information gathered in previous sessions

We have already done two important activities on the risks of information exchange. We have conducted a survey and got an expert's opinions. We have identified many risks through these. Now we will make a list of those risks. We will separate the risks of digital media and regular media.

Digital media risks	Non-digital media risks
<p>1.Wrong information about the SSC examination came to my guardian's phone. I forwarded the message to all my friends' guardians without verifying it.</p> <p>2.I was playing a game in mobile phone. I inserted my guardian's email address at one stage. My guardian received an email saying that s/he has won a lottery. Click the link and put your bank account information. My guardian put his/her account information there.</p> <p>3.</p> <p>4.</p> <p>5.</p>	<p>1.I heard wrong information about the SSC exam on the way to school. I passed on the information to all of my friends without verifying it.</p> <p>2.I mistakenly forgot copies of my birth certificate or passport to the photocopy store</p> <p>3.</p> <p>8.</p> <p>6.</p>

We have to complete the list within 10 minutes. After it is done, we, one after another, have to write one by one from the classified risks on the board like the following map. We will compare our own lists with it.



We have already understood which media have what types of risks in information exchange. Risks in digital media and non-digital media differ a bit. Let's read the description below to know more about this.

Risks in digital & non-digital media

We have to use different media to exchange information. We use language or gestures the most. Besides, we also exchange information through signs, letters and texts. But due to invention of technology now we can quickly exchange a huge amount of information through telephone, internet and wireless devices. These media help us send information quickly but they also contain more risks.

So, if anyone uses it with good intentions, they can help many people in a short time. Similarly, a person with bad intentions can harm many people using the same technology in a short time

Let's assume a businessman has mistakenly imported salt more than needed. The amount of salt is so huge that he does not have enough space to store it for long. He thought how to sell the salt quickly. So he played a trick. He spread rumours in different social media (Facebook, Twitter, YouTube, WhatsApp, etc.) that the price of salt will increase by 5 times from tomorrow because as the exporting country won't export salt anymore. Many people across the entire country rushed to buy salt. Thus, the dishonest businessman sold all of his salt at a much higher price.

Let's think once, if there was no internet service, could that businessman be able to deceive people so quickly?

That does not mean technology is bad. We are leading such a modern life due to technology. Many kind people, brilliant scientists and inventors have contributed to it in different ages. We all want to be one of the good people of future.

● **Session- 6: Identifying possibilities of breaching privacy by classified risks**

We have prepared a list of risks from our survey findings and the expert's opinions. Then we have classified it into digital and non-digital media. Now we can consider another issue. We told you how much harm false information could cause if released in the digital media, didn't we?

When we will form the awareness-raising human chain, we can raise awareness about another matter. That is personal information. If our personal information is exposed in the wrong media, to a wrong person or at wrong place, we may face a lot of trouble or embarrassment.



Let's read the incident below silently:

Case Study

Jewel took part in the boys' 200m sprint at the annual sports last year. He collided with another participant at the beginning and fell. But he got up and continued running. An audience member took a photo of him falling down and posted it to social media without his permission. Jewel's father saw the photo and informed Jewel. Many made good and encouraging comments, but some comments seemed very negative to him. Jewel was very upset at it and he informed this matter to his school's digital technology teacher. The teacher immediately contacted the person who took the photo and asked him to take it down. Although the picture was removed, Jewel was still a little depressed.

Let's think if such an incident ever happened in our real life? What type of information was exchanged here?



Personal confidential information

When personal information can become a risk and can cause harm to a person's life then that information should be kept private and confidential. This information is personal confidential information. Then we have to realise when information can be cause of risks. My name is personal information, but it can be known to all, nothing to hide. But is it really so? No, do I immediately tell my name when a stranger on the street asks me my name? No, I do not. We first ask, why does s/he want to know my name? We ask who is s/he, don't we? It means, we verify trustworthiness of the person to whom we give our information. Similarly, what can happen if my guardian's mobile number ends up at the hand of wicked person? He can blackmail my guardian to get money. So, we have realised that any of our personal information can be confidential information depending on the media or the person receiving it.

In the case study, privacy was breached in information exchange in Jewel's incident. We identified many risks in the previous sessions. But all of those did not involve breaching privacy. Let's make a separate list of risks involving privacy breaches. We will do this through discussion among the group. We will compare the risks with real life. We will ask help from our teacher if needed.

During the presentation, the group representative will explain why and how the identified problem is breaching privacy.

Risks involving privacy	How privacy is breached

● Session- 7: Making action plan to address risks in information exchange

We learned at the beginning of this Experience that we would make an action plan through different activities to address the risks.

We will fill up the action plan chart based on the topics discussed in the previous sessions. We will work in the same group and make an action plan to deal with the list of risks that we have made earlier. The action plan should be simple so that we can easily apply it in our real life. We will mention the deadline to execute our strategy, risks of privacy breaches, judicial and societal strategies to address the risks. We need to notice that the deadline to execute the strategies should be short



A part of Section 26 of the Digital Security Act, 2018 says, 'If any person collects, sells, possesses, provides or uses the identity information of any other person without lawful authority, then such act will be an offence.' If anyone commits any offence mentioned in sub-section (1) again or again and again, they will be jailed for maximum seven years or fined maximum Tk 10 lakh or both.

Risk	Type of risk (digital or non-digital)	Chances of privacy breach	How to deal with the risk	Deadline for executing strategy
Birth certificate to get exposed	No digital	High	Keep the birth certificate in a secure place. Do not keep copies of it lying around, do not keep its digital copies in others' computers. Do not share with untrustworthy people.	One week

● Session- 8: Making placards for awareness-raising human chain

We have almost reached the end of our activities. We will make some placards in this session. These placards will be based on what we have learned in the last seven sessions.

According to the action plan made in the last session, we will make placards in the same groups to address the mentioned risks or raise awareness. We will then form a human chain.

We will consider the following things while making the placards:

- ▶ Causes of risks
- ▶ Types of risks
- ▶ Legal aspects of privacy breach in digital media
- ▶ Social and moral aspects
- ▶ To-dos to address the risks
- ▶ Awareness to address the risks



3. Each group will make multiple placards. Placards' text size will be big enough so that it can be read from far. If possible, we can use poster/art paper/blank sides of a calendar page, large paper to make the placards. We will consider applying our experience of creating contents/themes based on target groups.
4. Students are displaying placards in front of the school's main gate. Some villagers will look at the students while passing. The display will have an equal number of boys and girls. Texts on the placards will be blurred .

Displaying Placards

- 1.The placards should be displayed on the school balcony or in a place from where it is seen by outside people.
- 2.We will display the placards maintaining discipline. If anyone asks anything during the display, we will give them explanation and information.
- 3.The placard display activity will last for 30 minutes. Our teacher will accompany us the whole time.

We will use a part of the action plan at home. Say, I can take on a strategy. I will take the responsibility to ensure security of all of our family's personal photographs. In that case, I will take steps to ensure security of the personal photographs saved in my family members' mobile phones. This step can include - use app lock, keep the screen locked, delete personal photos, etc.

We will make a progress report on this activity and collect stars (★) from our family members. We will explain to my family what I have done and why. Our family members will evaluate how well I have done the activity. I can get maximum three stars from my family members. If we can apply our strategy very well, then three stars, if well, then two stars. And if it needs correction, then I will get one star.

Risks	Strategy to address risks	What benefits received	Parents' evaluation Very well ★ ★ ★ Well = ★ ★ Needs correction = ★

We have achieved different experiences in last 8 sessions while forming the human chain. Through these, we have learned what is personal information, how exchange of information can be risky and how to ensure security of personal information. We have not only learned but also made people around us aware. We have also taken steps to solve the problems of security of personal information of our family. We have been happy to do this activity. We will apply this experience in different stages of our life.



Planning a Trip with Friend

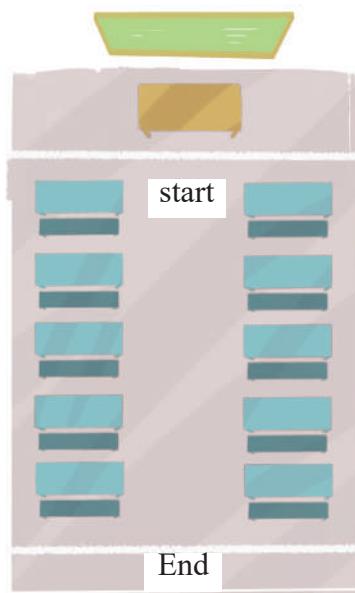
This time we will plan to go on a trip with a friend. Who doesn't like to go on a trip with a friend? Many new things are seen, many new items are eaten and many fun experiences are gained. But all of this fun can be ruined if we do not plan our trip accordingly. For example, we left for the trip but could not catch the bus/train/launch. We will be very upset then. It might be that the entire trip is cancelled. So, before going on a trip, we always have to make a good plan. We will just do it practically in this learning experience. We will plan a trip with a friend. We will move forward with this plan through some small activities.

● Session- 1: A fun trip in classroom

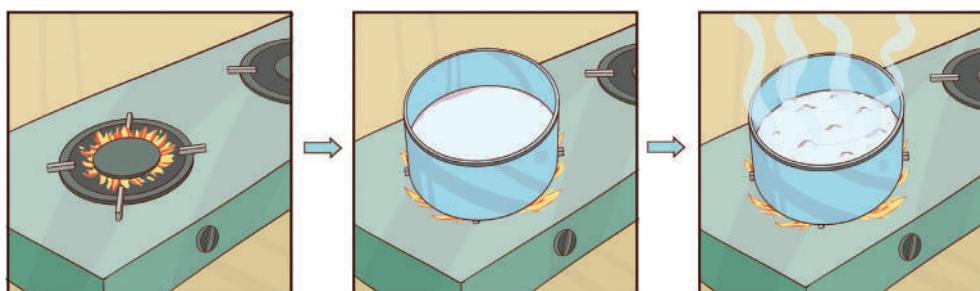
We will play a game before we make a tour plan. This game is called 'A trip to class while playing'. We can understand from the name that the game will be played in the classroom. But it can be played outside too. The rules of the game are given in the box below:



1. The first step of this game is to choose a classmate who will be the travelling partner.
2. Once the travel partner is selected, we all will stand where the teacher tells us to.
3. Now the teacher will draw a line on the front of the classroom, that is, along the place where the teacher's table is. S/he will draw another line in another part of the classroom. The first line in the classroom is the starting mark and the other mark is tour destination.
4. We will have to go to the destination with our travelling companion.
5. We will say 'start' loudly at the start of the game from the starting point. And we will say 'end' aloud after reaching the destination.
6. The pair that can travel to the destination in as few steps as possible will be the winner.



What did we learn from this game? Yes, from the game we realised that there will be some steps in our travel plan and we have to identify it. It is not just travel planning that requires step-by-step activity. Everything around us has steps. And everything is done following these steps. The digital devices we see around us also work in steps. Not just the digital devices, every task around us happens in steps. For example, a family member is cooking in the house. S/he is following some steps for cooking.





When cooking, first the stove has to be lit, then the pot has to be put, then something is cooked in that pot. When playing the harmonium at home, you have to press one key after another, otherwise the exact melody will not play. Again, there are some steps in the rickshaw that runs on the road. The rickshaw-puller first grabs the handle of the rickshaw to drive it. Then he sits in the rickshaw, rotates the rickshaw pedals and so on. Then we see that every task in our life is subject to certain steps. Do we know what this is called in mathematics? This is called algorithm. We will understand if we look around us. We just need to understand how every task is done one by one. Then we will become experts in algorithms.



Homework:

We will write down at home the tasks we do in steps to come to school in a chart like below.

- **Steps needed to come to school from home**

● Session- 2: Let's do our tasks step by step

In order to make the right tour plan, we need to know what and how many tasks are there. During last session's game 'A trip to class while playing' we realised that to get to a place we have to go through some steps or complete some tasks. According to the instructions of the previous session, we have to bring our homework. We will do a lot of tasks in this session based on this homework. In today's session we will understand working step by step better.

We come to school every day. Maybe we don't come to school a couple of days for some special reasons. We have to do some tasks every day to come to school from home, which we have already written. Let's read the following story with a classmate:

Nira is a student of class six at 'Monpura Secondary School'. She goes to school regularly. Her elder brother Nihad helps her a lot to go to school. One day Nira thought that if her elder brother Nihad was busy with some reason, she would miss the school. She shared this thought with her brother. Nihad said, 'You are right, Nira. You will have a problem going to school if I am busy with some work. Let's do a thing. We will make a list while going to school tomorrow of what we do after we wake up every morning. Then if I go somewhere, you can see the list and prepare for school yourself.' Nira really liked the idea. The next day Nira and Nihad made a list of what tasks they completed and wrote how to do those. Their list almost looked like this:



Nira asked her brother, “Why did you write Start and End in the task list? This is easily understandable which is start and which is end.” Nihad replied, “Well! This is a computer programming language.’ This time Nira asked, ‘Why did you put these arrow symbols?’ Nihad replied, ‘This is called flowchart. When you learn computer programming language, you will become a great computer programmer. Isn’t it amazing?’ Nira found that amazing too

Like Nira, let’s publish our tasks to come to school from home as a flowchart. For this, we will have a discussion with our classmates and then write.

- **A flowchart of steps to come to school**

We certainly have realised our steps to come to school.



Homework:

Let's observe a cooking procedure at home. With the help of the family member who is cooking, list down the steps of cooking using computer programming language and flowchart in the following table. We should observe a simple food preparation rather than a complicated one.

What is cooked:

Cooking ingredients:

Flowchart of the cooking procedure:

● Session- 3: Who has more steps

In the last session we used flowchart to write down tasks in steps to come to school. Now we will see who has more steps in ‘coming to school’ task. We will count our steps and share the number with the teacher. When everyone has done it, we will notice that for the same task of coming to school, some have mentioned many steps and some very few steps. Just like the game of our first session. Let's write down the highest and lowest number of steps in the table below

Highest Number	Lowest Number

Now let's ask the student, who took the maximum number of steps, about what steps s/he wrote and write it down in the following table.

- **Flowchart of student who takes highest number of steps to come to school**

Start



End

Let's now discuss with our classmate about the steps written above. Find out which steps are not necessary for coming to school. Mark those steps with an X. Because we have to keep in mind while making the tour plan that adding additional tasks will only waste our time. It may eventually ruin the fun of the tour. If we divide a task into multiple steps, we have to know how to do the task using the least number of steps.



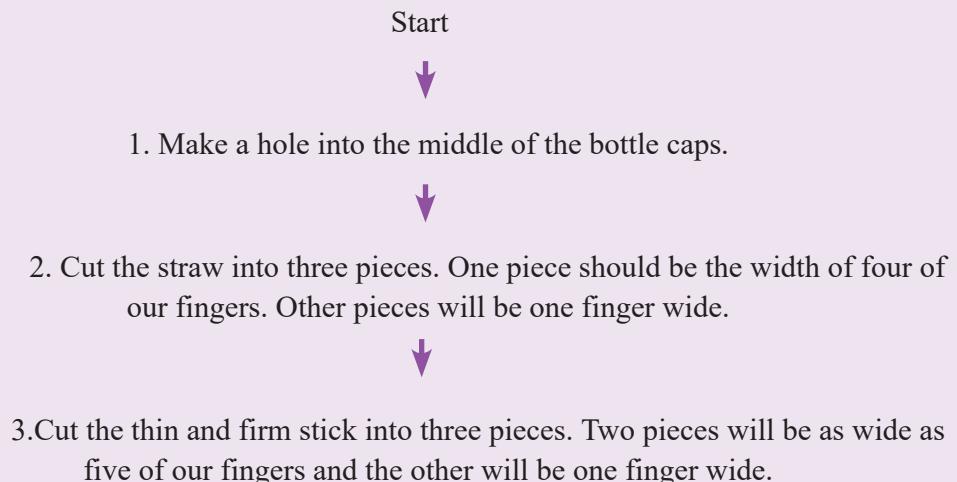
Homework:

Let's do another task. There is a flowchart below about how to make a 'car with sticks'. Let's build the car with the assistance of a family member and following the flowchart. Identify any additional steps in the flowchart and mark it with an X. We will have bring the car to the classroom when it is made.

● Components needed to make the car

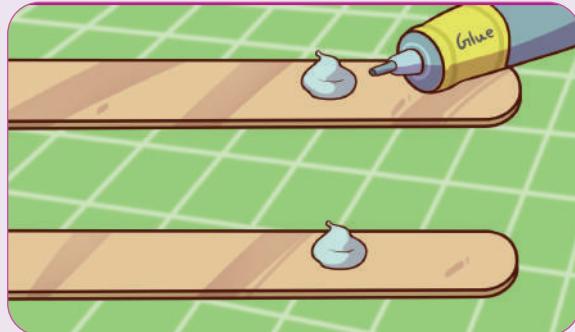
1. Four bottle caps of same size
2. Two ice-cream sticks
3. One drinking straw. If a straw is not available, then shape a paper into a cylinder shape.
4. Five thin rubber bands
5. One thin and firm stick
6. Glue

● Flowchart for building a car



4. Place the two ice-cream sticks side by side

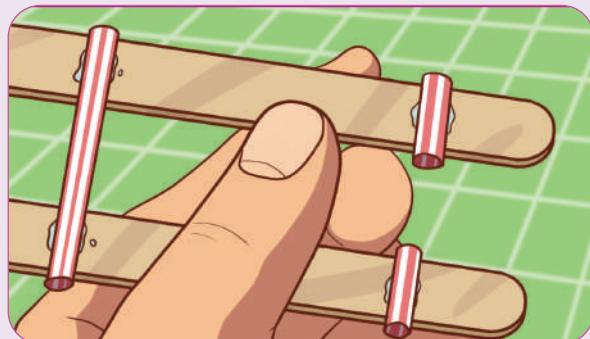
5. Put glue on both ends of the ice-cream sticks



6. Stick the big piece of the straw on one end of the sticks so that it connects them.

7.Like a bridge on the road

8.On the other end of the sticks, place the smaller pieces of the straw

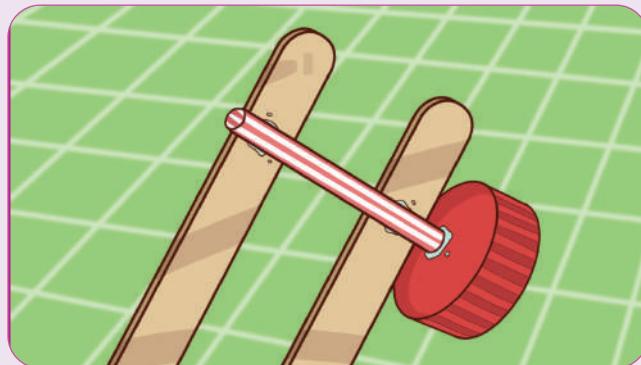


9. Insert one end of the bigger piece of the thin, frim stick in a bottle cap hole

10.Put some glue into the hole so that it gets firm.



