Lesson-10: Safety and First Aid

9 Periods (40 minutes each)

Learn Better (Main Course Book), Stay Ahead (Workbook), Book of Holistic Teaching, Book of Project Ideas, CRM signs

Animation, Animated Activities, Concept Map, Dictionary, eBook, Experiment, I Explain, Infographic, Quiz, Slideshow, Test Generator

Confirming better: Nature's beauty makes me happy.

Curricular Goals and Objectives (NCF)

To enable the students:

- to understand the importance of safety and first aid.
- to apply basic first-aid measures for injuries.
- to create simple first-aid kits and remedies.
- to think critically in emergencies.
- to communicate and collaborate on safety practices.

Methodology

Period 1

SHOULD DO — 05 MIN.

Teacher: Good morning, students. How are you all today?

Teacher: Great. Before we dive into our lesson, let us take a moment to relax and focus our minds with a short meditation. Ready?

Teacher: Sit comfortably in your chair, with your back straight and feet flat on the ground. Close your eyes gently and take a deep breath through your nose. Hold it for a moment, then slowly breathe out through your mouth.

Let us do these three more times. Breathe in, and breathe out. As you breathe, imagine your mind becoming clear and ready to learn.

Open your eyes and smile at your friends. Let us start our lesson with positive energy.

Affirming better

Teacher: Before we start the class, let us all affirm together something positive, 'I am curious and ready to learn.' Repeat after me: 'I am curious and ready to learn.'

MUST DO — 10 MIN.

Teacher: Alright. Today, we are going to begin a new chapter 'Safety and First Aid.' We use a KWL chart to help us organize our thoughts and learning.

I have made a KWL format on the blackboard. Please take out your notebooks and draw the same format.

K	W	L

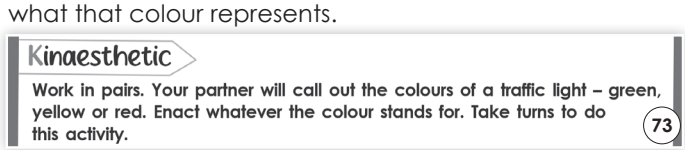
Teacher: Let us start by filling out the 'K' and 'W' columns. Take a few minutes to think and write. If you have any questions, feel free to ask.

Teacher: Before we start the chapter, we will do a quick Re-KAP, which involves revisiting our previous knowledge through creative activities using Kinaesthetic, Auditory and Pictorial methods to make our learning interactive and engaging.

Kinaesthetic

MUST DO — 10 MIN.

Teacher: Let us begin with an interactive activity. You will work in pairs. One of you will call out a traffic light colour—green, yellow or red—while the other enacts what that colour represents.



Teacher: Take turns and observe your partner's actions carefully. Think before you act, and make sure your actions match the meaning of the colour.

(Give the students time to complete the activity.)

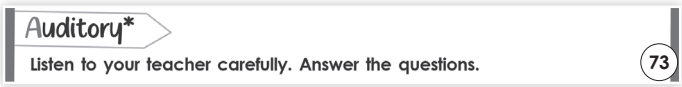
Teacher: Well done, everyone. That was a great way to recall what traffic signals mean. Now, let us move on to the next part.

Auditory

MUST DO

10 MIN.

Teacher: Let us start the auditory activity. Listen carefully to me. I will ask you some questions and I want you to pay attention to every detail before answering. Are you ready?



Teacher: If you see someone fall and hurt their arm or leg, make sure they don't move it too much. Call an adult right away. Remember, staying calm and knowing what to do can make a big difference in an emergency.

1. What to do when someone hurts their leg or arm?
2. What kind of behaviour can make a big difference in an emergency?

(Waits for student responses.)

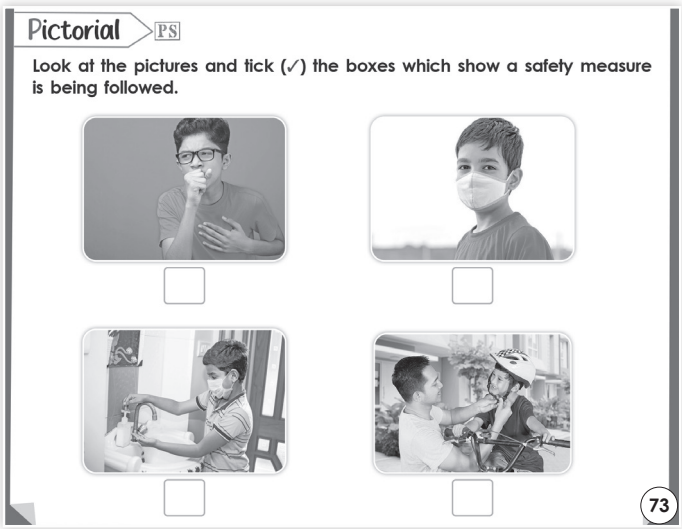
Teacher: Fantastic answers. You were all listening carefully. Now, let us move to the next activity.

Pictorial

MUST DO

10 MIN.

Teacher: Look at the pictures in front of you. Observe them carefully and think about what they represent.



Teacher: Some of these pictures show safety measures being followed. Tick the ones that show a correct safety practice.

(Give the students time to tick the safety practices.)

Teacher: Great job. Now, let us discuss—what safety measures do these pictures highlight?

(Discuss the safety measures.)

Teacher: Excellent thinking, everyone. You have done a wonderful work identifying safety practices.

Differentiated Activities

110 km/hr

Name two places where traffic lights are commonly found.

80 km/hr

Name one thing a pedestrian signal shows.

40 km/hr

What colour of the traffic light tells you to stop?

Home Task

Observe traffic signals in your neighbourhood. Write three rules that help people stay safe while using the road.

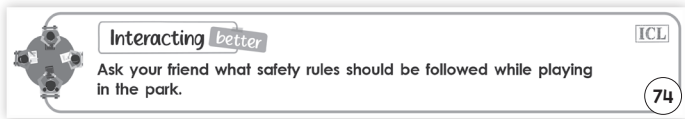
Period 2

Interacting better

MUST DO

10 MIN.

Teacher: Good morning, students. How are you all today?



Teacher: Great. Let us have a discussion about safety rules in the park. When we play, we must follow certain rules to stay safe.

Teacher: Turn to your friends and ask them what safety rules should be followed while playing in the park. Listen carefully to their answer and share your thoughts with them.