11. Put the stick attached to the bottle cap through the bigger straw hole



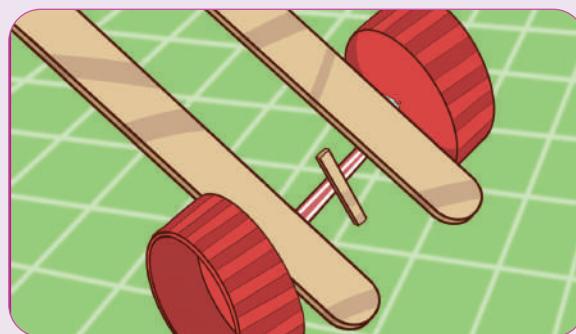
12. Glue another bottle cap on the other end of the stick



13. Now this will look more like the wheels of a car.



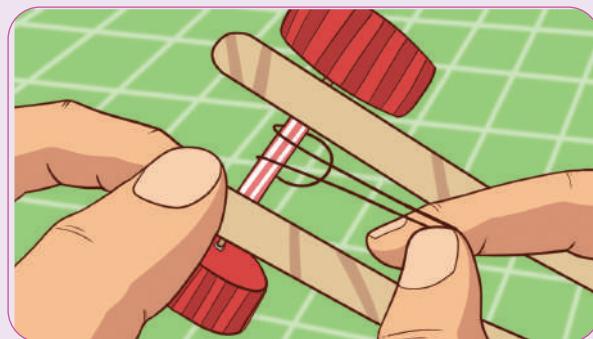
14. Put the second bigger piece of the thin stick through the smaller straw holes at the other end of the ice-cream stick



15. Glue the other two pierced bottle caps at both ends of the stick. Now we get wheels of a car on both sides of the ice-cream sticks



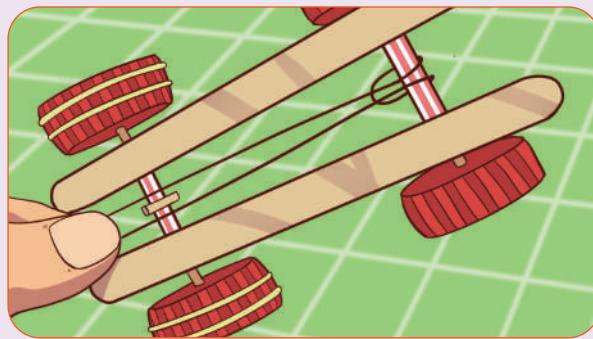
16. Stick the smaller piece of the thin stick in the middle of the wheels made by inserting a stick through the smaller straws.



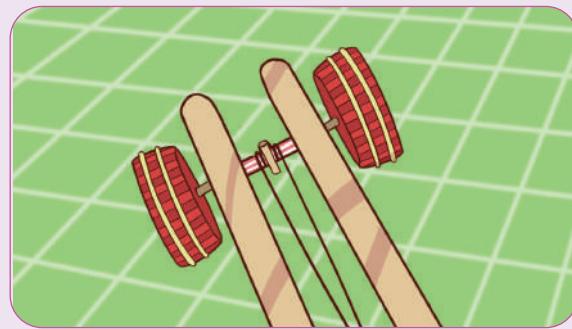
17. Tie a knot with a rubber band on the other end.



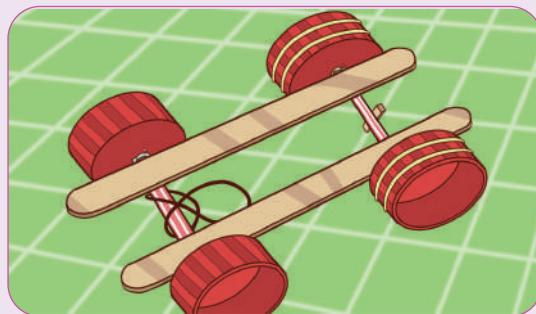
18. Use the other four rubber bands around the bottle cap wheels on the side of the small stick.



19. Stretch the knotted rubber band and attach it to the small stick.



20. Rotate the wheels with rubber bands around it. We will notice that the other rubber band is being stretched and wound up in the small stick.



21. Release the car on the floor.



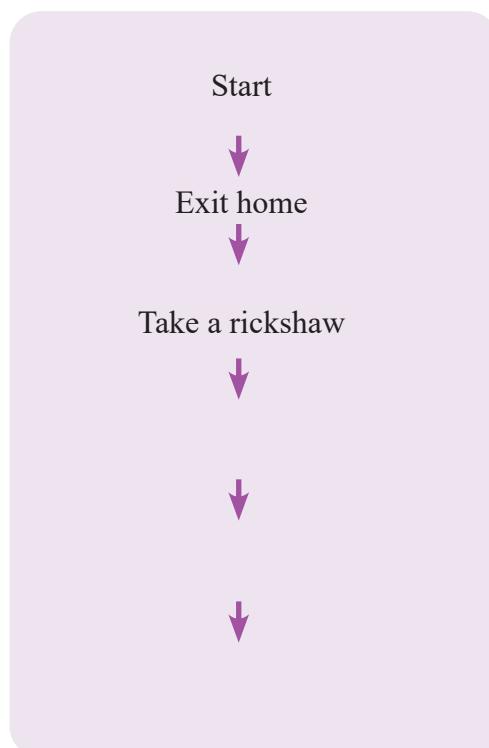
End

● Session- 4: Planning a trip in riddles- 1

By the time we have made the stick car, we must have realised that we need to set all the steps of the tour plan. We also need to plan it so that we can do it without wasting time. In this session we will make a draft of our travel plan. Below is a list of three travel destinations. It also has a list of where to switch vehicles and what kind of long-distance vehicle we will use to get there. Let's choose a destination and two vehicles by discussing with our classmates and put a tick mark beside it. With the first vehicle we will go to one place (Sylhet/Khulna/Chittagong-given in the table below). Then with the second vehicle we will go from that place to our destination.

Travel destination	Switching vehicles	Tick	Vehicle	Tick
1. Jaflong	First in Sylhet then in Jaflong		Train and CNG	
2. The Sundarbans	First in Khulna then in the Sundarbans		Train and launch	
3. Cox's Bazar	First in Chattogram then in Cox's Bazar		Train and bus	

Similar to the steps to come to school from home, let's make a flowchart with the steps to reach our desired travel destination. First two steps are done for you below.

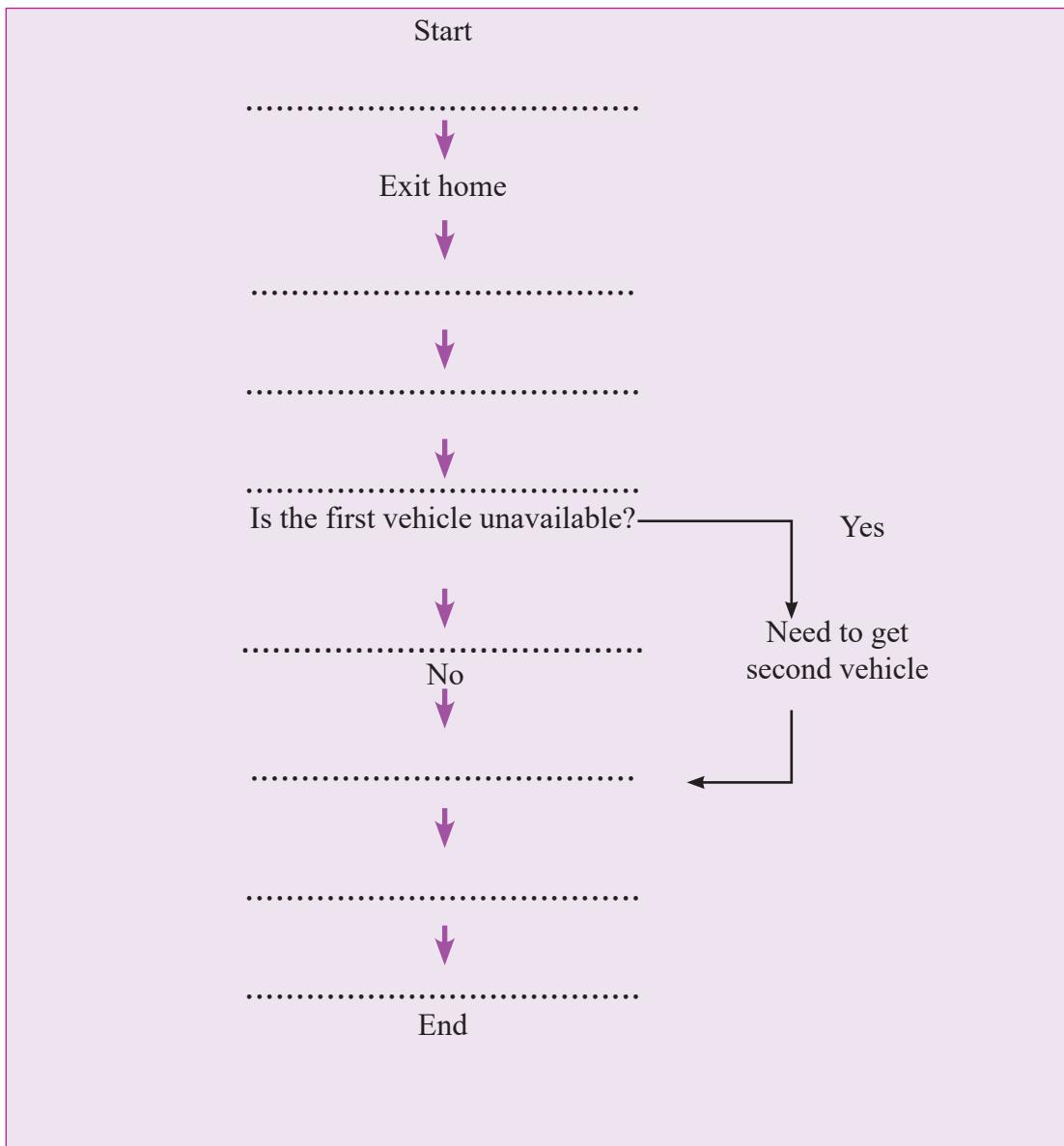


Now let's add a riddle to our travelling plan.

First vehicle is off for me

Switching rides is the way I see

It means the vehicle we first chose for the travel is unavailable. We are now in a different situation. Let's assume the vehicle we chose first is not available for some reason. To adapt to this new situation, we have to make some changes to our planned steps. The step that will have this condition needs to be drawn in a different flowchart. An example of how the flowchart should look is given below:



● Session- 5: Planning a trip in riddles- 2

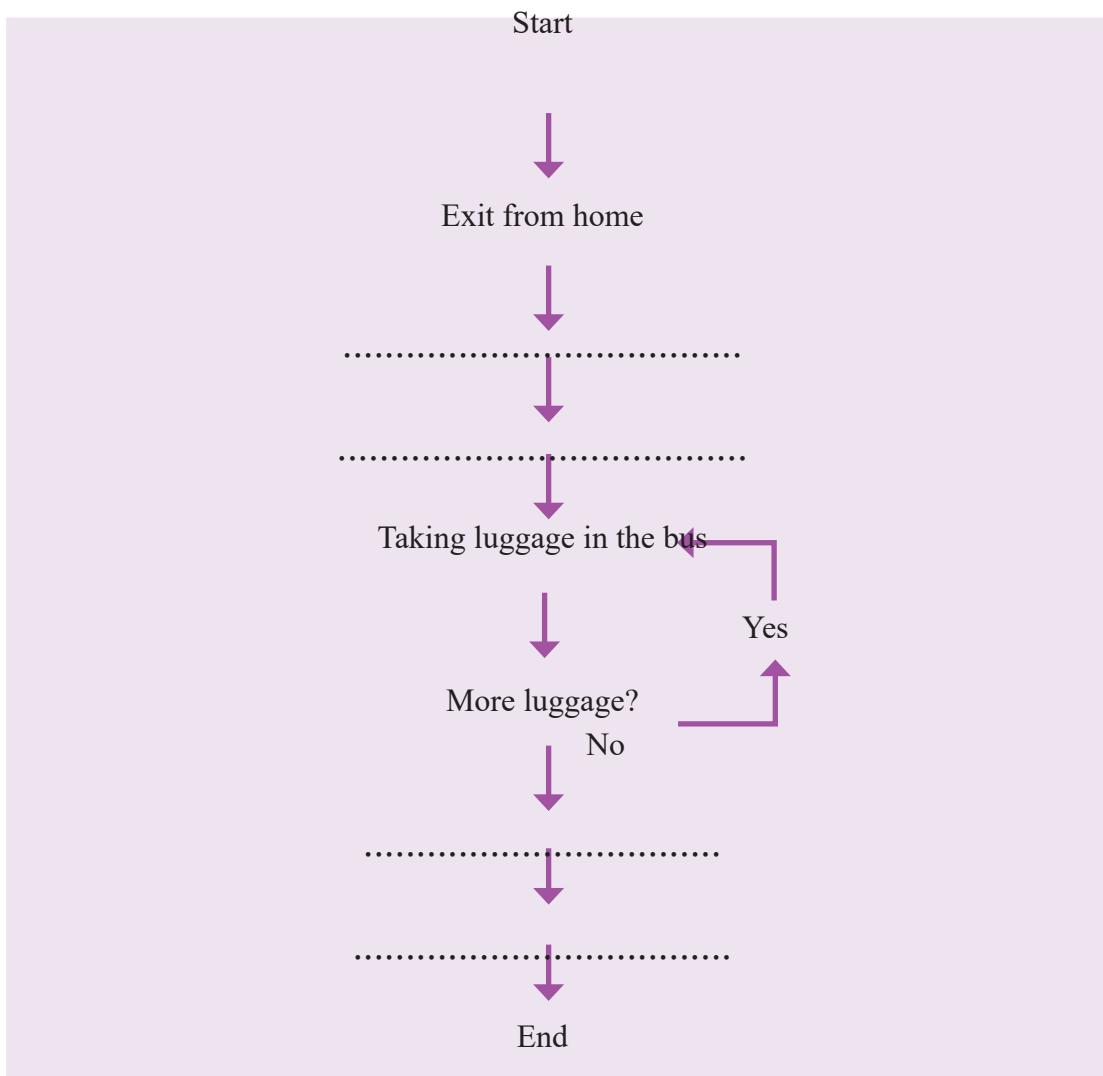
In the last session we made a travelling plan and solved what to do in a complicated riddle. In this session we will solve two more riddles.

Riddle: 1

I will join the tour if I see

I have five bags with me

That means we have to go on the tour with five bags. So, when we get on and off from a vehicle, we will carry the five bags with us. Following this riddle, let's draw a flowchart of our tour plan in the box below. There is an example of a flowchart of getting on the bus in the box below. We need to be aware that this might repeat a few times in the entire tour.



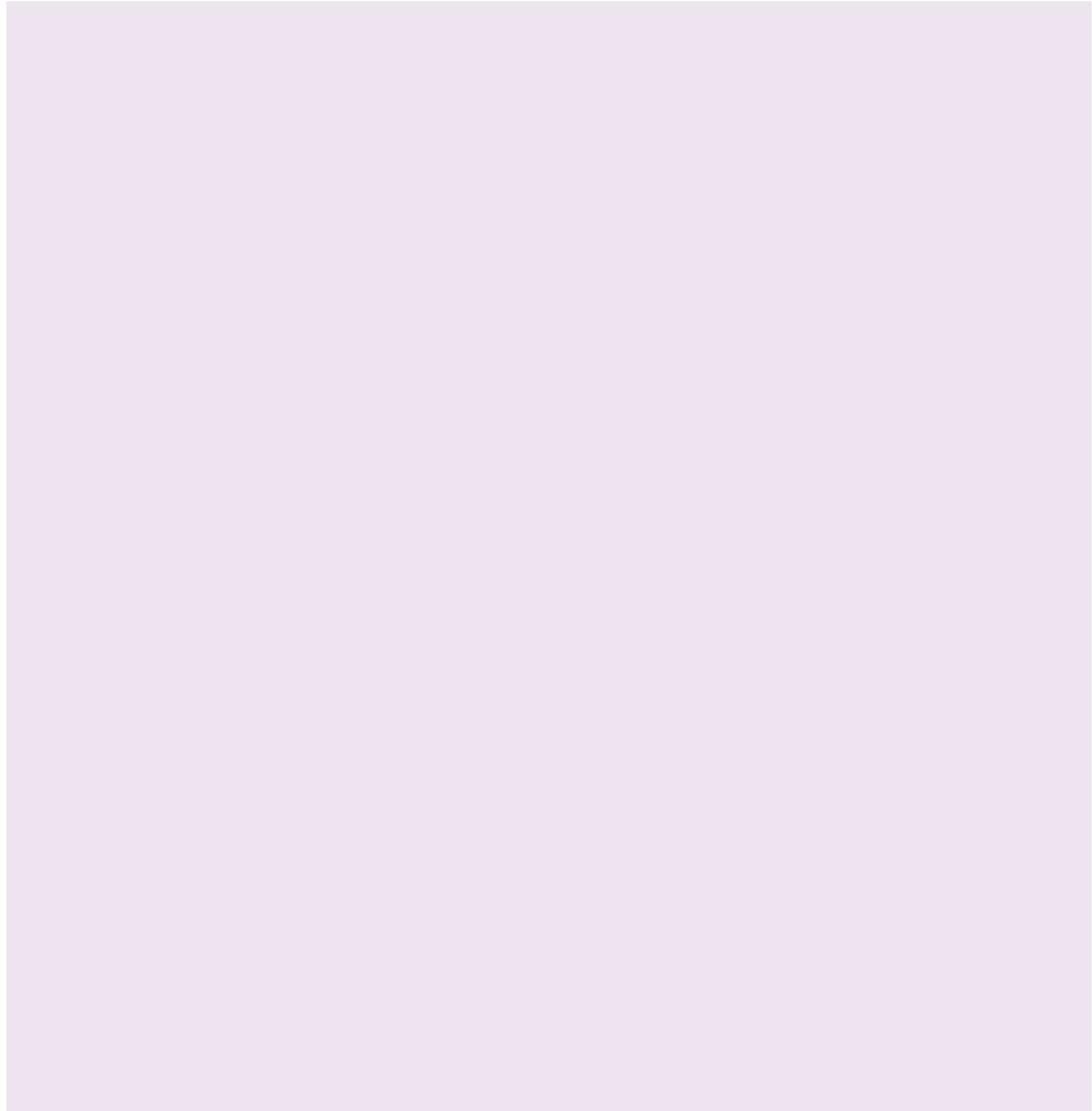
Let's see the steps of carrying the bags while getting in the vehicle shown in the flowchart given on the right above. Notice that at one point we have asked, 'More luggage?' This is a question which has 'yes' or 'no' as answer. No other answer is possible. Digital devices often have to make such decisions. Suppose we have built a robot, which will load and unload old people's baggage in the car to ease their life. In that case, we have to set this question in the instructions written in the robot's head, right? Let's think of another matter. We could write the phrase 'taking luggage in the bus' five times if we wanted. It would not be wrong if we did that. But let's assume we are writing the same instructions for a robot that will load cement sacks into a truck. Will we write 'Load sacks in the bus' a thousand times for a thousand sacks then? Never. We will write once like the flowchart. And if there are more sacks, we will show with arrow marks to repeat the instruction of 'carrying bags'. This is called repetition, that is, doing something again and again.

Riddle: 2

The first thing I will do

Is to take my friend too

This means we have to go to our friend's home first, take him/her with us then start our journey. So, the situation has changed a little. We cannot just start the journey ourselves now. First we have to go to our friend's house, take her/him with us and then start the trip. So, we have to add some new steps to our flowchart to face this changed situation. Let's draw the flowchart of our travel plan according to this riddle in the box below.



What we were planning so far while solving the riddles is mainly an algorithm. Algorithm means doing a bigger task by doing some smaller tasks in steps. When we planned by solving the first riddle, it was branching of algorithm. In one step here, we had to ask a question last session that had only ‘yes’ or ‘no’ as answer. Depending on the answer we followed the yes branch or the no branch in the flowchart. The first riddle of our this session was repetitive of a simple algorithm. Our five bags had to be loaded and unloaded five times one by one, meaning same task was repeated five times. The second riddle was a refinement to a simple algorithm. We had to change the beginning of what tasks we had to do here. Previously we only made plans for ourselves. But now we had plan to pick our friend then go on with the trip. So, there have been some changes to the steps of our travelling plans. There, we have learned how to make simple algorithms. Isn’t it fun?

● Session- 6: Let's make a travelling plan

In this session we will finally complete our desired travelling plan. The riddles in the previous two sessions are given here together. We have to make our plans keeping the riddles in mind.

Riddles	Let's draw a flowchart of the travelling plan as per the riddles-
<p>The first thing I will do Is to take my friend too</p> <p>First vehicle is off for me</p> <p>Switching rides is the way I see</p> <p>I will go out if I see I have five bags with me</p>	

This is where this Learning Experience ends by making this tour plan. We can show it to our parents or teacher to know how successful our plan is. Let's write our name and the name of our classmate on a separate piece of paper. We will draw the flowchart of the travel plan again and give it to the teacher. The teacher will evaluate our travel plans. If we want, we can go on a tour with our friend according to the plan on a holiday. But we must take our guardian with us.

At the same time we have to do one more thing. Whenever we hear a plan to go somewhere, we will make a travel plan of our own and show it to our guardians. It will be a source of great joy for both our guardians and us. After the trip we will check if all the steps we wrote were correct. Then we will write our opinions on one page. We will give our teacher the plan we made and our own opinions about it. It is because our teacher will help us to plan properly.



Networking for Learning

Our school is very dear to all of us. We like to go to school every day, don't we? But we could not go to school for a long period between 2020 and 2021 due to the Corona epidemic. At that time the teachers of our school contacted our guardians in different ways so that we could continue with our studies. The teachers still communicate with our guardians for different reasons. But we had or still have many classmates with whom the teachers could not or still cannot communicate due to unavailability of



communication medium. So this time we will make something so that none of our classmates will ever fall behind for any reason. In this Learning Experience we will create a 'network for learning'. This means we need a communication system so that in future, even in such a situation, the teachers can communicate with everyone and teach us. Maybe one of us will be able to design it when we grow up. We will now learn how network works so that if needed, we can build a better network when we grow up.

● Session- 1 : On a trip with a friend through map of Bangladesh

Before we understand what networking is, let's do something first. Do we remember what we did in the last Learning Experience? Yes, we planned a trip with a friend and showed that plan through a flowchart. This time we will draw our travel plan on the map of Bangladesh. We can call this the communication network of our travel plan. When we draw the communication network on the map, we will use different lines for bus, rail and launch communication. We will use two rows of dashes for rail communication, a straight line for bus communication and curved line for launch communication. Besides, we will put a stop sign at the place where we change vehicle. This time we will draw all the places and vehicles of our travel plan on the map. An Example: Shishir lives in Dhaka. He and his friend Zayad have decided to go on a tour



to Dinajpur. They will visit the famous Kantajew Temple, which is very beautiful, in Dinajpur. Then Shishir will mark the start of the journey from Dhaka. He will first go to Rangpur by train from Dhaka and then to Dinajpur by bus. Then Shishir and Zayad will draw on the map below as a communication system. So what did we do here? We travelled from one place to another using Bangladesh's communication network. There is also a network or communication system for digital communication, through which we can exchange various information.

Let's observe Shishir and Zayad's travelling plan and draw the plan we made with our friends on the map given on the next page.





When we finish drawing the communication network of our travel plan on our books, the teacher will hang a large map on the board. S/he will take all of our travel plans and create a picture map of our communication network. We will cooperate with our teacher. Since we have already made a communication network in our books through our travel plans, it will be very easy for us to collaborate with the teacher. Together we all will be able to create a communication network for the entire Bangladesh. In other words, it can be called a non-digital network. Once the whole communication network is made, we can all rejoice together. But we must save this big map of Bangladesh properly for later use.

If we only use the bus routes, the map we created would look like the map below. It will look different if the launch and rail routes are added. We can notice one thing. We could not go to the St. Martin, Hatia or Sandwip islands because of using only the bus communication. Another thing is that if we followed the real bus routes, the lines would have been zigzag. But we have used straight lines to understand the map easily. For this reason, we may laugh to see the bus passing over water in some places.



With this map we can travel from our home to our favourite or others' favourite tour destinations. We can call this system that we have drawn a communication network. Network means when two or more objects/subjects /persons are connected to each other by something. If we look at the network we have drawn carefully, we will see that different regions on our map are connected by different communication systems or communication networks. With a better view, for example, roads, traffic on the roads, truck or bus terminals, ticket counters, drivers or helpers, traffic police, traffic laws – all these are parts of the road communication network. In other words, a communication network means our coming and going or some kind of exchange. Similarly, water communication system, railway communication, postal communication, fibre optic (a kind of string made of glass through which data is transferred at the speed of light) communication, satellite communication (an artificial satellite is human-made devices that is sent to space by rockets. It moves around the earth and helps exchange information), mobile phone, radio, television, internet communications – all these together establish our communication networks.



Preparation for next session:

We have to find answers to three questions for the next session. We need to find the answers to these three questions involving the communication networks we made in our books and the board map. The three questions are:

1. How can we ensure that every bus, train and launch leaving the capital will depart in time?
2. How can we know if all the passengers from the capital were able to change vehicles in a divisional city?
3. How can we know from Dhaka if all the passengers were able to get on the vehicle and reach the district towns from divisional headquarters in time?

We will discuss these three questions with our family members, classmates, senior students and adults. We will find the answers and bring them to class after writing them in the 'My Answer' box on the next page.

● Session- 2: Let's learn about digital network

Let's write the answers of the three questions given in the last session in the designated tables. Two tables are given below. We will write the answers we got inside the 'My Answers' column and classmates' answers inside the 'Classmates' answers' column. If any of our answers any contain special word (related to information exchange/digital technology), we will write it in the next page's designated spot.

Question 1: How can we ensure that every bus, train and launch leaving the capital will depart in time?

My Answer		Classmates' Answer

Question 2: How can we know if all the passengers from the capital were able to change vehicles in a divisional city?

My Answer		Classmates' Answer

Question 3: How can we know from Dhaka if all the passengers were able to get on the vehicle and reach the district towns from divisional headquarters in time?

My Answer		Classmates' Answer

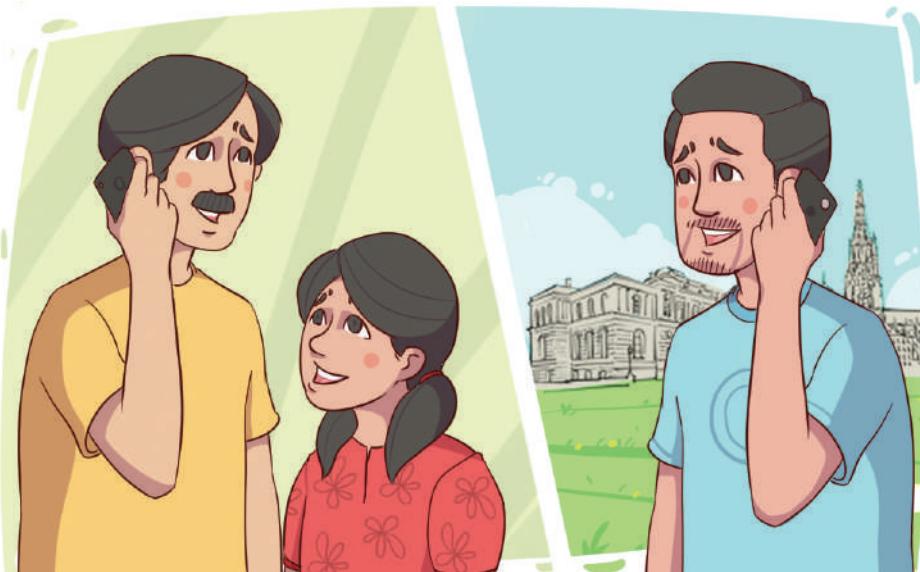
While looking for answers of the three questions, we have found some special words, without which the information would not be available. Let's write down the special words in the box below

Special words found in answers

Let's read a story with our classmates together and try to find more special words (related to information exchange/digital technology) in it.

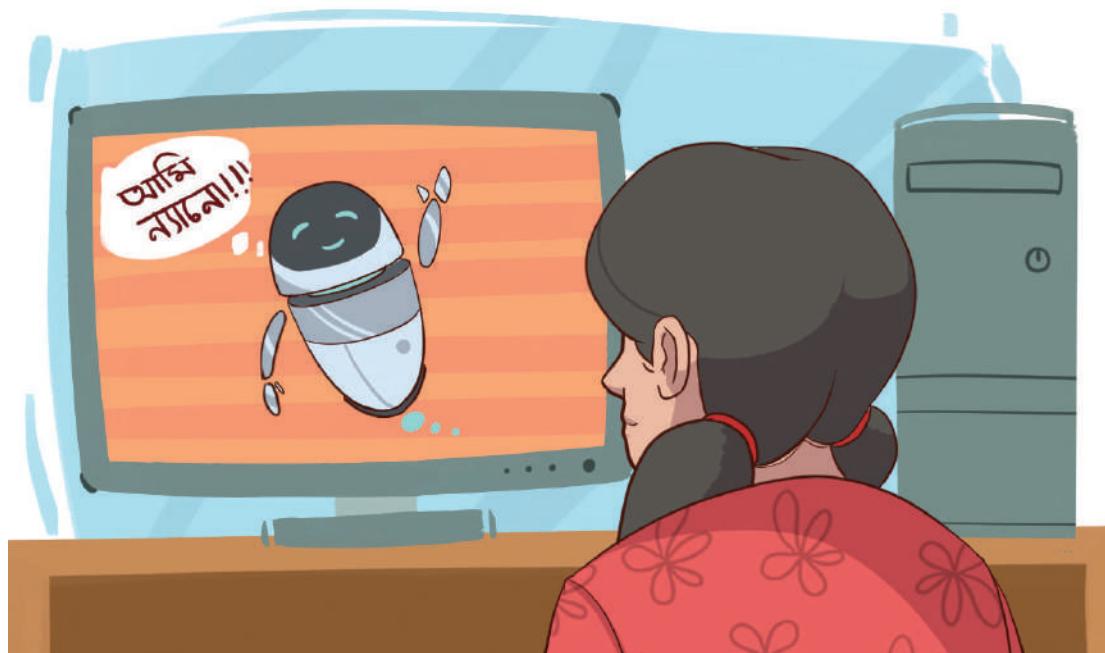
Pina sent an email

A sixth grader girl named Pina lives in Chattogram. Pina's younger maternal uncle, who was a very, very dear to her, lives in Sweden, very far away from Bangladesh. He also loves Pina very much. Every year before her birthday, she sends a gift list to him by letter. But this time there was an exception. Ten days before Pina's birthday, he called her on her father's cell phone and said, 'Listen Pina, now you are in class six. This time, you have to let me know what you want on your birthday via email. If you send me an email, I will instantly reply you. If you don't send an email, there will be no gift.' Pina was in big trouble. She does not even know what an email is! How will she send email to her uncle? Next day Pina asked her father, 'Dad, what is an email?'



Pina's father smiled and said, 'Your uncle has put you in a lot of trouble', hasn't he? Well, let me tell you what an email is. Email is sending a letter through digital medium. You have so far sent letters by writing on paper. Email is sending letters by writing in computer or mobile to computer or mobile. Sending an email requires an email address. Pina's father showed her how to send an email. With the help of her dad, Pina properly sent an email from her father's laptop. After two days, Pina asked her father if he had received any email from her uncle. But alas! Her uncle did not reply yet. Does that mean he did not get the email? Pina asked her father again, 'Dad, give uncle a phone call. Ask him if he received my email. Uncle did not reply to my email.' Her father called him and told Pina that he had not received her email.

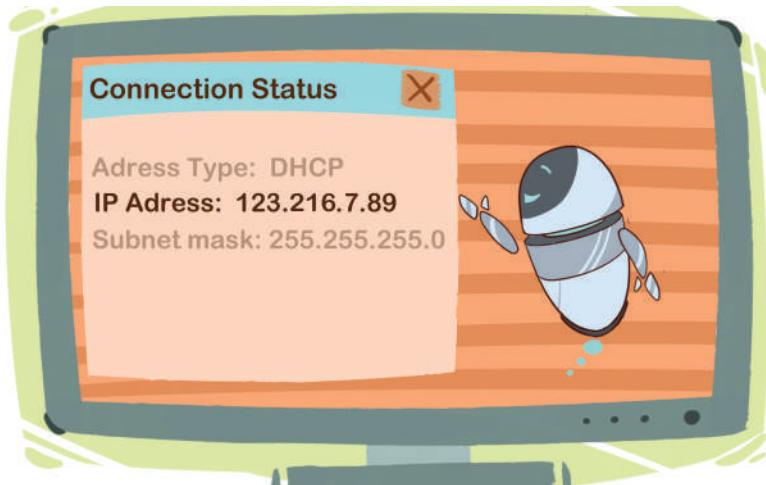
Anxiety could not let her sleep at night. It was two o'clock at night. Pina suddenly noticed a huge computer in her room. A light blue light was coming out of the computer monitor. Pina slowly walked to the monitor. On the monitor, a small robot was looking at Pinar with very kind eyes. Pina asked in surprise, 'Who are you?' The little robot replied, 'I am Nano.' Pina echoed, 'Nano !!!' Nano said, 'Hmm, I'm Nano, I can solve any digital problem. I saw that you were very upset, because your email did not reach your uncle. That's why I came to help you.' Pina was surprised and said, 'How did you know that I couldn't send the email?' Nano answered, 'I know everything that happens inside a computer.'