(Encourage students to discuss and guide the discussion accordingly.)

(Use CRM signs to settle the class.)

Teacher: Well done, everyone. You have shared some important safety rules. It is always good to be aware of our surroundings and follow rules to keep ourselves and others safe.

Teacher: Open your books and carefully read the story given on page 74 of your Main Course Book about Ryan on his way back home when he sees a speeding bike from the bus window. Observe the pictures and conversations closely and try to understand what is happening. Take your time and notice all the details in the pictures.

MUST DO
30 MIN.

(Give time to the students to read the story)

Teacher: Now that you have read the story, let us discuss it together. What did Ryan and his friends notice from the bus window?

Teacher: Yes, they saw a biker riding at high speed. That could be very risky. How did the students react when they saw this?

Teacher: Absolutely. They were concerned that it could be dangerous. And what happened next?

Teacher: Correct. The biker lost control and fell. That must have been a scary moment. What did the bus driver do to help?

Teacher: Yes. He remained calm, stopped the bus and called for help. That was a responsible action. How did the boy and the bus driver assist the injured biker?

Teacher: Exactly. The boy helped the biker get up, and the bus driver provided first aid. Helping others in such situations is very important. Finally, what did the biker realise at the end of the story?

Teacher: Yes. He understood the importance of following safety rules and promised to change his behaviour.

Teacher: Well done, everyone. You have understood the story very well.

You may show the **Dictionary** and **eBook** on the digital platform.

Differentiated Activities

110 km/hr

Why is over speeding dangerous for both the rider and others on the road?

80 km/hr

What is the first thing you should do if you see someone get hurt in an accident?

40 km/hr

Name one safety rule that bikers should follow.

Home Task

Observe the traffic rules followed by people around you. Write down three safety rules that every road user should follow and explain why they are important.

Period 3

SHOULD DO
05 MIN.

Teacher: Good morning, students. How are you all today?

Teacher: Great. Let us begin today's lesson with a quick game. I will ask some questions and you have to answer them. Ready?

Teacher: What do traffic signals help us with? (They control traffic)

Teacher: What should you do when the pedestrian signal is red? (Stop)

Teacher: What colour of the traffic light means 'Get ready'? (Yellow)

Teacher: Why do people wear helmets while riding bicycles? (For safety)

Teacher: What should you do before crossing the road? (Look both ways)

Teacher: Well done, everyone. You remembered the concepts well. Let us now move on to today's lesson.

(The teacher will read the last paragraph of page 74 and first seven paragraphs of page 75 aloud and provide explanations to ensure that the students understand the content.)

Safety is very important for everyone. Therefore, we should always follow safety rules.

Let us learn about some safety measures that we should take to keep ourselves and others safe. 74

For example, while on the road, we must read and follow road signs to be safe. However, sometimes accidents occur despite being careful. In such cases, we should know how to deal with such emergencies. 75

Teacher: Safety is very important for all of us. Why do you think we should always follow safety rules?

MUST DO
05 MIN.

Teacher: Yes, following safety rules helps protect us and those around us. Let us think about road safety. What should we do when walking on the road?

Teacher: That is correct. We should read and follow road signs to stay safe. But sometimes, even when we are careful, accidents can still happen. In such cases, what should we do?

Teacher: Absolutely. We must know how to deal with emergencies. Well done, everyone. Let us now learn about first aid.

You may show the **I Explain** on the digital platform.

Teacher: First aid is the immediate medical help given to an injured person. Why do you think it is important to give first aid quickly?

MUST DO
05 MIN.

FIRST AID

First aid is the immediate medical assistance given to an injured person. It is important to stay calm while giving first aid. Call an adult for help immediately. Watch the adult as they give first aid. 75

Teacher: Yes. First aid prevents the injury from getting worse. But while giving first aid, we must remain calm. Who should we call for help when someone is injured?

Teacher: That is right. We should call an adult immediately. We must also observe how the adult provides first aid so

that we can learn how to help in the future. Well done. Now, let us discuss how to treat cuts and scratches.

Teacher: Cuts and scratches may look small, but they can let germs enter our body. Why do you think treating them is important?

MUST DO
10 MIN.

For cuts and scratches
Cuts and scratches are the way for germs to enter the body. Therefore, their treatment is necessary.
To treat such injuries, one must clean the dirt around the wound with cotton soaked in an antiseptic solution. Then, place a thick pad of cotton and press it gently to stop the bleeding. In case of minor cuts, seal the wound with a bandage.
Cuts and scratches by dirty or rusty objects may cause a deadly disease called tetanus. You must consult a doctor for an anti-tetanus injection in such cases.
75

Teacher: Exactly. If we do not treat them, germs can cause infections. What is the first step in treating a wound?

Teacher: Well said. We must clean the wound with cotton soaked in an antiseptic solution. What should we do next to stop the bleeding?

Teacher: That is right. We should press a thick pad of cotton on the wound. What should we do for minor cuts?

Teacher: Excellent. We can seal them with a bandage. Sometimes, if the cut is caused by a rusty object, it can lead to a serious disease. Can anyone name this disease?

Teacher: Yes. It is called tetanus. In such cases, we must consult a doctor for an anti-tetanus injection. You are all doing great. Now, let us talk about how to handle nosebleeds.

For nose bleeds
Keep the patient upright, with their head held back. Press the bleeding side firmly and keep an ice pack or wet cloth on the nose and head of the patient. Ask the patient to breathe through the mouth. In case of heavy bleeding, consult a doctor immediately.
75

Teacher: A nosebleed may seem scary, but it can be treated easily. What is the first thing a person should do if their nose starts bleeding?

MUST DO
10 MIN.

Teacher: Very good. The person should sit upright and tilt their head back slightly. What should they do next?

Teacher: Correct. They should press the bleeding side of their nose firmly. What can be used to soothe the bleeding area?

Teacher: Well remembered. An ice pack or a wet cloth can be placed on the nose and head. How should the person breathe during a nosebleed?

Teacher: That is right. They should breathe through their mouth. If the bleeding is heavy and does not stop, what should be done?

Teacher: Excellent. They must see a doctor immediately.

For sprains
A sprain is an injury caused by twisting a joint (especially wrist or ankle). The sprained region appears swollen, sometimes discoloured, and painful. In such cases, apply an ice pack or ice cube until the swelling subsides. Consult a doctor.
75

Teacher: Sometimes, while running or playing, we may twist our wrists or ankle. This type of injury is called a sprain. Can anyone tell me how a sprain might look or feel?