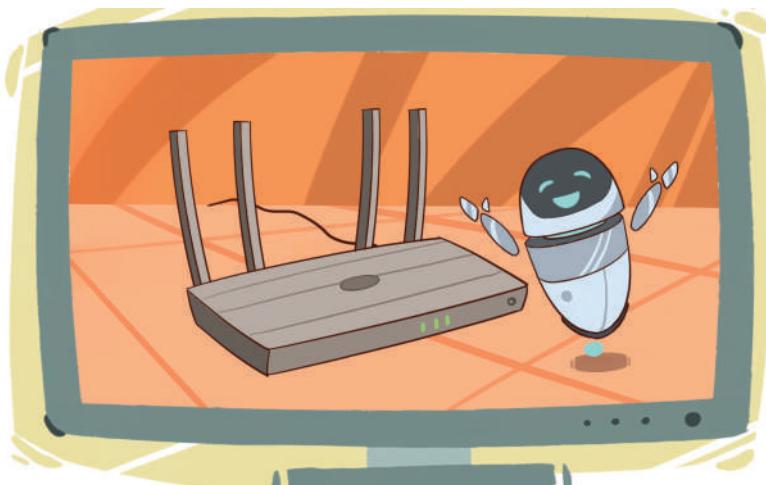
This time Pina became happy. She told Nano, ‘Can you solve my problem?’ Nano said, ‘Of course I can. Look at the monitor and see what I do.’ Pina saw that Nano first began to look for something called sender. After a while, Pina’s father’s name came up there. Pina asked Nano, ‘Well Nano, why did my father’s name come up?’ Nano said, ‘The email was sent from your father’s email address. That’s why his name came up.’ Then Nano started looking for something by writing recipient. This time Pina’s uncle’s name came up on the monitor. Pina cried out loud, ‘Uncle!!’ Pina said, ‘That means uncle will receive my email, so he is the recipient or receiver. Isn’t it, Nano?’ Nano nodded while working. Pina thought that it was just like sending a letter. The one who receives the letter is the recipient and the one who sends it is the sender.



Pina saw Nano was looking for something again with almost closed eyes. After a while, Nano showed her a number and said, ‘Look here. This is your digital address. The number looked something like 123.216.7.89. Pina wondered how that could be an address. Nano said, it is called an IP address. All devices have such a digital address. By looking at this number, it is possible to know to whom the information is going and also from whom the information is coming.



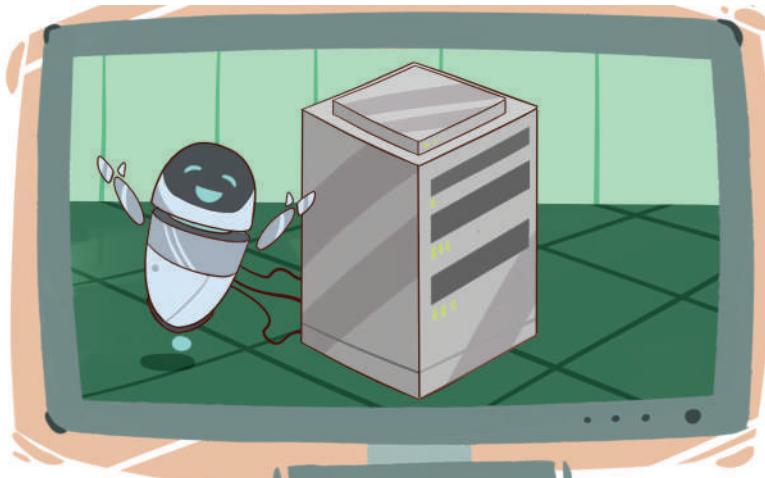
Again, Nano started looking for something else. This time Pina saw the picture of a box. The top of the box had some horns attached. Pina almost laughed. To her it looked like her grandmother's broken radio. Nano said, 'This is okay too.' Pina asked, 'Nano, what is this?' Nano said, 'This is a router. The email you sent to your uncle, it breaks it into small pieces and sends down the cable. However, its main function is to coordinate which information will go to whom. That is why it is also called a digital traffic police. The digital address that I showed you little ago, the router sees it and then sends the information according to the address to a large room.' Pina shook her head as if she had understood everything.



This time Nano addressed Pina, 'See Pina, this is that big room. This place is very dear to me. Vast amount of information is available here. Whoever needs any information

will get it here. Do you know what it is called? Its name is associated with ‘serve’. This is called a server. It

means the one who serves or helps. The server first sees the address sent from the router. Then it sends it to the recipient’s router. Whatever, there should not be any problem here.’



Now Pina could see her favourite younger uncle’s house bit by bit. She cried in joy. ‘Younger uncle’s house!!!’ Nano yelled too, ‘Pina... I think there’s a problem in your uncle’s router. Your email was sent by your father’s router into small pieces, but it didn’t come together right here. It is a router problem. Tell your younger uncle to change the router.’

Nano further said, ‘Pina, do you want to see something more amusing?’ Pina replied, ‘Of course, Nano. I’m so glad to see everything with you.’ Nano became happy too. This time Pina saw a picture of something under water. She realised that something long is seen under water.



She shouted, ‘Nano!! Is it a snake?’ Nano laughed. It said, ‘Don’t be silly, little girl. It is optical fibre, a type of cable. Through this your email goes to your uncle.’ Pina said, ‘It’s so long and thick. It should take a lot of time to send an email, shouldn’t it, Nano?’ Nano replied, ‘Not at all. Data goes through it a lot faster, almost at the speed of light. It takes a bit longer than when you open your eyes and see something.’ Pina’s eyes were wide open hearing this. ‘So fast!!’ Nano continued, ‘You know Pina, sometimes the cable is cut off because of shark bites or for any other fish or animal. It causes a lot of problems. Then it is fixed again.’ Pina nodded.

Now Nano asked, ‘Can you see this, Pina? Pina replied, ‘What, Nano? I can’t see anything.’ Nano replied, ‘Oh, you are human. You are not supposed to see this. Listen what I say. I can see waves of different lights here. Human being can’t see this. This is a kind of wave. That optical fibre I just showed you, it sends and receives information with these waves from routers to servers. Whatever, no more display, Pina. I am sure your head must be spinning hearing these difficult words.’



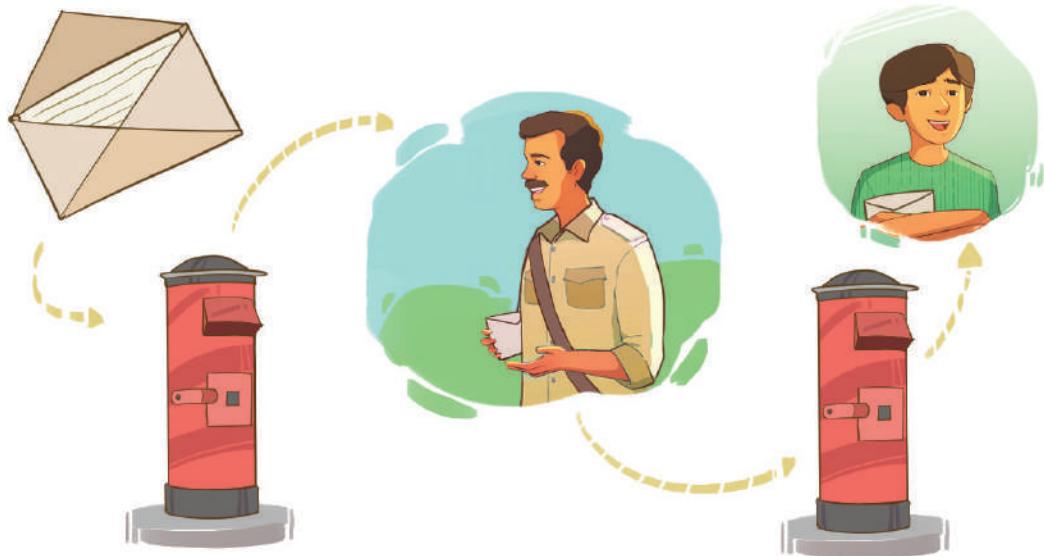
Pina’s head was truly spinning hearing those difficult words deep at night. But she became very happy to know why her uncle did not receive the email. She thanked Nano many times. She wanted to give Nano a hug. Nano said, ‘You feel so happy, don’t you, Pina? I am also so happy to help you.’

If we think of Pina's story of sending email in terms of the digital system, we will notice that in any information exchange of a digital system, the process starts with the sender. Sender sends information. The one who receives it is the receiver. When the sender sends information, it includes the sender's and the receiver's digital address. Router reads the receiver's information properly and sends it to the server as per address to send it to the precise destination. A server has digital addresses of many people. It searches for router where the information will be sent. Then it sends the information to the receiver's router. The receiver's router receives the information and delivers it to the receiver. In this entire process, optical fibre is used as a wired medium and invisible waves act as a wireless medium. Sometimes one of the media and sometimes both are used.



Homework:

Let's compare the digital network related words found in the story with the special words (related to information exchange/digital technology) we got from our classmates. We will discuss the words with family members/senior students/ the teacher. Besides, we will read the following part with or without help at home.



When we look around us in the same way that we communicate in a digital system, we also see some other communication/information exchange networks. Two communication/information exchange systems are mentioned here

1. Our postal communication system and

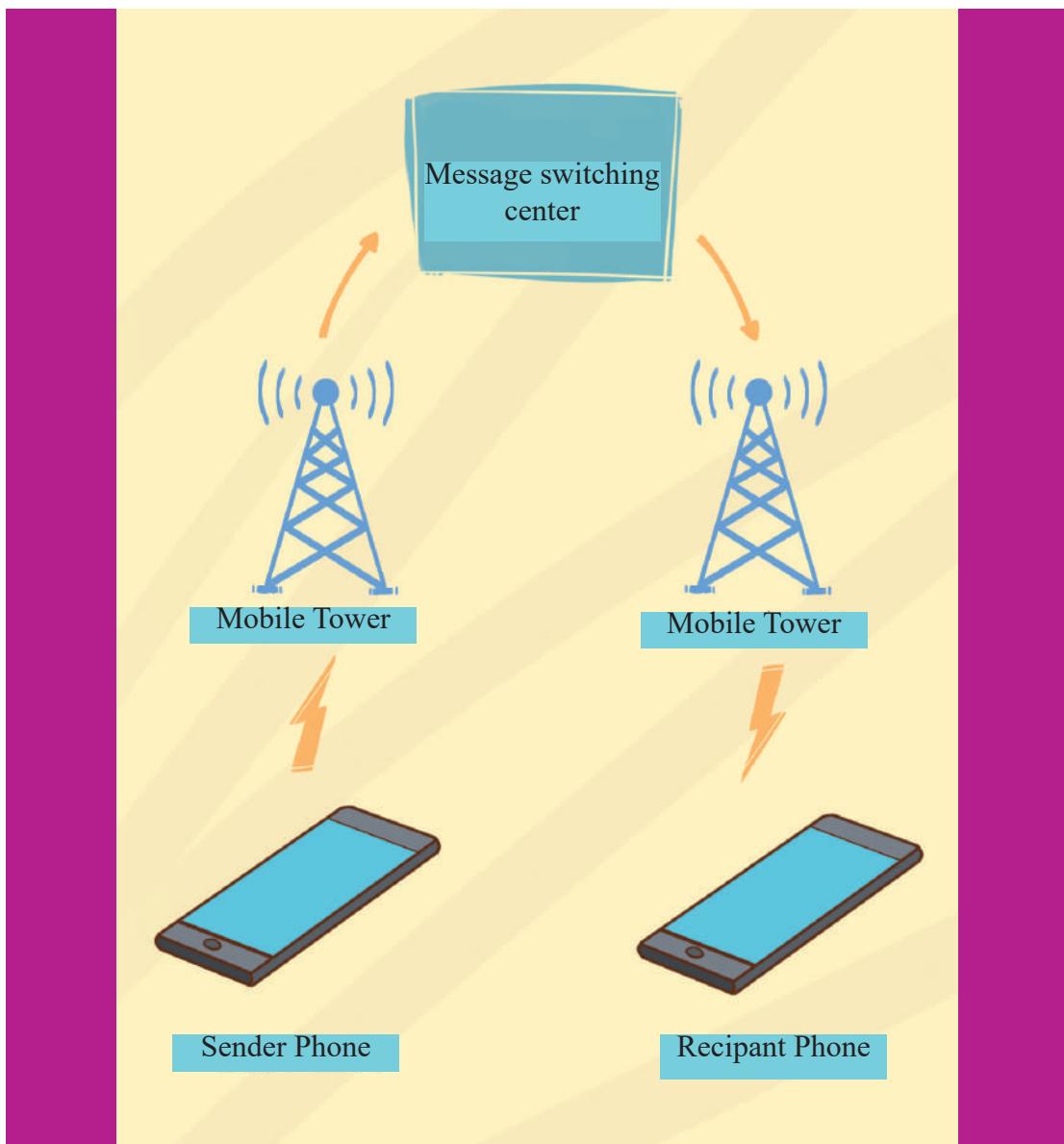
2. Communication via SMS in mobile

Do we remember Pina used to send letters to her uncle? Later he asked Pina to send him an email and she was in trouble. This system of sending letters is the postal communication system. For example, we live in Panchagarh and want to send a letter to Cox's Bazar. When we send the letter, our address of Panchagarh and the receiver's address of Cox's Bazar are given. Here we are the sender and the recipient of the letter is the receiver. When our letter goes to the district post office, that is, to the Panchagarh Post Office, it works as a router. When the Panchagarh Post Office sees that the letter will not go anywhere in Panchagarh, it will go to Cox's Bazar, then it will send it to the General Post Office in Dhaka. The General Post Office in Dhaka will act as the server. It will see the address of the letter and send it to Cox's Bazar Post Office. The Cox's Bazar Post Office is the recipient's router. It will read the road number, house number, person's name and send the letter to the correct address.

We see many people around us texting and sending information or message to others. We call it SMS in short (SMS: Short Message Service). Those of us who are not familiar with the word SMS have no reason to be afraid. This is just a system for exchanging messages between two mobile phones. It is also called a short message. When we send an SMS to our friend via our guardian's mobile, it is stored in a short message storage centre through the mobile company's tower. When our friend turns on his/her mobile,

the short message storage centre sends the short message to his/her mobile through the mobile tower in their area. Then our friend can see the short message. Here, since we have sent a short message, we are the sender, our friend is the recipient. The mobile tower in our area is our router, the mobile company's tower in our friend's area is their router and the short message storage centre works as the server.

Look, the postal system and the SMS system of mobile are similar to the email system sent by Pina, aren't they? But not all communication systems/information exchange systems are so simple. If someone in our house works at a post office or in a mobile company, we can learn more from them. It does not matter if we cannot learn more. We will learn it gradually



● Session- 3: Setting up networking equipment on map

In the last session we got some special words (related to information exchange/digital technology) from our classmates to exchange information in the digital system. After reading the story of Pina and Nano again, we learned some new things. Besides, we also read at home about how the process of sending information through a digital system is similar to our letter and text messaging system. In this session we will practise these newly learned things thoroughly.

Let's come back to the story of the previous session. Can we see through a flowchart how Pina's information reaches her uncle? An empty flowchart is given below. We will fill in the blank by discussing the words beside it with our classmates. If necessary, we can take help from Pina's story.

Information exchange network in a digital system	Words needed to complete the flowchart
Start 	Sender Receiver
..... 	Sender's router Server
..... 	Receivers router
..... 	
..... 	
.....  End	

Can we rewrite the answers of our previous three questions in the context of a digital system? Let's rewrite the answers of the three questions after discussion with our classmates. But this time we have to keep in mind that we use the materials of digital systems to write the answers. Answer to one question is given below as an example.

Question 1: How can we ensure that every bus, train and launch leaving the capital will depart in time?

Answer: When the departure time of any bus, train and launch from the capital is finally decided, a person from the office of bus, train and launch will give the schedule in a digital device (computer/mobile). Here, this person is the sender. The router will see who will get this information. It will send the information to the server according to the address. The server will send the information to my router after seeing my address and I will get the correct information from my router.

It is worth mentioning that if I want to get this information, I have to use the internet or SMS service in my mobile phone which is basically a network.

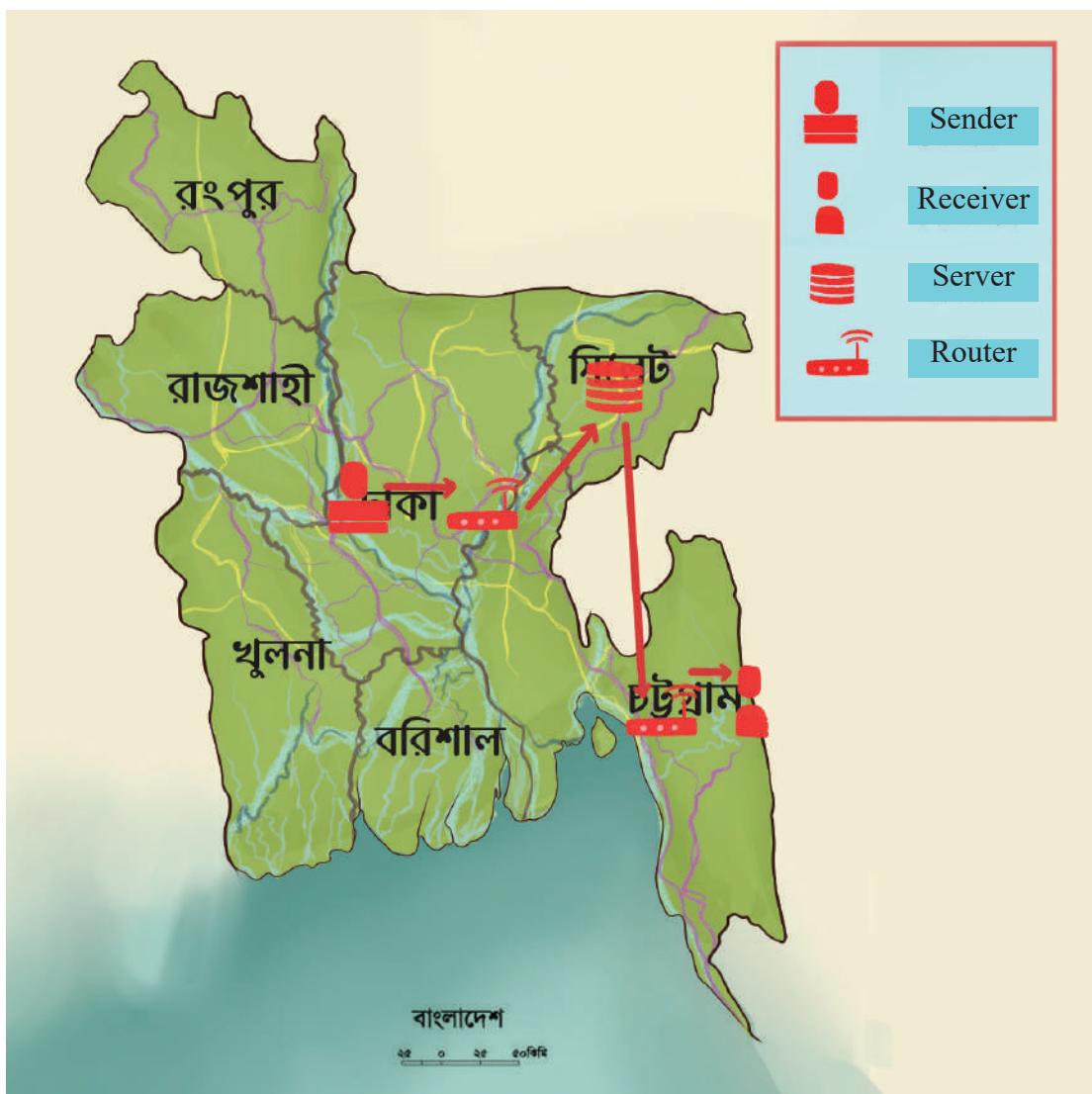
Question 2: How can we know if all the passengers from the capital were able to change vehicles in a divisional city?

Question 3: How can we know from Dhaka if all the passengers were able to get on the vehicle and reach the district towns from divisional headquarters in time?

Homework:

Now there are names of some places for us on the next page. We have to draw the answers of any one questions of this session in that place. The answer is to decide where the sender is, where to place the router, where to place the server and where the recipient is. We also have to use the symbols for sender, router, recipient and server. An example is given for us. The answer to the first of the three questions is given in this section. For example, for answer to the question 1,

Sender lives in **Dhaka**.



Sender's router is in **Dhaka**.

Server is near **Sylhet**.

I am the receiver, I live in **Chattogram**.

My router or the recipient's router is in **Chattogram**. Then,

Let's write the answer to the question Sender lives in _____.

Sender's router is in _____.

Server is near _____.

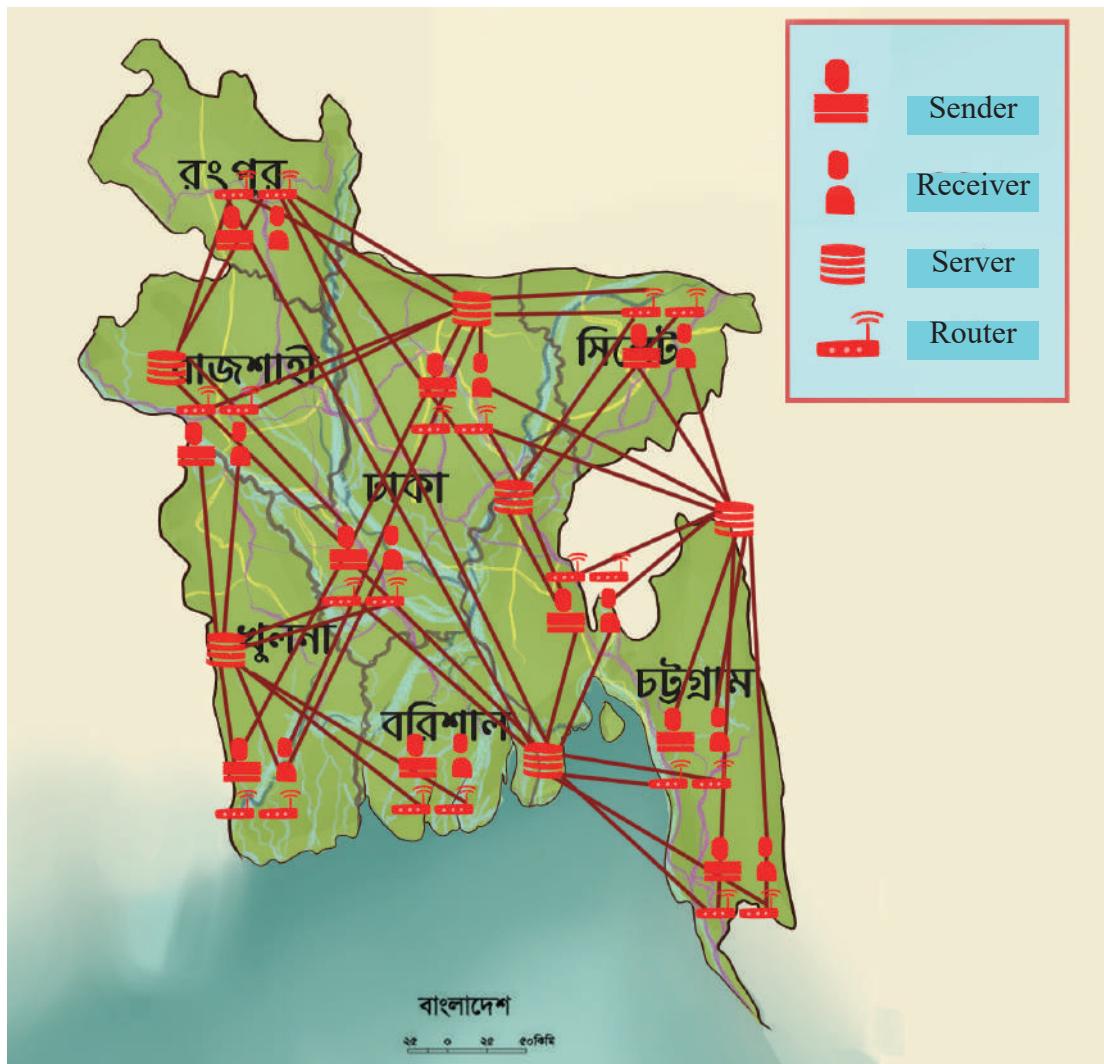
Receiver I myself live in _____.

Receiver's router, that is my router, is in _____. So,



● Session- 4: Let's make a digital network on the map together

In the last few sessions, we drew a picture of a communication network for vehicles and gathered some ideas about elements of information exchange networks in digital system. Besides that, we also saw how information is exchanged in digital system by putting servers, routers and receivers in our books. Now let us do an activity. We all will draw a bigger communication network on a larger sheet of paper from the network drawn in our book. The network will look like a communication network. It will look like this:



Now let's put the vehicle communication network, that means, the non-digital communication network that we created before and the large sheet of digital communication network side by side. Let's find three similarities and two differences of the two digital and non-digital communication networks by discussing with our classmates. One similarity and one difference are done for us.

Similarities between two networks	Differences between two networks
1. We can exchange information on both digital and non-digital networks. We can exchange letters in a non digital network and emails in a digital network.	1. The information being exchanged in non-digital network can be seen and touched. But the information sent in a digital network cannot be seen or touched.
2. ----- ----- -----	2. ----- ----- -----
3. ----- ----- -----	3. ----- ----- -----
4. ----- ----- -----	4. ----- ----- -----

● Session- 5: Our school's learning network- 1

In the previous session, we found similarities and differences between the two types of information and communication networks. Let's create a learning network in this session. We said at the beginning of our Learning Experience that we would never let any of our classmates fall behind due to lack of communication. We will try to do that in this Learning Experience. Now we will do the real work. We will create a kind of school learning network with all the students of our class.



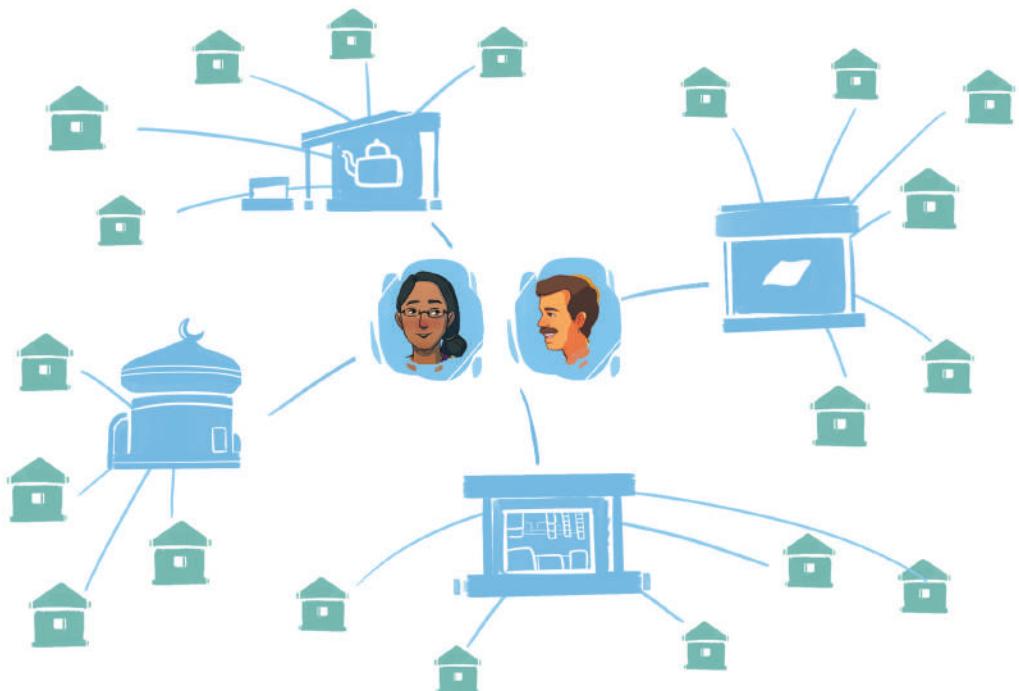
Let's read the following short story with a classmate to create a learning network

Khushi Apa is the teacher of Class Six at Anandapuri Secondary School. The school is announced to be closed for one week on occasion of a religious festival. Khushi Apa has decided to greet everyone in this religious festival, regardless of their religion. She will make cards by cutting paper and send it to everyone's house. So before the school closes, she asked school gardener Karim to talk to Monir of the shop in front of Asha Market on the south of the school. The students could collect their cards from Monir's shop. Similarly, she asked Karim to talk with Zarina from the 'Baba Mar Doa' tea stall in the north, the imam of the mosque in the west, and Abul from 'Bhai Bon' photocopy shop in the east so that students from the north, west and east could also get the cards. It's almost like -

This is a network. Not only for sending gifts, even if the school is closed, Khushi Apa can still teach the sixth graders of Anandapuri Secondary School this way. Khushi Apa will explain lesson or homework on a piece of paper. Karim Kaka will deliver those in the designated places. Students can pick up the paper by themselves after their studies or by their parents. Similarly, the students can submit their homework to the designated place by themselves or with the help of their parents. Karim Kaka will go one day and collect the homework of the students.

Now we will build our non-digital network. Our digital technology teacher will take the place of Khushi Apa in the centre. We will need someone like Karim Kaka and fix four places or more if necessary, from where we can get necessary information or instructions from the teacher.

We will do the work on the board with the help of the teacher. After our network is drawn, we will redraw it in the box below.





Preparation for next session

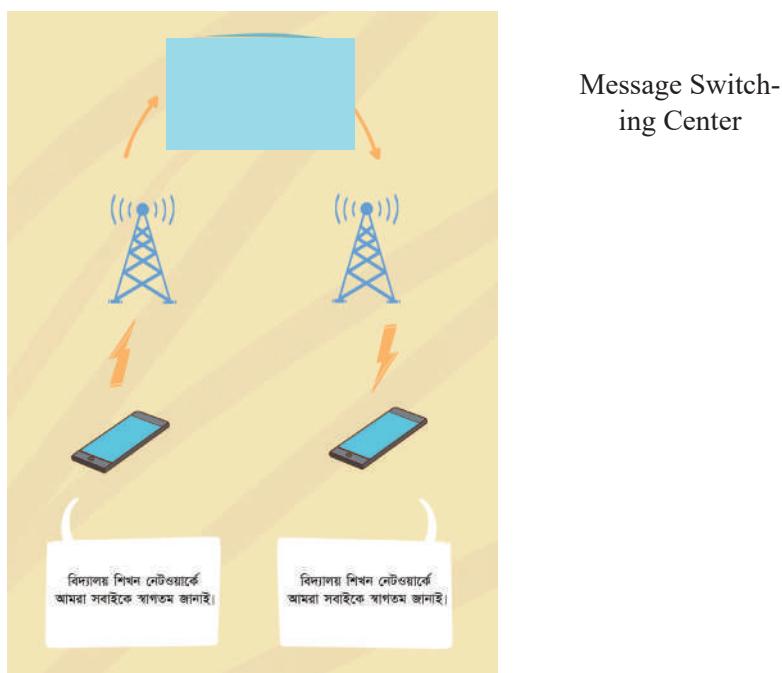
For the next session, we will write down the mobile numbers of our parents and if they do not have a mobile number, then write down the numbers of other family members. We will bring it with their permission of course. We will write the mobile number to contact me in the space below. We need to remember that a person's mobile number is their personal confidential information. So, we will try not to lose this piece of paper so that it ends up in others' hand. We will only give this information to our teacher.

To contact me, the mobile number is: 01.....

● Session- 6 : Our school's learning network- 2 (Work outside classroom)

In the last session we created a kind of learning network. In this session we will build two more types of learning networks. One with mobile service only and the other with internet service.

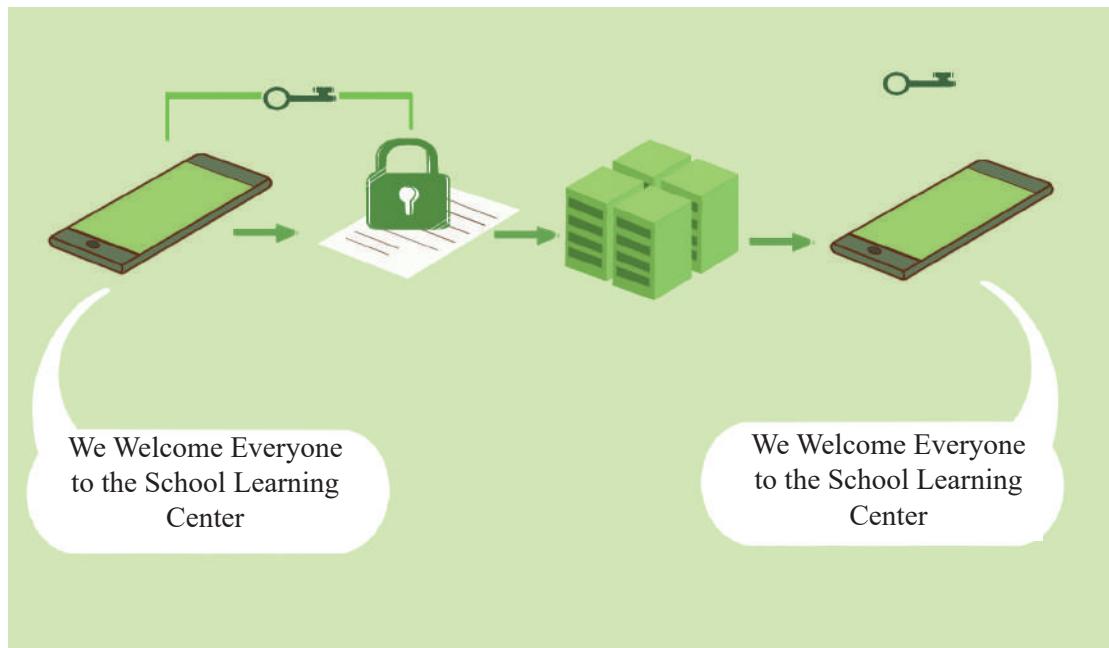
We have to give our mobile numbers to our teacher. The teacher will save all the mobile numbers in his/her mobile. The teacher will open an SMS group with all the mobile numbers. The mobile phones which have messaging apps like WhatsApp, Messenger, Imo, Viber, etc, with those the teacher will create a group using one app. We can use these apps to share images, files, audio, video, etc. But it needs internet to do that. The group we created will work like the following network.



Once all our learning networks have been created, the teacher will try to reach us with a message/letter through all the networks. The teacher will send the message through the network we created in the last session and the two types of network in this session.

The message can be, ‘Welcome to the learning network of the school.’

Thus ends our creation of learning networks. But this is only the beginning for us. We can always use this network to keep in touch with everyone and we will do that.



Learning Experience- 7



Let's organise an emergency services information centre We have to go to the information centre during emergency

There are times in everyone's life when we need urgent help or information. We get this service from individuals or organisations. For this we have to consider some issues and get the service in steps. Through this Experience we will be able to learn how to get emergency services very easily. Besides, it is also important to have an emergency services information centre in our school. That is why we will set up an emergency services information centre through different activities.

● Session- 1: Idea of emergency services and creating list of area-based emergency services

Dear students, greetings to you. We will do activities step by step here like in the previous experiences. Many times in our life we face such dangers, for which if we don't take immediate action, there can be great loss. The government agencies concerned usually provide us with emergency services then. We will make an emergency service information centre in a specific place in our school by making informational materials on how to get this service and from whom.

What we will learn in this session will come in handy in your real life from the very next moment. Not only that, if we can learn this matter properly, we can help and serve those who are older than us.