MUST DO
05 MIN.

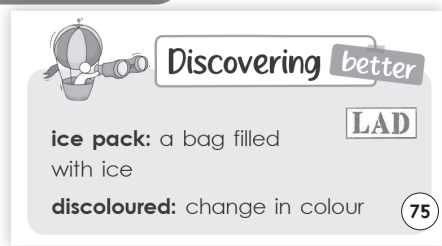
Teacher: Yes. A sprained area may become swollen, painful and sometimes even discoloured. What do you think we should do first if someone gets a sprain?

Teacher: Correct. We should apply an ice pack or ice cube to the affected area. Why do you think this helps?

Teacher: Well said. Ice helps reduce swelling and provides relief. After applying ice, what should we do if the pain does not go away?

Teacher: Absolutely. We should consult a doctor to ensure proper treatment. Well done, everyone. You have all understood these first-aid steps very well.

Discovering better



(Explain the terms mentioned in the 'Discovering better' on page 75.)

You may show the **Animation** and **Infographic** on the digital platform.

Differentiated Activities

110 km/hr

What should you do if a cut is caused by a rusty object?

80 km/hr

Name one thing that can be used to clean a wound.

40 km/hr

How should a person breathe during a nosebleed?

Home Task

Write three safety rules that you follow at home, in school or on the road. Then, explain why these rules are important.

Period 4

SHOULD DO
05 MIN.

Teacher: Good morning, students. How are you all today?

Teacher: Great. Let us begin today's lesson with a quick game. I will ask some questions and you have to answer them. Ready?

Teacher: Why is it important to follow safety rules? (To protect ourselves and others)

Teacher: What is first aid? (Immediate medical assistance for an injury)

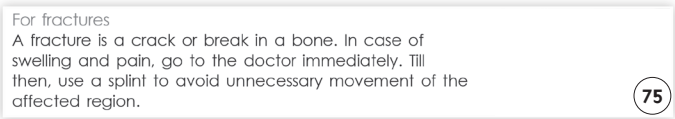
Teacher: How can you treat a minor cut? (Clean it, press with cotton and cover with a bandage)

Teacher: What should you do if someone has a nosebleed? (Keep them upright and press the bleeding side)

Teacher: When should a person with a heavy nosebleed see a doctor? (If the bleeding does not stop)

Teacher: Well done, everyone. You remembered the concepts well. Let us now move on to today's lesson.

(The teacher will read the last three paragraphs of page 75 and first four paragraphs of page 76 aloud and provide explanations to ensure that the students understand the content.)



For fractures

A fracture is a crack or break in a bone. In case of swelling and pain, go to the doctor immediately. Till then, use a splint to avoid unnecessary movement of the affected region.

75

Teacher: A fracture is a crack or break in a bone. Can anyone tell me what happens when someone suffers a fracture?

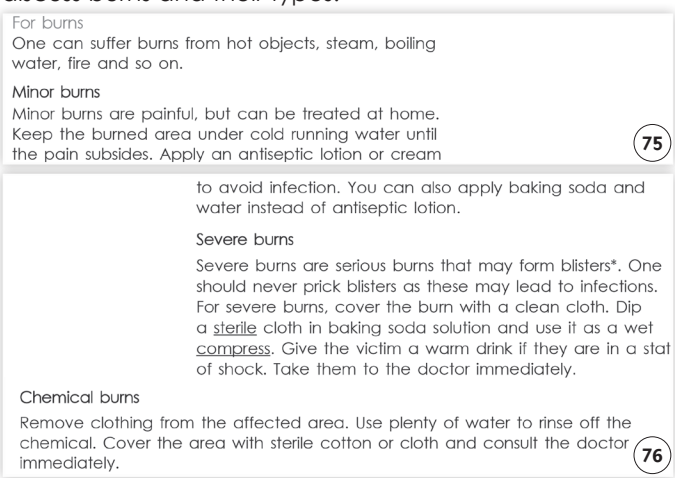
MUST DO

05 MIN.

Teacher: Yes. The affected area swells and causes pain. What should be done immediately if someone has a fracture?

Teacher: Correct. They should go to a doctor without delay. But before reaching the doctor, what can be used to keep the injured part stable?

Teacher: Well done. A splint can be used to prevent unnecessary movement. Great job, everyone. Now, let us discuss burns and their types.



For burns

One can suffer burns from hot objects, steam, boiling water, fire and so on.

Minor burns

Minor burns are painful, but can be treated at home. Keep the burned area under cold running water until the pain subsides. Apply an antiseptic lotion or cream to avoid infection. You can also apply baking soda and water instead of antiseptic lotion.

Severe burns

Severe burns are serious burns that may form blisters*. One should never prick blisters as these may lead to infections. For severe burns, cover the burn with a clean cloth. Dip a sterile cloth in baking soda solution and use it as a wet compress. Give the victim a warm drink if they are in a stat of shock. Take them to the doctor immediately.

Chemical burns

Remove clothing from the affected area. Use plenty of water to rinse off the chemical. Cover the area with sterile cotton or cloth and consult the doctor immediately.

75

76

Teacher: Burns can be caused by hot objects, steam, boiling water, fire and more. Can anyone tell me how a burn might look or feel?

MUST DO

10 MIN.

Teacher: Exactly. Burns can be painful and the skin might turn red or blister. Now, let us focus on minor burns. How should we treat a minor burn?

Teacher: Well remembered. The burned area should be placed under cold running water until the pain reduces. What else can be applied to prevent infection?

Teacher: That is right. An antiseptic lotion or cream can be used. You all are learning well. Let us now discuss severe burns. What happens when someone suffers a severe burn?

Teacher: Yes. Severe burns can form blisters and they should never be pricked. What should we do if someone has a severe burn?

Teacher: Correct. The burn should be covered with a clean cloth. What solution can be used to soothe the area?

Teacher: Very good. A sterile cloth dipped in baking soda solution can be used as a wet compress.

Discovering better

MUST DO

05 MIN.

(Explain the terms mentioned in the 'Discovering better' on page 76.)

Discovering better

sterile: free from germs LAD

compress: here, a cloth that is pressed against a body part to stop bleeding, etc.

76

Teacher: What should be done if the victim is in shock?

Teacher: Excellent. A warm drink should be given and they should be taken to a doctor immediately. Now, let us talk about chemical burns. What should be the first step if someone gets a chemical burn?