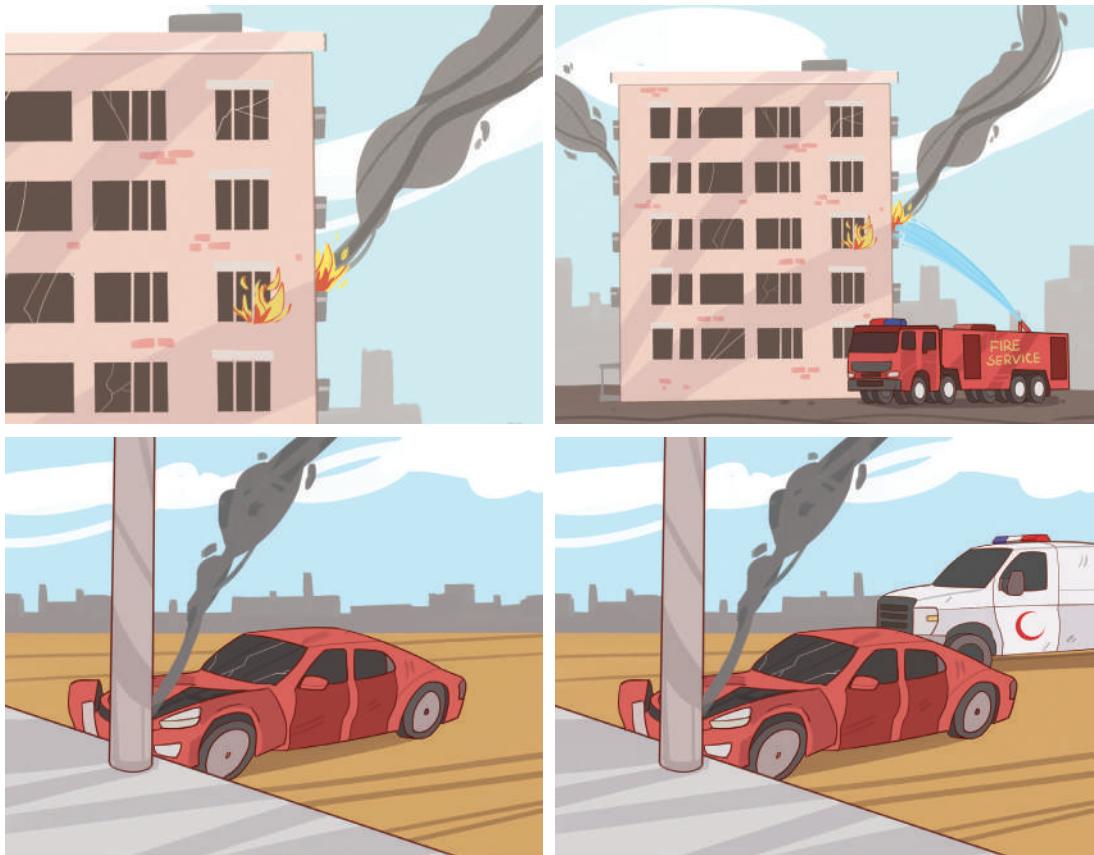
Medium of emergency services

Before we learn how to get emergency services using digital media, we need to know how to get emergency services without it.

If emergency services are needed, first we can get help from those around us, such as teachers, guardians or anyone else. In some areas there are volunteers or people who come forward first to go to others' aid. Some emergency services are also available from the Scout, Girl Guide members of our school.

The school has a first aid box for immediate service or care if someone is injured or ill. It is a kind of emergency service. As long as no outside service is available, primary service is provided through this first aid box. In the same way, in case of our urgent need, services can be availed through instant communication using digital medium.

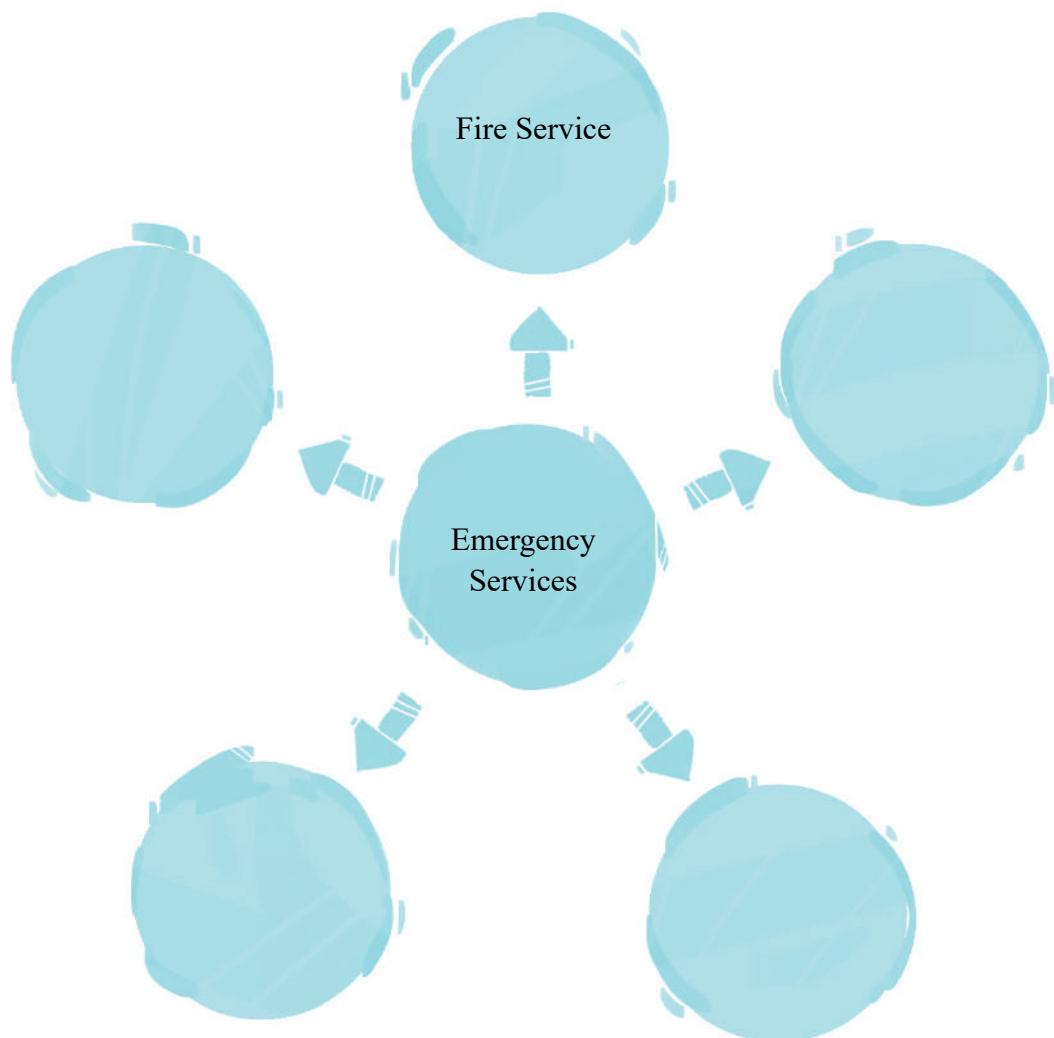
What can we see in the four images below?



Emergency Services

Accidents often occur in our life for which we are not prepared. If we don't take immediate action, it may cause us a great harm. So, we need the help of others then. We usually get this support from a government service organisation. Sometimes we can take those organisations' services by taking information from them. We also know through different media how to get these services.

So, whenever any accident occurs, we can get support from some government organisations. Can we name some emergency services like this? Let's write names of some emergency services below...



Let's write one name after another from these on the board. We will not repeat the same name.

Are all emergency services available in our locality? The emergency services may vary depending on the area. For instance, if there is a fire in an urban area, we can get fire service. But a fire in a rural area is addressed differently. We will do an activity in this regard. Let's list the emergency services written on the board based on the locality in the box below.

Town	Village

Some of us will present the list in the classroom to see if it matches with others' lists. After the presentation, we will write the information received from others on the book's table.

● Session 2: Identifying digital media for emergency services

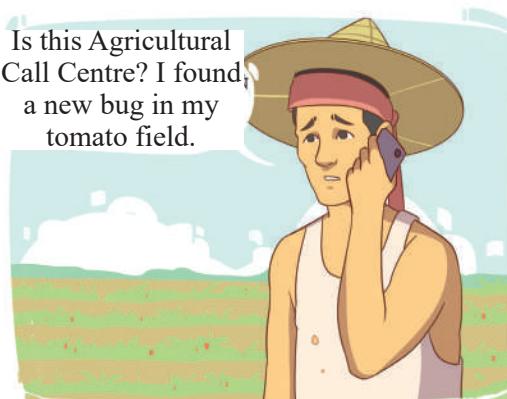
We learned the names of several emergency services last session. Now we will find out which digital media can be used to get these services. Let's observe the following events



Is this 999? Someone is cutting down a roadside koroi tree of our village without permission!

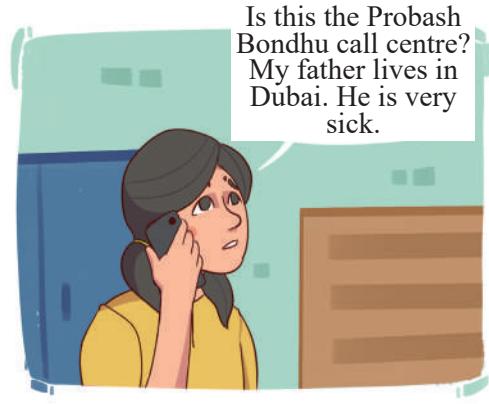
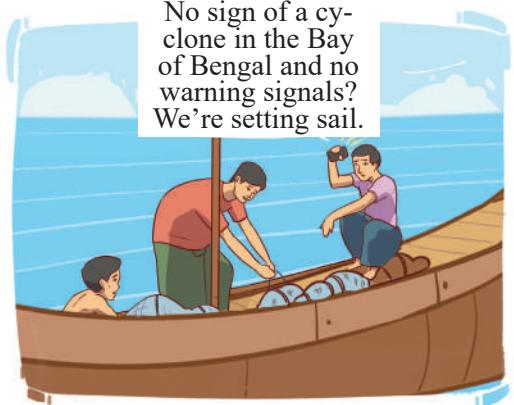


Is this Agricultural Call Centre? I found a new bug in my tomato field.



Is this women and children abuse prevention call centre? Please stop my friend's child marriage!







From the incidents above, we realised where we should contact in case of emergency. Every event is different and may occur in our life. Here in some cases call centre numbers are mentioned. Let's make a list by collecting all the call centre numbers with the help of the teacher.

We need these numbers right by our hands in case of any emergency. Let's write down all the important numbers in the table below.

Serial no.	Name of the emergency service	Contact of the emergency service
1.	National Emergency Service Call Centre	999
2.		
3.		
4.		
5.		
6.		
7.		
8.		

Now let us think about what happened around us or in our own life in a few days when if we had known the emergency phone numbers, it would have been of great help. We need to keep one thing in mind. Emergency can often be a matter of personal concern. If there are any events that I do not want to tell others, then it is not necessary to write it in the table below.

Emergency Situation	What number should we should have called?

● Session- 3: Investigating the steps of getting emergency services

In order to get emergency services, we need to contact the call centre to provide accurate information about the matter we are seeking help for and correct location. Sometimes the information receiver wants to know the details. If we do not communicate properly, it may be late to get help or embarrassing too. So in today's session we will do some activity on how to communicate properly.

What can we see in the picture below? Who has been contacted here? For which type of problem?



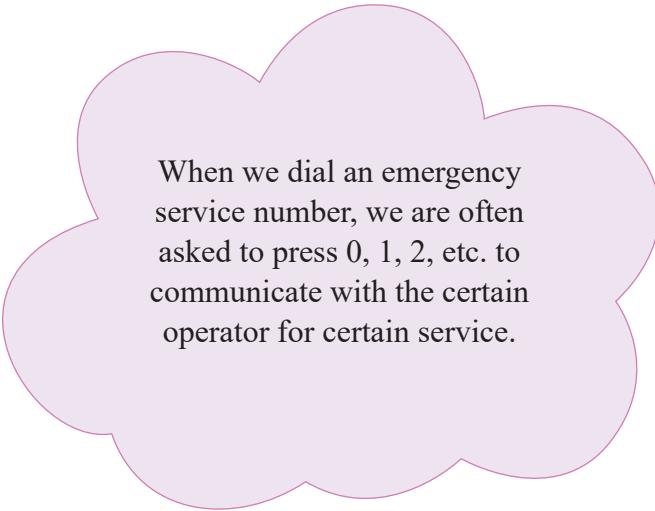
Sometimes we need to pay for communication for emergency services through digital media. Emergency can be of many types. Such as: house fire, road accident, wrong medicine intake, drinking pesticides, someone's difficulty breathing, chest pain, sudden collapse, choking on food, witnessing crime, etc. Sometimes it is necessary to know information about something. For instance, we need information on weather reports, agriculture, health, etc. One should never be embarrassed or afraid to call for help when someone is in danger. This might cause opposite results. Although we do not give away our name, address or other personal information to strangers, it is safe and mandatory to provide such information to the emergency service representatives. The emergency service numbers are our national asset. We should not dial these numbers for fun. Not only that, there is also an option of punishment for calling unnecessarily. All emergency numbers and their service types should be written on a poster so that everyone can see it from different places of the school. Moreover, the practice of memorising contact numbers in emergency services between friends while playing can come in handy during emergency.

This time we will learn in groups how to ask for help nicely on phone. If I don't like any of these characters, I will make a character of my choice without taking much time. The character has to be realistic

We will write a conversation with one of the following characters for each group.

- Police officer at the National Emergency Service Call Centre
- An accident victim passenger
- Agricultural Emergency Service Call Centre officer
- A farmer
- An official of the Women and Children Abuse Prevention Call Centre
- A victim student of child marriage

- An officer of the Health Portal Call Centre
- A patient
- An official of the advance meteorological call centre
- A fisherman
- An officer of Prabas Bandhu Call Centre
- An expatriate worker



When we dial an emergency service number, we are often asked to press 0, 1, 2, etc. to communicate with the certain operator for certain service.

Let's write how the conversation can be to make such a contact...

Me: Hello, is this 999?

Operator: Good morning. This is Proloy Saha speaking from 999. Can you please share your name, address and contact number?

Me: Yes. I am Diniyat Zerin from Manasree village in Mohanganj upazila of Netrokona district. My contact number is ...

Operator: _____

Me: _____

Operator: _____

Me: _____

Operator: _____

Me: _____

Operator: _____

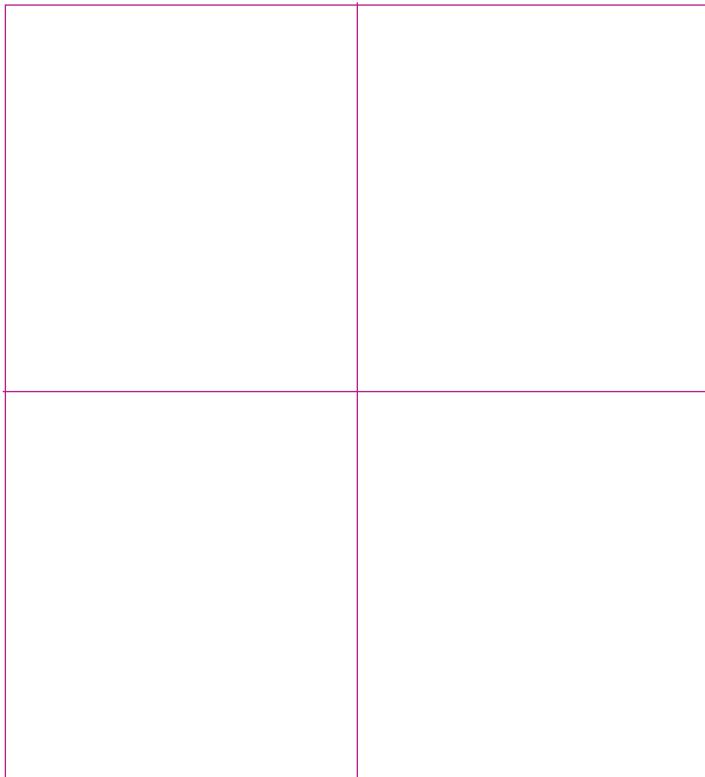
Now, when the teacher asks the questions below, we will compare with our written conversion and see if we got all the fields correct. Here ‘total’ means total satisfaction, ‘partial’ means partial satisfaction and zero means I was not satisfied at all. We will put a tick on the appropriate cell.

Serial	Field	Total	Partial	Zero
1.	What help was needed was understandable			
2.	Got necessary information			
3.	Got fast solution			
4.	Every step of getting service was completed			

● Session- 4: Preparing components for emergency service information centre

We need to start preparations to set up an emergency service information centre for our school. For this, first we have to make materials. We have to make some fun posters for the Emergency Services Information Centre. Our teacher will decide any two emergency services for us. We will make a few posters on how to get these two emergency services. We will use our experience from previous sessions to create the posters. In the previous sessions we have identified emergency services, got emergency service numbers and learned how to contact for emergency services. We will make posters for our information centre to present these matters. Our teacher will make eight (08) groups. We will make a poster for each group with the help of the teacher. We will

make a total of eight posters, four for each of the two emergency services. At the end of our book/experience chapter there are blank pages for writing posters or leaflets, which we will use to create a poster of four pages. Which team will make the poster with which information on emergency service will be decided by our teacher. If we give written permission to someone then he/she can use a copy of this poster in his/her own organisation. We will mention the intellectual property in the lower corners of these posters.



Sample poster

The information that the poster should contain...

- Name of emergency service
- Number of emergency service
- How to get emergency services (step by step)
- What is important to remember to getting emergency services
- Booklet/Information Book (making a booklet with the information filled in the book is important. It will be in the Emergency Services Information Centre)

Each of the group will write or draw on the pages of our own books and make a poster by combining them. We will make a group plan about who will do what. Each group



We get some emergency services by talking with representatives directly. In some cases, it is available through

will make a poster on an individual idea. If we have the opportunity, we can make the poster by printing. We can do the work by printing at school or elsewhere. But we must remember that the poster should be informative and interesting. We will write the information in black ink and in large so that it can be clearly understood. Since each group will make one poster, the best four pages of drawing/writing should be selected with everyone's consent. In this case we will take the opinion of the teacher. We all will try to draw or write our best. We should not be sad if our work is not selected. We must remember that group's good job means I have done a good job.