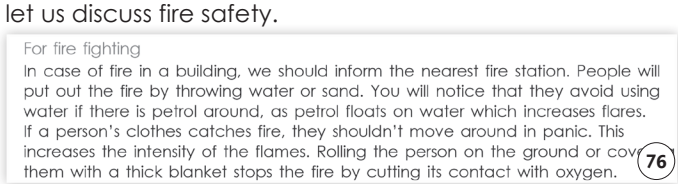
Teacher: That is correct. The affected clothing should be removed immediately. What should be used to rinse off the chemical?

Teacher: Well done. Plenty of water should be used. After rinsing, what should be applied to the affected area?

Teacher: Yes. A sterile cloth or cotton should be used, and the person should be taken to a doctor. Well done. Now, let us discuss fire safety.

MUST DO

10 MIN.



For fire fighting

In case of fire in a building, we should inform the nearest fire station. People will put out the fire by throwing water or sand. You will notice that they avoid using water if there is petrol around, as petrol floats on water which increases flares. If a person's clothes catches fire, they shouldn't move around in panic. This increases the intensity of the flames. Rolling the person on the ground or cov them with a thick blanket stops the fire by cutting its contact with oxygen.

76

Teacher: If a fire breaks out in a building, what should be done first?

Teacher: Absolutely. The nearest fire station should be informed immediately. How do people usually try to put out a fire?

Teacher: That is correct. They use water or sand. However, why should we avoid using water if there is petrol around?

Teacher: Excellent. Petrol floats on water, which can cause the fire to spread further. Now, what should a person do if their clothes catch fire?

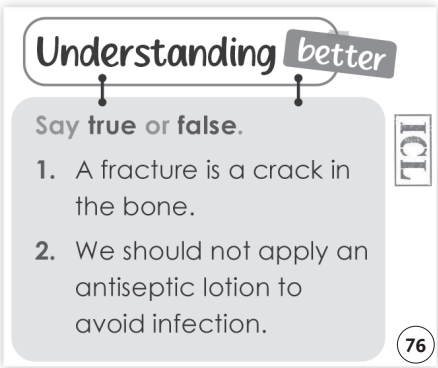
Teacher: That is right. They should not run in panic, as it will make the fire worse. Instead, what should they do to put out the flames?

Teacher: Very good. Rolling on the ground or covering themselves with a thick blanket helps to cut off oxygen and stop the fire. Fantastic work, everyone. You now know how to handle fire emergencies.

Understanding better

MUST DO
05 MIN.

Teacher: Let us check our understanding with a quick true or false activity. I will read a statement and you will tell me whether it is true or false.



Teacher: First statement – A fracture is a crack in the bone. Is this true or false?

Teacher: Yes. That is true. A fracture is a break or crack in a bone. Now, here is the next statement – We should not apply an antiseptic lotion to avoid infection. Is this true or false?

Teacher: Correct. That is false. Applying an antiseptic lotion helps prevent infection and should always be done for minor wounds.

Teacher: Well done, everyone. You are thinking and answering correctly.

You may show the **Animation** and **Experiment** on the digital platform.

Differentiated Activities

110 km/hr

Why should blisters on a severe burn never be pricked?

80 km/hr

What should be used to cover a chemical burn after rinsing it with water?

40 km/hr

What should you do first if your clothes catch fire?

Home Task

Write down three fire safety measures you should follow at home and explain why they are important.

Period 5

SHOULD DO
05 MIN.

Teacher: Good morning, students. How are you all today?

Teacher: Great. Let us begin today's lesson with a quick game. I will ask some questions and you have to answer them. Ready?

Teacher: What should be used to keep a fractured bone stable before reaching a doctor? (A splint)

Teacher: How should a minor burn be treated? (By running cold water over it)

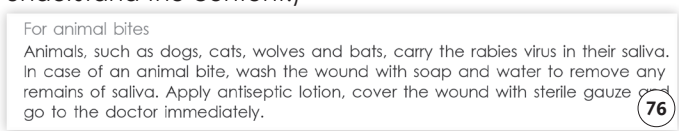
Teacher: What should be applied to a severe burn to soothe the skin? (A wet compress with baking soda solution)

Teacher: Why should we avoid using water on petrol fires? (Because petrol floats on water and spreads the fire)

Teacher: What should a person do if their clothes catch fire? (Roll on the ground or cover with a thick blanket)

Teacher: Well done, everyone. You remembered the concepts well. Let us now move on to today's lesson.

(The teacher will read the last three paragraphs of page 76 and first paragraph and table 10.1 of page 77 aloud and provide explanations to ensure that the students understand the content.)


For animal bites
Animals, such as dogs, cats, wolves and bats, carry the rabies virus in their saliva. In case of an animal bite, wash the wound with soap and water to remove any remains of saliva. Apply antiseptic lotion, cover the wound with sterile gauze and go to the doctor immediately.
76

Teacher: Sometimes, animals like dogs, cats, wolves and bats can carry the rabies virus. What should we do if someone is bitten by an animal?

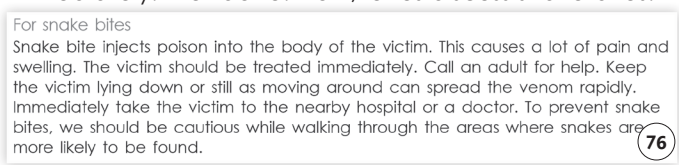
MUST DO
05 MIN.

Teacher: Correct. The wound should be washed with soap and water to remove any saliva. After that, what should be applied to the wound?

Teacher: Well done. An antiseptic lotion should be applied. How should the wound be covered after cleaning it?

Teacher: Excellent. A sterile gauze or bandage should be used. Finally, what is the most important step after treating an animal bite?

Teacher: That is right. The person should go to a doctor immediately. Well done. Now, let us discuss snake bites.


For snake bites
Snake bite injects poison into the body of the victim. This causes a lot of pain and swelling. The victim should be treated immediately. Call an adult for help. Keep the victim lying down or still as moving around can spread the venom rapidly. Immediately take the victim to the nearby hospital or a doctor. To prevent snake bites, we should be cautious while walking through the areas where snakes are more likely to be found.
76

Teacher: A snake bite injects poison into the body. How do you think this affects the person?

MUST DO
05 MIN.

Teacher: Yes. It causes a lot of pain and swelling. What should be done immediately if someone is bitten by a snake?