To make our work memorable, the Emergency Services Information Centre should be inaugurated by the headteacher and the chairman of the management committee. For that, at the end of this session, some of us will go to the headteacher with our teacher to update him/her about the matter. We will request the headteacher to inform the chairman about the date and time of the next session.

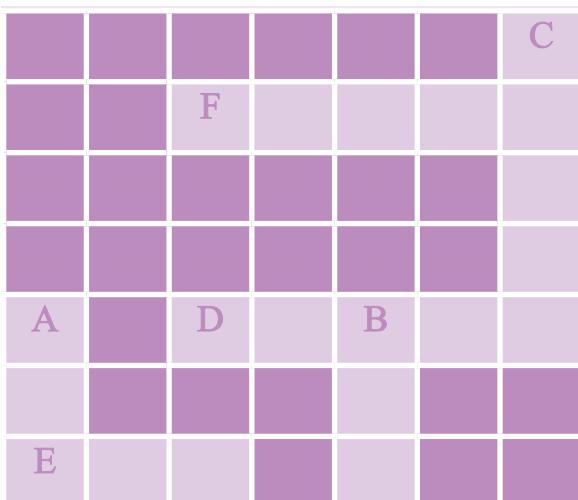
● Session-5: Establishment of Emergency Services Information Centre

We will select a specific place in the school for the Emergency Services Information Centre with the help of our teacher and subject to the approval of the headteacher. The place will be visible to everyone. When the materials of every group member are ready, we will submit those to the 'supporting' friend. The supporting friends of all groups will put up the posters in the information centre for 15 to 20 minutes with the permission of the teacher during break or after school. Since we have total eight (08) posters, we will put four in the Emergency Services Information Centre and four in a specific place in the classroom. We need to be careful that the posters are pasted nicely.

We will invite the headteacher and the chairman of the School Management Committee to inaugurate the Emergency Services Information Centre once it is completed within the stipulated time. We all have to be very disciplined during the inauguration. We need to make sounds in a way that does not hamper teaching-learning of other classes.



 **Homework:** Let's find the emergency service number by solving the number puzzle



The next image has 6 emergency numbers. Let's find the numbers and write the service names beside them...

A.....

B.

C.....

D.....

E.....

F

Clues:

Top to bottom:

- a) Subtract 11 from 120
- b) Multiply 35 with 3
- c) Add 25 with 16238

Left to right:

- d) Subtract 77 from 16200
- e) Subtract 111 from 1110
- f) Subtract 44 from 16300

 **Outside class activity:**

In this session we have learned how to get emergency services using digital methods. Now we will make contact using digital media to get emergency services in real life. We have learned that emergency numbers cannot be called unnecessarily. So we will only use emergency services to get necessary information. If nobody in the class needs any urgent information, we will collect important information from the ‘Weather Forecast’ call centre to complete the table below. The teacher will evaluate it in the next class.

Service Name	Emergency Service Number	Information for which Called	Who was Responder	Received Information

Congratulations to you on completing all the steps.

Learning Experience- 8

Open Discussion on Inner Thoughts

We are learning something new in each experience and doing some fun activities ourselves. Now we will organise an open discussion in our class. What will be the topic of discussion, who will participate in it, who will be the guests - we will plan and organise all these.

Before planning and organising the discussion, we need to become skilled in some matters. One of the skills is the ability to communicate. Let's read a story first.

A funny incident happened on the way to school today. A song was being played through a microphone in a rickshaw. The subject of the song is why extra pesticides should not be used while growing vegetables. I found it amusing that such information was spreading through a song. I reached school and shared it with my friend Mahin. Mahin found it amusing too. Do you know what is the most interesting thing? In our first session, our favourite teacher, Soikot sir, was telling a story about taking care of trees. I drew his attention by raising hand and asked him why extra pesticides harms environment. He answered my question by drawing a picture on the board.

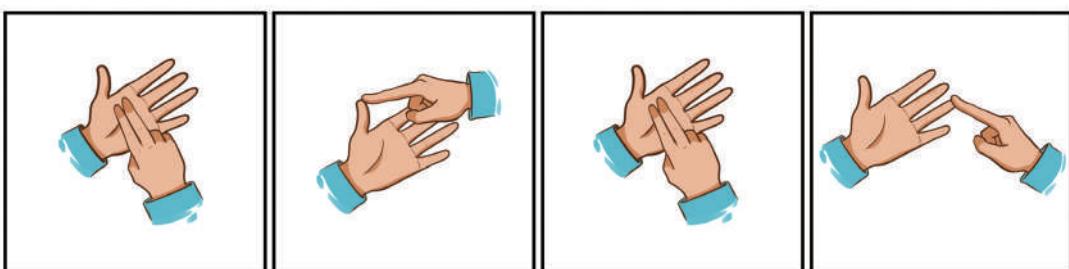
Now say why is this story told? From this story we will understand what is ‘communication’! The song in the microphone, giving my friend information, raising hand to draw teacher’s attention and drawing picture to explain some information - all these are ‘communication’.

Communication is a process by which we share our thoughts, feelings, ideas, experiences, etc. with each other. Communication can be different depending on the source, type, purpose and medium.

Types of communication may vary depending on the process:

1. Verbal Communication: Expressing thoughts or feelings to one another using a language.
2. Written Communication: Expressing thoughts in writing using letters or symbols. Braille is the means of written communication for those who have difficulty seeing.
3. Nonverbal Communication: Expressing thoughts through facial expressions, body gestures, signs or signals. Those who have difficulty speaking and hearing communicate in sign language.

Sign Language



N

A

N

O

Images of different types of communication have been given below. Let's try if we can say which one is which type of communication.

 **Table: 8.1**

Let's match with the pictures

	Written Communication
	Nonverbal Communication
	Verbal Communication

We have realised much by matching the images that communication can be of different types-

Speech Bubbles

Now we will create dialogues by imagining some situations. Five situations are given here. We will divide into five groups and write the dialogues in our notebooks. That is, we will write down how we would usually talk in that situation. Each group will write dialogue for one situation.

 **Table: 8.2**

	<p>You are requesting guardians to take you to the book fair.</p>
	<p>Explaining to grandparents why walking regularly every day is good for health</p>
	<p>Telling uncle/aunt next door that you, the children, want to make a small garden by the house. If s/he can help you</p>
	<p>You are planning to have a picnic with your cousins</p>
	<p>You are requesting the shopkeeper next to your house to keep an item of your choice in the store</p>

Can we realise now that our communication differs depending on age and relationship? That is, I do not talk to a stranger the way I talk to my father.


Homework for tomorrow:

Your homework for the next day is you will carefully observe your family members and the people around the school. You will notice what rules they are following when communicating with others, or not following that you think they should. Write your observations in the table below.

What behaviour I have seen	How have I felt	Why did it feel good/bad
A man on the road was addressing a rickshaw-puller with ‘tui’(insulting)	Didn’t like it	We should address others as per age and relation and should not address a stranger by ‘tui’
A friend while going from school was telling another friend, ‘Call me [tui dakis] when going to the field.	Liked it	If two good friends address each other as ‘tui’, it is not a problem.

● Session 2: Types of Communication

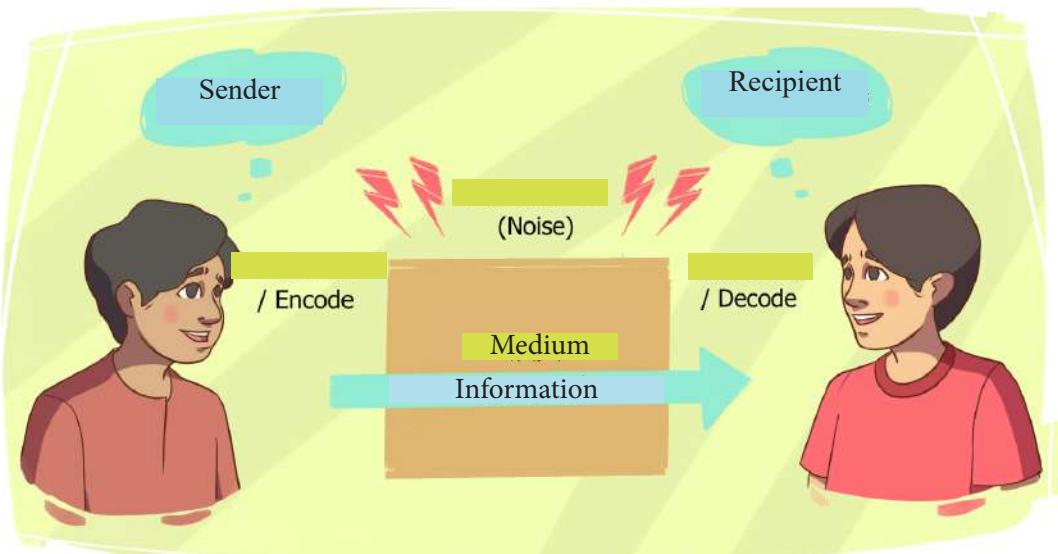
We have to communicate with many people to organise the open discussion. So, we are trying to understand the topic ‘communication’ properly. We communicate with each other all the time for our own needs. We discussed in the last session how many types of communication are there. Do we remember? Let us try to remember a little more. Let’s add one or two more examples besides the different types of communication we had in the last session.

 **Table: 8.3**

Process of Communication:

Types of Communication	Example	I will Write another Example here
1.Verbal communication	Talking, singing	
2. Written communication	Writing letters	
3. Nonverbal communication	Sign language, traffic lights, communication through touch	

 **Cell: 1**



Information or message sender

Information or message receiver

In Cell 1 we can see how a message or information goes from one person to another in the field of communication. This process can be interrupted for different reasons. Suppose I am talking to someone in Bangla but the person I am talking to does not know Bangla. The fact of not knowing is also an obstacle. It may be that I did not use the right words or music was playing loudly around while talking, the person who will talk is busy, etc. So, we need to consider many things during communication and we will try to understand these gradually.

Now it is time to match our homework.

Our homework was, we would observe the people around us. How they behaved when communicating with others and which of it we liked and which we did not. How the behaviour could be that I did not like.

Now we will write at least one point from our homework book's column 'Why did it feel good/bad' on the board with the help of the teacher. We will write all the points in our notebooks too.



We ourselves have observed the people around us and found out what rules we follow in our communication with others in our regular/daily life. We may have noticed one thing that we use a lot of technology for communication in our daily life. For example, talking and texting on mobile phones, communicating via email, audio or video calls,

sending pictures, videos or documents through social media like Messenger, imo, WhatsApp, Viber, etc. And these modes of communication are digital communication. In other words, digital communication is the type of communication that we use to send any information to another one using digital technology.

Social Behaviour in Digital Communication: Do you think the social norms that we follow in communication in general/normal life are also applicable for digital communication?



Homework : We all have written our last day's homework together on the board and in our own notebooks, haven't we? The homework of the next day will be to identify which of the rules of communication that we should follow in our ordinary life also apply to digital communication. If necessary, we will take help of our guardians.

We can draw a table like this in our notebook -

Table: 8.4

Rules for general communication	Does it apply as rules for digital communication?
Exchange of greetings if meeting someone	Applicable
If someone arrives while I am eating, request them to join me	Not applicable

● Session 3: Plan of Open Discussion

We are now very much ready to plan our open discussion. First, we will choose what will be the topic of our discussion. Then we will decide who can be involved here. Do we remember the target group? Whom we will invite to join our discussion depends on the topics of the open discussion.

Let's write the details of our plan in the table below-

 **Cell: 8.1**

Topic of discussion	
Those who can be present in the discussion	
Date of discussion	
Time of discussion	
Duration of discussion	

Our plan outline has been complete. It must have come to our minds during planning that some people on our guest list have to be invited via digital media. So, it is good to know the etiquette of digital communication, isn't it?

We have already identified a number of digital communication rules to match those with the general communication rules. Still, maybe we can figure out something more.

Our teachers will also help us.

Common practices of digital communication

Now we will say one by one what can be the rules for digital communication. Another one will write those on the board. Then we will write the practices that everyone agrees with in the table below.



| Cell: 8.2

● Session 4: Inviting Guests

In today's session, it is time to implement the plan of open discussion. We have already selected the topic of our discussion. Now we need to frame some questions as per the topic. We will ask these questions to our guests.

The guests can be asked these questions:

 **Table: 8.5**

Questions	Whom to ask

Once we made the questions, we need to plan communication with the guests. That means, we will decide who among our friends will contact whom to invite them to join the open discussion. In this case, we will send a letter to someone in person, send someone an email or call someone. Let's just practice what we will write or say when we communicate through these three media.

Group Work:

We will divide all the friends in the classroom equally and make 5-6 groups. Each group will write what to say in a letter, an email, an SMS and a mobile phone call on our notebooks. We will share the group work with everyone in the classroom.

We will make a format for each medium through discussions and with the help of our teacher. For example, what the letter or SMS might be and how we should talk over phone.

A copy of a letter is given below. We can make the structure of a letter by adding necessary information and keeping the copy in mind. This letter is our email, SMS and phone conversation (we will write with a pencil first. Then we will rewrite by a pen and can cut this page to use it to invite our guests).

Letters, emails, SMS, phone calls or whatever we use, we may have noticed already that every social conversation has three parts-

1. Address,
2. Main statement,
3. Farewell

We will keep these in mind while writing the letter/email/SMS for our communication.

Date:

Dear/Mr/Mrs

Greetings from our school

You will be happy to know that we are hosting an open discussion on on
... from to

The main topic of our discussion

In this open discussion we will

discuss these topics. We hope this will be a lively and thoughtful discussion and we can learn many new things.

We are inviting you to join this discussion as

Regards,

On behalf of the Class VI students of _____ School

Can we determine the language if we communicate via email, SMS or phone call in light of this letter? The conversations will be different based on the age and relation. So, let's fill in the gaps keeping the guests to be contacted in our minds.

New Message

To: Email address of the recipient

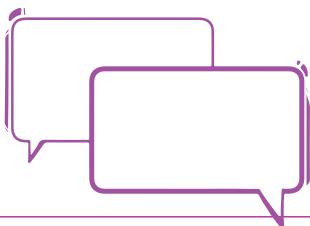
Subject: Aim of the mail in brief

The main statement of my email (address, main statement, farewell)

Send



If we want to attach photo, video, documents in email





Homework: We will invite the guest whom we have decided to contact by contacting him. Even if we send a letter or an email, we have to make a call or send an SMS. That is, to confirm if they have received the email or letter and if they can be present on that day. It is also to remind them again of the time of the event the day before. It means our homework is to communicate with the guests to confirm their presence in the event.

● Session 5: Our Open Discussion Today

Today is our main event. Our concern so far has been if all the guests will arrive in time. As the event has already been organised today, we can keep some things in mind during the event.

- To ensure that guests can continue their discussion happily.
- We may like to ask all the questions in our mind. But we have to make sure that the questions should not embarrass the guests or other participants.
- If we talk or do anything else during the event, our guests may think that the event is not that important. We will refrain from doing such behaviour.



After the open discussion we may write down our experiences on our notebooks as an assignment and submit it to our teacher

.  **Table 8.6**

- Date of open discussion
- List of speakers
- Number of participants
- Topic most people agreed upon
- Topic most people did not agree upon
- What can be the topic of next open discussion
- What changes will improve the next discussion
- What mistakes were there in my communication for this event
- Things to keep in mind for communication during the next event

Learning Experience- 9

*Local Diversity Tree*

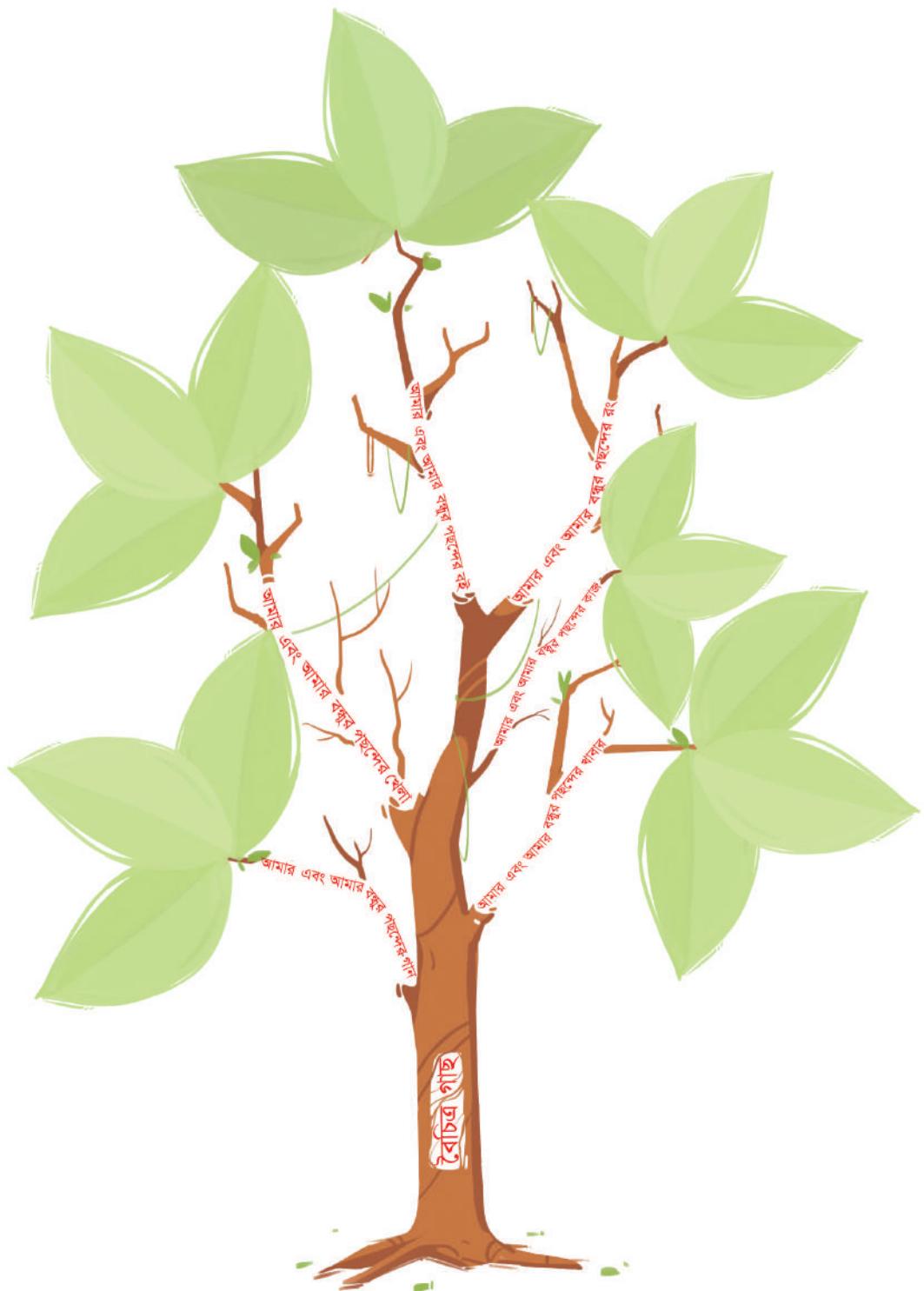
● Session 1: Diversity and Beauty



Our surroundings are full of diversity. We ourselves are different from one another. The fact that our bodies are different from each other can be determined by fingerprint, voice, etc. Well, there are changes in our behaviour, movement, habits, right? How can we understand that?

Diversity Tree:

Let's write our favourite things in the Diversity Tree along with our friends. We will write my favourite things on one leaf and two friends' favourite things on two leaves.



We have realised that the branches of a tree start from one place and spread out in different directions. Similarly, me and my friends are living together beautifully like branches with our uniqueness in this diverse world, aren't we?

Let's do another exercise.

We will write down different sides of our and our family members' behaviour in the following table.

Cell: 9.1

Favourite food of most of my family members	
Dinner time of my family members	
Most favourite leisure time activities of my family members	

Did we notice that we have to put a lot of thought into writing down our family members' favourite things? It is because everyone's choices are different. Now read out loud what you have written in Cell 9.1.



Did everyone hear the answers written by everyone? Great! Have we understood through this that our habits and behaviour are different in different families? Yes, we all are different, different in identity and different in behaviour, and this difference is called diversity. We have diversity in different ways, such as physical structure, educational qualifications, nationality, religion, etc. It would be boring if we were all the same without diversity around us, wouldn't it?

Through this Experience we will achieve a 'diversity paper'. As adults have a National Identity card, we can get a local diversity card in the 6th grade. Then from seventh to tenth grade we will get an 'Inland Diversity Card', then 'Asian Diversity Card', then 'Global Diversity Card' and finally 'Digital Global Diversity Card'!

What an exciting matter it will be!

You must be wondering how we will get our 'Local Diversity Card'!?

Very easy, we will try to know the diversity of our Bangladesh. We will also evaluate the friends who found out how much. In this way our headteacher will approve this 'Local Diversity Card' for us in the end.

Homework:

As homework we will select a district other than ours. We will write down what our family members, including our parents or grandparents, know about the people from that district and write it down in one sentence.

Cell: 9.2

Selected district	What my family members think about the people from that district

● Session 2: Which side are you on?

Well, if someone asks you whose side you are in the cricket match between Bangladesh and England! Most of us will say “I am in favour of ‘Bangladesh.’” Can you say why is that? Because we love our country. We love our country even if our cricketers don’t play well. This is not bad at all. However, in some cases we often make mistake of judging an issue or event by liking or disliking more.

One of my friends’ name is Palash. I like him very much. Another friend of mine is Mita, I don’t like her that much. One day, another friend Shimul came to me and said, ‘You know what? Palash did something wrong. He read Mita’s personal diary without her permission. He took a story from the diary and published it in the school magazine by his name!’ ‘Since I liked Palash very much, I did not believe what Shimul said. I didn’t even check whether the incident was true or not. The fact that I didn’t believe Shimul because I like Palash is called ‘prejudice’.

Prejudice is the process of a person’s thinking or taking decisions. In this process, a person agrees or disagrees with a particular matter, event or person only because s/he likes/believes or dislikes/distrusts that event or person. Because of this prejudice, a person seeks information that they like. If they receive information that is beyond their preference or belief, they don’t want to accept it and refrain from verifying its authenticity.

Let’s observe a few incidents and see if there is any prejudice involved here.

Cell: 9.1



Riju lives in a beautiful village. There are a beautiful small river and huge field next to his house. He goes to the field to play whenever he has time. He thinks he is the happiest person and those living in the city are unhappy people. There is no joy in the life of those people.

Is it biased thinking? Yes/No



Sourav loves his grandmother a lot. As a child, he heard stories from her that on full moon nights, fairies used to bathe in a pond beside their house. He heard this story about 7 years ago. Since then, he never went to play by the pond even at day.

Is it biased thinking? Yes/No



Two different TV channels are giving opposing information on “effect of vaccination on Coronavirus”. Tuli has an essay competition tomorrow about Coronavirus so she is watching both the TV news.

Is it biased thinking? Yes/No



Suravi has some hearing challenge. All the other students in her class have assumed that since she has difficulty hearing, she is not very good at studying.

Is it biased thinking? Yes/No

Well, did any prejudiced attitude work in you that you have got rid of? Let’s write it in the My Experience table below. A sample is done for you.



Cell: 9.2

1.	We had a classmate from a different religion. I used to think since he was from another religion, he would be very different from us. Later we talked a lot during group work. We did a lot of classwork together. This way, I came to understand that we have many similarities. Now I understand that my previous attitude was prejudiced.
2.	
3.	
4.	



Homework for next session:

The homework of the last session was to choose a district and find out what the family members think about that district.

Today's homework is we will look for information about that district. We will learn about how the people of that district really are and write it down in the table below.

During search for information, we will use both human and non-human sources. Human sources can be any of my relatives living in that district. Non-human sources can be books, newspaper, internet, etc. We can also get some information by analysing the character of a famous person of that district.

By doing this we will go one step further in getting our 'diversity tree'.

Selected district	What my family members think about the people of that district	Information I got about the district

● Session 3: Am I neutral?

In order to get diversity tree, we need to be able to judge or verify our surroundings impartially.

Do we know what does neutrality mean? Not taking sides?

Absolutely not, neutrality means being on the right side. In the last two sessions we have tried to understand what is ‘prejudice’! Neutrality is when you do not have a biased attitude while verifying an event, matter or person.

It becomes very easy to verify an event or situation impartially if we know two things. Those are –

- 1.Fact
- 2.Opinion



Arnab and Anwesha are two friends of mine. They are twins. They visited Cox's Bazar during last summer vacation. Our Badal sir told us before vacation that we should write what we would do on holidays in our diary. I wrote about going to my uncle's house in Khulna. Arnab and Anwesha wrote about their trip to Cox's Bazar. Most of our classmates have never been to Cox's Bazar. So, sir asked them to read us their diary.

Arnab writes: The sea beach in Cox's Bazar is very long, as far as the eyes goes. Every day the beach is very crowded. We had a lot of fun.



Anwesha writes: I went to Cox's Bazar, the longest natural white sandy beach in the world, with my family on June 30. It is 122 km long. We met a tourist police uncle on the beach. His name is Shiplu Bari. He informed us that on average about 50,000 people travel to Cox's Bazar district every day.

In this story, both Arnab and Anwesha have shared their experiences. But Arnab has given his 'opinion' without any specific information. Anwesha shared her experience through information, so her description is 'fact'.

For anyone who has never seen Cox's Bazar sea beach, which description will be more useful? (Put tick mark)

- The sea beach of Cox's Bazar is very long. As long as the eyes can see.
- The sea beach in Cox's Bazar is the longest natural white sandy beach in the world. It is 122 km long.

For someone who has never seen Cox's Bazar sea beach, which description will be more useful to understand the crowd on the beach?

- The beach becomes very crowded every day.
- On average, about 50,000 people travel to Cox's Bazar district every day - said tourist police Shimul Bari.

We have understood then that fact is, 'a statement presented with sufficient factual evidence to convey the true nature of an event'. Opinion is 'the expression of a person's own feelings'.

'Opinions' are not always wrong or false! But 'fact' is more believable and reliable.

Some more 'opinions' are given in the following table. Let's write how the same sentence will look as a 'fact'.

 **Table: 9.2**

Opinions	Facts
1. Kuhu has high fever	Kuhu has 103 degrees of fever
2. Zabir can run very fast	
3. I submitted my homework yesterday	
4. Mehran's grandparents live far away	
5. I waited for a long time yesterday	

Have we been able to write all the incidents with regards to the opinions as facts?

Can we now find out from our last day's homework which parts were 'opinions' and which were 'facts'?

Table: 9.3

Selected district	What my family members think about the people of that district	Information I got about the district
Put Tick Mark	Opinion/fact	Opinion/fact

Group Work: Let's form seven groups by equally dividing all the students of the classroom. Now each of the groups will select a division with the help of the teacher and create a profile of that division.

Name of my group	The division my group has selected

➤ **Homework for tomorrow:**

We will collect information on the division we have selected as homework. Let's now distribute the work among our group members and decide who will discuss which part.

The materials needed for classwork tomorrow:

- 1.A small notebook with 20 pages (if we don't have notebook available at hand, we can stitch 20 pages).
- 2.A copy of my photograph (if photograph is not available, I can draw a self-portrait).
- 3.All information about myself (name, parents' names, permanent address, my birth registration number).

● Session 4: My Identification Diversity Diary

Photograph of
Student

Name:

Mother's Name:

Father's Name:

Guardian's Name

Age:

Permanent Address:

Blood Group:

Signature:

Name of the Division

What we have learned about Division
from presentation of other groups

In today's session, we will prepare an identification diary for ourselves. One page of the diary will contain detailed information about myself. On the 8 other pages, we will write the names of 8 divisions. We will keep two pages blank after every page. I will put my own division in first and the division my group is working on at last. We will write down under the name of the division important information about it that we learned from each group presentation. On the next page I will write my own observations on the basis of the information.

Name of Division



Name of Division



What I have learned about the division from other groups' presentation



My own observations after seeing the presentation



The inside pages of the diary will almost look like this.



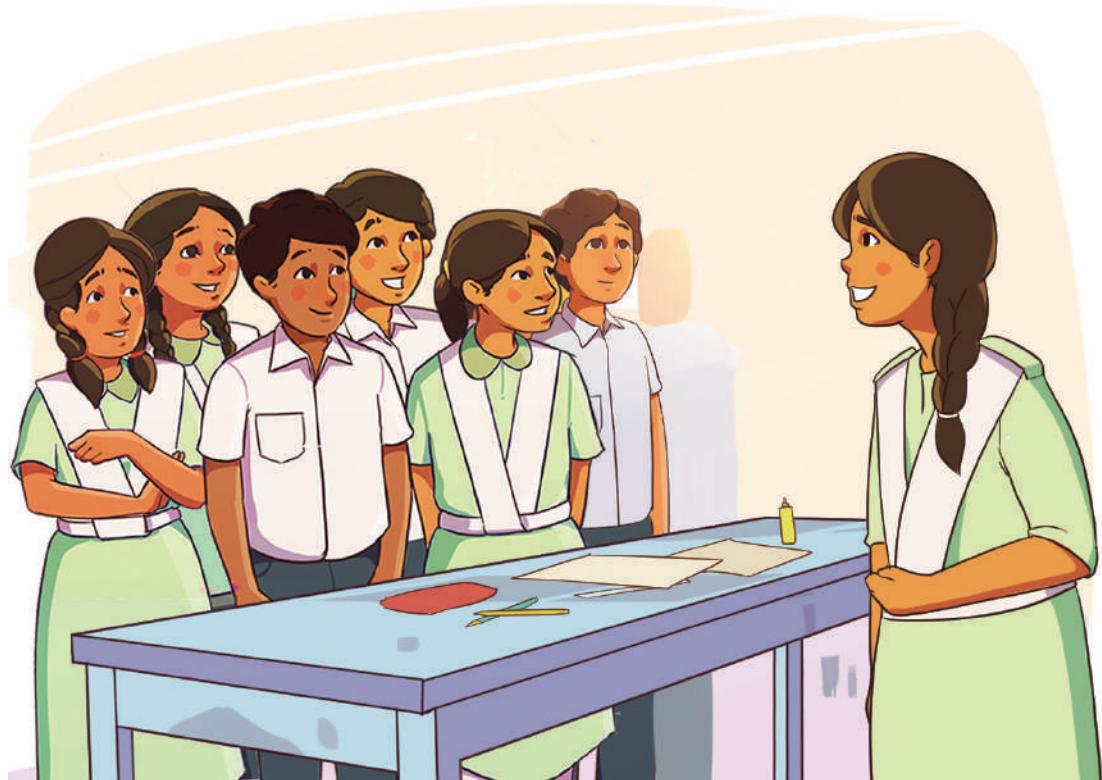
➤ Group Work:

After we completed making our diaries, we will coordinate the information that we have gathered about our selected division. If we cannot find any more information, we will use newspapers, television, internet and other sources with the help of the teacher for suitable information. We will make a group presentation in the next session.

For the group presentation, all 7 groups will create 7 presentation stalls or booths inside the classroom. We can check the next page to see how the stalls will look like. We will take preparations before the next session so that we can get our classroom ready soon after our arrival.

In order to decorate our stalls, we can make our presentation through posters, maps and photographs about our selected division. So, we will prepare informative posters and other materials at home. For that, we will discuss and decide who will do which part now.

● Session 5: Visit groups and write diary



Today we will make only presentations. Each member of the group will stay in front of the stall for 10/15 minutes (subject to number of group members). The rest of the members will visit other stalls/booths to learn about other divisions and write it in the diary. The member who will present will stand in the stall. Members of other groups will ask him/her questions about the division.

After today's presentation, we will return home and write our own observations in the blank pages beside different divisions. We will submit our diaries and the Digital Technology book to our teacher the next day. The teacher will evaluate our work and propose a diversity tree for us. The headteacher will sign on those of our diversity tree who deserve to have one. Our teacher will return the book signed by the headteacher. Then we will cut the diversity tree and keep it with ourselves.

Local Diversity Tree

Student's Photo	Local Diversity Tree	
	Name: _____	
	_____ has successfully presented his/her observations about _____ division on the basis of facts. I wish him/her a lively and diverse future.	
	Signature of the teacher	Signature of the headteacher









ডিজিটাল তথ্য সেবা: টেলিমেডিসিন ও কৃষি কল সেন্টার

মাননীয় প্রধানমন্ত্রী শেখ হাসিনা ২০২১ সালের মধ্যে বাংলাদেশকে ‘ডিজিটাল বাংলাদেশ’ এ রূপান্তরিত করার ঘোষণা দিয়েছিলেন ২০০৮ সালে। ২০২১ সালের আগেই বাংলাদেশকে ডিজিটাল বাংলাদেশে রূপান্তর করা হচ্ছে। বর্তমানে ডিজিটাল পদ্ধতিতে গ্রাম্য সমস্যার সমাধানের দোরগোড়ায় পৌঁছে দিচ্ছে সরকার।

ডিজিটাল স্বাস্থ্যসেবা- টেলিমেডিসিনের মাধ্যমে বিনামূল্যে ও সহজে স্বাস্থ্যবিষয়ক পরামর্শ প্রদান করা হচ্ছে। দেশের বিভিন্ন পর্যায়ের হাসপাতালে বর্তমানে উন্নতমানের টেলিমেডিসিন সেবা চালু আছে। টেলিমেডিসিন পদ্ধতিতে রোগীগণ বিশেষায়িত হাসপাতালের চিকিৎসকদের পরামর্শ নিতে পারছেন। মোবাইলের মাধ্যমেও রোগীগণ বিশেষায়িত চিকিৎসকের সেবা গ্রহণ করতে পারছেন। করোনা মহামারির সময়ে এই সেবা গুরুত্বপূর্ণ ভূমিকা রাখছে।

ডিজিটাল কৃষি সেবা- কৃষি সম্পর্কিত সর্বাধুনিক প্রযুক্তি, সেবা ও তথ্য সবার মাঝে ছড়িয়ে দেওয়ার লক্ষ্যে কৃষি কল সেন্টার চালু করা হচ্ছে। কৃষি কল সেন্টারটি খামারবাড়ি, ঢাকাতে কৃষি তথ্য সার্ভিসের সদর দপ্তরে স্থাপিত। কৃষি কল সেন্টারের ১৬১২৩ নম্বরে ফোন করে কৃষি বিষয়ক যে কোনো সমস্যার তাৎক্ষণিক বিশেষজ্ঞ পরামর্শ নিতে পারেন দেশের জনগণ।

Academic year 2023

Class Six

Digital Technology



সমৃদ্ধ বাংলাদেশ গড়ে তোলার জন্য যোগ্যতা অর্জন কর

– মাননীয় প্রধানমন্ত্রী শেখ হাসিনা

তথ্য, সেবা ও সামাজিক সমস্যা প্রতিকারের জন্য ‘৩৩৩’ কলসেন্টারে ফোন করুন

নারী ও শিশু নির্যাতনের ঘটনা ঘটলে প্রতিকার ও প্রতিরোধের জন্য ন্যাশনাল হেল্পলাইন সেন্টারে
১০৯ নম্বর-এ (টোল ফ্রি, ২৪ ঘণ্টা সার্ভিস) ফোন করুন



Ministry of Education

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