Teacher: Absolutely. We should call an adult for help and keep the person still. Why is it important for the victim to stay still?

Teacher: Correct. Moving can spread the venom more quickly. What should be done next after keeping the person still?

Teacher: Yes. The person should be taken to a doctor or hospital immediately. How can we prevent snakebites in areas where snakes are common?

Teacher: Very good. We should walk carefully and avoid places where snakes might be hiding. Well done. Now, let us move on to poisoning.

For poisoning

Items, such as nail polish, naphthalene balls and detergents etc. are poisonous. Do not touch these objects. Throw or destroy the medicines after their expiry date. Wash vegetables and fruits before eating them, as they are sprayed with harmful pesticides. In case of poisoning, make the person vomit and take them to a doctor immediately.

76

Teacher: Some items we use daily, such as nail polish, detergents and pesticides, are poisonous. What should we do if we see such items?

MUST DO

10 MIN.

Teacher: That is correct. We should not touch them. Why do we need to check the expiry date on medicines before taking them?

Teacher: Exactly. Expired medicines can be harmful. What should we do before eating vegetables and fruits?

Teacher: Well done. We should wash them to remove harmful pesticides. Now, if someone accidentally swallows a poisonous substance, what should be done immediately?

Teacher: That is right. We should make the person vomit and take them to a doctor at once. Excellent. Now, let us talk about emergency helpline numbers.

A CALL AWAY

Keep the telephone numbers of ambulance, fire station, police station and hospital handy. In case of emergency, immediately call for help.

Table 10.1 Emergency helpline numbers in India

S.No.	Departments	Phone numbers
1.	Police	100
2.	Fire station	101
3.	Ambulance	102
4.	Hospital	Respective numbers

You can also call 112 in case of an emergency related to ambulance, fire, etc. 112 is an all-in-one emergency number.

77

Teacher: In case of an emergency, we should have important phone numbers ready. Can anyone tell me which services we should be able to contact quickly?

MUST DO

10 MIN.

Teacher: Yes. The police, fire station, ambulance and hospital. What is the emergency number for the police?

Teacher: Correct. It is 100. What number should we call if there is a fire?

Teacher: Well remembered. The fire station number is 101. What about an ambulance?

Teacher: Yes. It is 102. If we need a hospital, what should we do?

Teacher: That is right. We should call the respective hospital's number. There is also a single number we can dial for any emergency. Can anyone tell me what it is?

Teacher: Well done. It is 112, which can be used for police, fire and ambulance services. Great job, everyone. Now, let us check our understanding.

Understanding better

Teacher: Let us check our understanding with a quick true or false activity. I will read a statement and you will tell me whether it is true or false.

MUST DO

05 MIN.

Understanding better

Say **yes** or **no**.

1. Throw or destroy the medicines after their expiry date.
2. In case of fire in a building, inform the nearest police station.

77

Teacher: First statement – Throwing or destroying expired medicines is a good practice.

Teacher: Yes. That is true. Expired medicines should not be used. Here is the next statement – In an emergency, we should wait instead of calling for help.

Teacher: Correct. That is false. In an emergency, we should act quickly and call for help immediately.

Teacher: Well done, everyone. You answered correctly and understood the concepts well. Let us now move on to differentiated activities.

You may show the **Concept Map** on the digital platform.

Differentiated Activities

110 km/hr

Why should a snake bite victim remain still?

80 km/hr

Which emergency number should you call in case of a fire?

40 km/hr

What should you do if an animal bites you?

Home Task

Write down three emergency helpline numbers and explain when they should be used.

Period 6

SHOULD DO
05 MIN.

Teacher: Good morning, students. How are you all today?

Teacher: Great. Let us begin today's lesson with a quick game. I will ask some questions and you have to answer them. Ready?

Teacher: What should you do first if you are bitten by an animal? (Wash the wound with soap and water)

Teacher: Why should expired medicines be thrown away? (They can be harmful)

Teacher: What is the emergency number for the ambulance? (102)

Teacher: What should be done immediately if someone swallows poison? (Make them vomit and take them to a doctor)

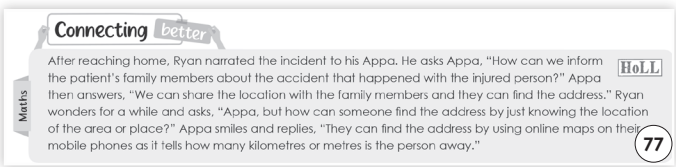
Teacher: Which number can be dialled for any emergency in India? (112)

Teacher: Well done, everyone. You remembered the concepts well. Let us now move on to today's lesson.

Connecting better

MUST DO
05 MIN.

Teacher: Let us begin by discussing how we can inform family members about an accident. After reaching home, Ryan told his father about the incident he witnessed. What did Ryan ask his father?


Connecting better

Maths

After reaching home, Ryan narrated the incident to his Appa. He asks Appa, "How can we inform the patient's family members about the accident that happened with the injured person?" Appa then answers, "We can share the location with the family members and they can find the address." Ryan wonders for a while and asks, "Appa, but how can someone find the address by just knowing the location of the area or place?" Appa smiles and replies, "They can find the address by using online maps on their mobile phones as it tells how many kilometres or metres is the person away."

HoLL

77

Teacher: Yes. He asked how to inform the injured person's family about the accident. What did his father suggest?

Teacher: Correct. He said that they could share the location with family members so they could find the address. But Ryan was still curious. What did he ask next?

Teacher: Exactly. He wondered how someone could find an address just by knowing the location. How did his father explain this?

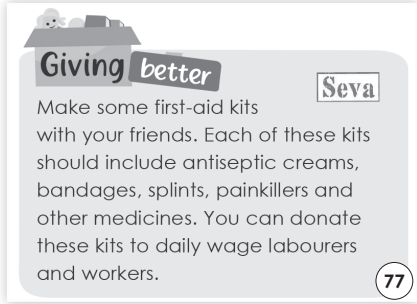
Teacher: Well done. He explained that mobile maps can be used to find locations as they show distances in kilometres or metres. That was a great discussion. Now, let us move to the next part.

Giving better

MUST DO
05 MIN.

Teacher: First aid is important and having a first-aid kit can be very helpful. What items should be included in a first-aid kit?

Teacher: Yes. It should have antiseptic creams, bandages, splints, painkillers and other medicines. What can we do with extra first-aid kits?


Giving better

Seva

Make some first-aid kits with your friends. Each of these kits should include antiseptic creams, bandages, splints, painkillers and other medicines. You can donate these kits to daily wage labourers and workers.

77

Teacher: Correct. We can donate them to daily wage labourers and workers who may not have access to medical supplies. Well done. Let us now learn an interesting fact about healing.

Healing better

MUST DO
05 MIN.

Teacher: Did you know that some natural remedies can help heal wounds? Can you name a natural ingredient that helps burns heal faster?


Healing better

KoI

Applying honey on burned skin helps it heal faster.

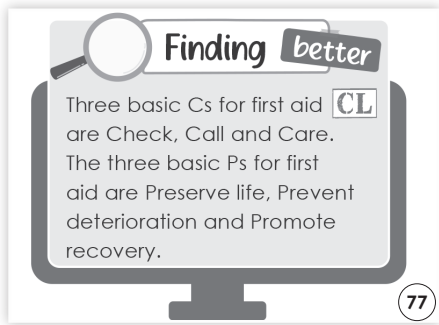
77

Teacher: That is right. Applying honey on burned skin can speed up healing. Honey has healing properties that help soothe burns. Great work. Now, let us learn about the basics of first aid.

Finding better

MUST DO
05 MIN.

Teacher: There are three important Cs in first aid. Can anyone tell me what they might stand for?


Finding better

CL

Three basic Cs for first aid are Check, Call and Care. The three basic Ps for first aid are Preserve life, Prevent deterioration and Promote recovery.

77

Teacher: Yes. They stand for Check, Call and Care. Now, there are also three important Ps in first aid. Who can guess what they might be?

Teacher: Correct. They are Preserve life, Prevent deterioration and Promote recovery. Fantastic work. Now, let us understand a new word.

Grasping better

MUST DO
05 MIN.

Teacher: Today, we are going to learn the meaning of the word 'blister.' Have you ever seen a swelling on the skin filled with liquid? That is called a blister.

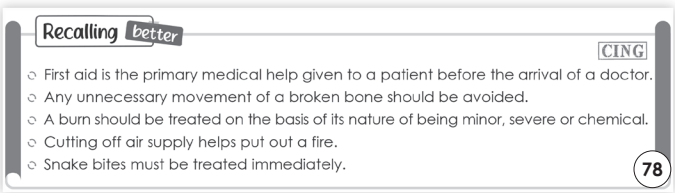
Teacher: Can anyone tell me when blisters might form?

Teacher: Well done. They can appear due to burns, friction or infections. Excellent work, everyone. Now, let us quickly recall what we have learned.

Recalling better

MUST DO
10 MIN.

Teacher: Let us recall some key points from today's lesson. I will ask a few questions and you can respond.



Teacher: What is first aid?

Teacher: Well done. It is the primary medical help given to a patient before a doctor arrives. What should we avoid if someone has a broken bone?

Teacher: Correct. We should avoid unnecessary movement. How should we treat a burn?

Teacher: Exactly. We should treat it based on whether it is minor, severe or chemical. What should be done to put out a fire on a person's clothes?

Teacher: That is right. Cutting off the air supply by rolling or using a blanket helps. Finally, how should a snake bite be treated?

Teacher: Yes. It must be treated immediately by a doctor. Well done, everyone. You have understood these concepts very well.

You may show the **Slideshow** and **Animated Activities** on the digital platform.

Differentiated Activities

110 km/hr

What are the three Cs in first aid?

80 km/hr

What natural ingredient helps burns heal faster?

40 km/hr

What should be included in a first-aid kit?

Home Task

Complete the 'Activity 4' (Air pressure drink dispenser) given on page 80 of the Main Course Book.

Period 7

SHOULD DO
05 MIN.

Teacher: Good morning, students. How are you all today?

Teacher: Great. Let us begin today's lesson with a quick game. I will ask some questions and you have to answer them. Ready?

Teacher: What should you do first when someone is injured? (Check the situation)

Teacher: What does the 'Call' step in first aid mean? (Call for medical help)

Teacher: What does the word 'blister' mean? (A swelling filled with liquid)

Teacher: What should you do if your clothes catch fire? (Roll on the ground or cover with a blanket)

Teacher: What should be donated to workers for their safety? (First-aid kits)

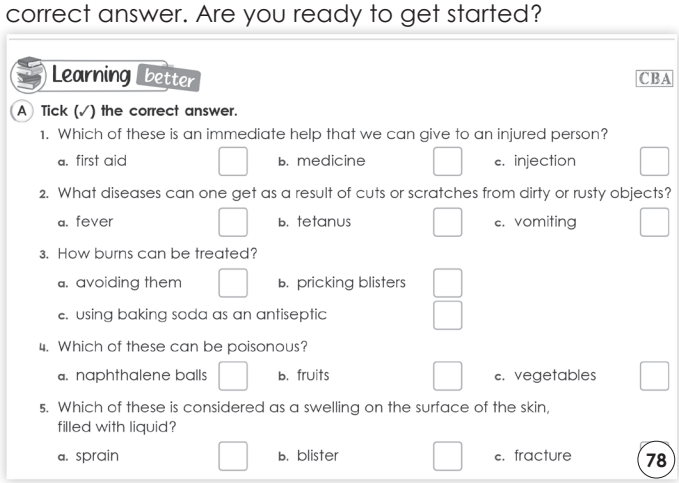
Teacher: Well done, everyone. You remembered the concepts well. Let us now move on to today's lesson.

Top of Form

Learning better

MUST DO
05 MIN.

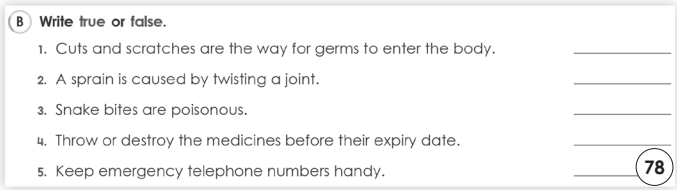
Teacher: Everyone please open page 78 of your Main Course Book. In Exercise 'A' of 'Learning better' you have to tick the correct answer. Are you ready to get started?



Teacher: Great. Let us begin with the first question. Which of these is an immediate help that we can give to an injured person?

Teacher: The correct answer is first aid. Well done.

(Similarly complete all five questions. And discuss the correct answers.)



B **Write true or false.**

1. Cuts and scratches are the way for germs to enter the body. _____
2. A sprain is caused by twisting a joint. _____
3. Snake bites are poisonous. _____
4. Throw or destroy the medicines before their expiry date. _____
5. Keep emergency telephone numbers handy. _____

78

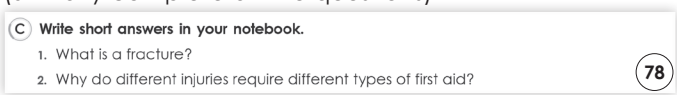
Teacher: Let us start Exercise 'B' of the 'Learning better' section, you have to write either true or false in the space provided. Are you ready to get started?

MUST DO 05 MIN.

Teacher: Great. Let us begin with the first question. Cuts and scratches are the way for germs to enter the body.

Teacher: Yes. It is true.

(Similarly complete all five questions)



C **Write short answers in your notebook.**

1. What is a fracture?
2. Why do different injuries require different types of first aid?

78

Teacher: Let us explore some short-answer questions. In Exercise 'C' of the 'Learning better' section, you have to write a short answer. Are you ready to get started?

MUST DO 10 MIN.

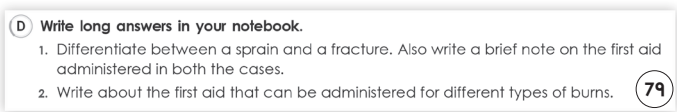
Teacher: Great. Let us begin with the first question. What is a fracture?

(Students have to write the answers for the given questions in about 40 to 50 words in their notebook. Wait for the students to write the answers.)

(Similarly, complete all three questions and discuss the correct answer with the class.)

Teacher: Let us explore some long-answer questions. In Exercise 'D' of the 'Learning better', you have to write a long answer. Let us begin with the first question. Write about the flora of mountains and coastal plains of India.

MUST DO 15 MIN.



D **Write long answers in your notebook.**

1. Differentiate between a sprain and a fracture. Also write a brief note on the first aid administered in both the cases.
2. Write about the first aid that can be administered for different types of burns.

79

(Students have to write the answers for the given questions in about 100 to 150 words in their notebook. Wait for the students to write the answers.)

(Similarly, complete the second question and discuss the correct answer with the class.)

(Instruct the students to bring their Little Book in their next class.)

You may start the **Quiz** on the digital platform.

Differentiated Activities

110 km/hr

What are the steps you should follow when administering first aid for an animal bite?

80 km/hr

What should be done immediately if someone is bitten by a snake?

40 km/hr

What should you do if someone has a minor burn?

Home Task

Complete the 'Creating better' activity (Make a first-aid box using an empty shoe box) given on page 79 of the Main Course Book.

Period 8

Teacher: Good morning, students. How are you all today?

SHOULD DO 05 MIN.

Teacher: Great. Let us begin today's lesson with a quick game. I will ask some questions and you have to answer them. Ready?

Teacher: If you get a cut, what is the first thing you should do? (Clean the wound with soap and water)

Teacher: What should you apply to a minor burn after running it under cold water? (Antiseptic lotion or cream)

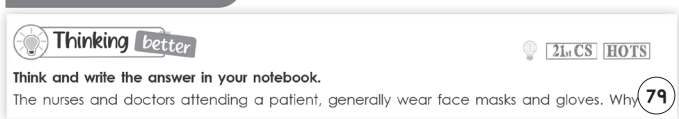
Teacher: If you see a snake, what is the best way to avoid being bitten? (Be cautious and avoid areas where snakes are likely to be found)

Teacher: What should you do first if you see a fire? (Call the fire station and try to put out the fire using water or sand)

Teacher: What is the emergency number to call for an ambulance in India? (102)

Teacher: Well done, everyone. You remembered the concepts well. Let us now move on to today's lesson.

Thinking better



Thinking better 21st CS HOTS

Think and write the answer in your notebook.

The nurses and doctors attending a patient, generally wear face masks and gloves. Why

79

Teacher: Let us begin by thinking about the reasons behind some actions. Why do nurses and doctors wear face masks and gloves while attending to a patient?

MUST DO 10 MIN.

Teacher: Think carefully. Write your answer in your notebook in a few sentences.

Teacher: Once you have written your answers, we will share some responses and discuss them together.

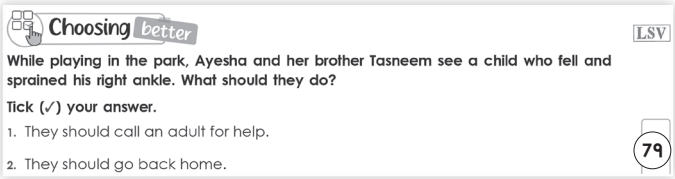
(Let the students think and write.)

Teacher: Yes. They wear these to prevent the spread of germs and protect both themselves and the patient from infection. Excellent. Let us now move on to the next activity.

Choosing better

MUST DO
10 MIN.

Teacher: Now, think about a situation where someone is injured. While playing in the park, Ayesha and her brother Tasneem see a child who fell and sprained his right ankle. What should they do?


Choosing better
LSV
While playing in the park, Ayesha and her brother Tasneem see a child who fell and sprained his right ankle. What should they do?
Tick (✓) your answer.
1. They should call an adult for help.
2. They should go back home.
79

Teacher: I will give you two options. Which one do you think is correct?

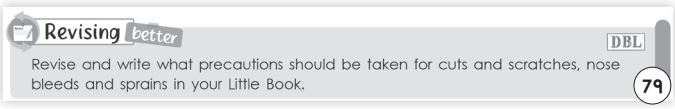
1. They should call an adult for help.
2. They should go back home.

Teacher: Yes. The correct answer is that they should call an adult for help. Well done. Now, let us move on to revising what we have learned so far.

Revising better

MUST DO
05 MIN.

Teacher: Let us take a moment to revise what we have learned. What precautions should be taken for cuts and scratches, nose bleeds and sprains?


Revising better
DBL
Revise and write what precautions should be taken for cuts and scratches, nose bleeds and sprains in your Little Book.
79

Teacher: Please write these precautions in your Little Book. Remember, it is important to know how to handle minor injuries and to always stay calm when helping someone in need. Well done, everyone. Now, let us move to our final activity for today.

Pledging better

MUST DO
05 MIN.

Teacher: Now, we are going to make a small pledge. Can anyone tell me what it means to pledge?


Pledging better
SDGs
In my own little way, I pledge to play outdoor games.
SDG 3: GOOD HEALTH AND WELL-BEING
79

Teacher: Yes, it means to make a promise. Let us all make a pledge to take care of our health and play outdoor games.

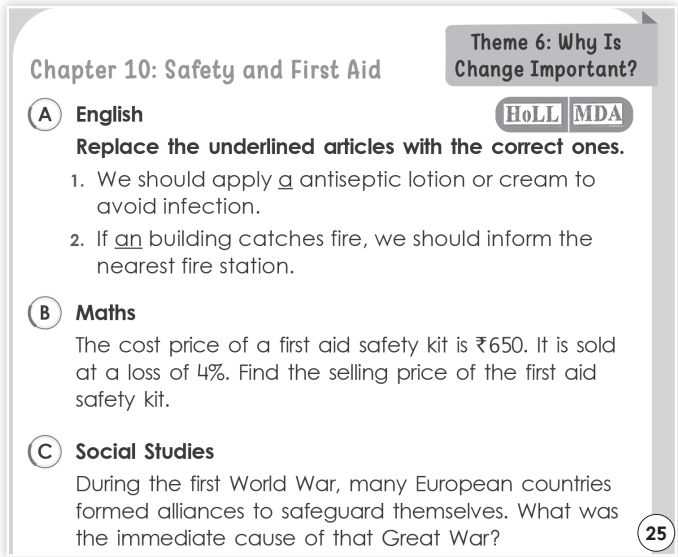
Teacher: Repeat after me: 'In my own little way, I pledge to play outdoor games.'

Teacher: This also connects with SDG 3: Good Health and Well-being, which encourages us to live healthier lives. Well done. You have all made a fantastic commitment to staying active and healthy.

Book of Holistic Teaching

COULD DO
05 MIN.

Refer to the Book of Holistic Teaching, page number 25 under the title 'Safety and First Aid.' Complete the activities mentioned in this section and ensure that the students complete them. These activities are designed to enhance their holistic understanding and engagement with the topic. Provide any necessary support and materials to help the students successfully finish the activities.


Chapter 10: Safety and First Aid
Theme 6: Why Is Change Important?
A English
HoLL MDA
Replace the underlined articles with the correct ones.
1. We should apply a antiseptic lotion or cream to avoid infection.
2. If an building catches fire, we should inform the nearest fire station.
B Maths
The cost price of a first aid safety kit is ₹650. It is sold at a loss of 4%. Find the selling price of the first aid safety kit.
C Social Studies
During the first World War, many European countries formed alliances to safeguard themselves. What was the immediate cause of that Great War?
25

Differentiated Activities

110 km/hr

Why is it important for doctors and nurses to wear face masks and gloves while treating patients?

80 km/hr

What should Ayesha and Tasneem do if they see a child who sprained his ankle in the park?

40 km/hr

What should be done when a child gets a small cut or scrape?

Home Task

The Project Idea, given in the book of Project Ideas, page 17 under the title 'Safety and First Aid.' This project should be assigned to the students as a home task to work on. Ensure that the students understand the project requirements and provide any necessary guidance or materials they might need.

Period 9

SHOULD DO
05 MIN.

Teacher: Good morning, students. How are you all today?

Teacher: Great. Let us begin today's lesson with a quick game. I will ask some questions and you have to answer them. Ready?

Teacher: Why do doctors and nurses wear face masks and gloves? (To protect themselves and patients from germs.)
Teacher: What should you do first if you see someone with a deep cut? (Clean the wound with soap and water)
Teacher: What should be included in a first-aid kit? (Antiseptic cream, bandages and painkillers)
Teacher: How should you treat a minor cut? (Clean it with soap and water, then cover with a bandage.)
Teacher: What is the emergency number for an ambulance? (102.)
Teacher: Well done, everyone. You remembered the concepts well. Let us now move on to today's lesson.

Worksheet – 1

Teacher: Let us do some activities from the workbook. Everybody, please open page 38 of your workbook and answer the questions given in worksheet - 1.

MUST DO
10 MIN.

Theme 6: Why Is Change Important?

10. Safety and First Aid

Worksheet 1

A. Fill in the blanks.

1. Safety is the utmost priority for _____ (you/everyone).
2. We should always follow the _____ (butterfly/safety rules).
3. We should _____ while administering first aid (stay calm/get excited).
4. Cuts and scratches are the way for _____ to enter the body (germs/mosquitoes).
5. _____ is the immediate medical assistance given to an injured persor (First Aid/Emergency Aid).

B. Rearrange the letters to make meaningful words related to first aid.

1. TSCU _____
2. UREDINJ _____
3. EPTICANTIS _____
4. CHESSCRAT _____
5. ENCIESEMERG _____

C. Write true or false.

1. We should know how to deal with emergencies. _____
2. For nose bleed, keep the head of the patient straight. _____
3. Treatment for cuts and scratches is also necessary. _____
4. Cut and scratches by dirty objects should be ignored. _____
5. While on the road, we must read and follow road signs to be safe. _____

38

(Let the students answer the questions on their own. Then discuss the answer by writing the correct answer on the blackboard.)

Worksheet – 2

Teacher: Let us do some activities from the worksheet - 2. Everybody, please open page 39 of your workbook and answer the questions given in worksheet - 32

MUST DO
10 MIN.

Worksheet 2

A. Fill in the blanks.

1. For nose bleeds, keep the patient _____ (upright/lying).
2. In case of heavy bleeding, consult a _____ (doctor/grandparent).
3. During the nose bleed, ask the patient to _____ through the mouth (eat/breathe).

39

4. A _____ is torn tissue that appears swollen and sometimes discoloured (sprain/fracture).
5. One should apply a/an _____ to reduce swelling in the sprained region (cream/ice pack).

B. Rearrange the letters to make meaningful words related to first aid.

1. TENTPAI _____
2. NUSTETA _____
3. TONCOT _____
4. TIONINJEC _____
5. AGEBAND _____

C. Write true or false.

1. A sprain is a broken bone. _____
2. A fracture is a broken muscle. _____
3. A sprained region appears sunken. _____
4. We can make splints from newspaper folds. _____
5. One should avoid unnecessary movement at the fractured region. _____

39

(Let the students answer the questions on their own. Then discuss the answer by writing the correct answer on the blackboard.)

You may generate additional practice worksheets using the **Test Generator** given on the digital platform.

Book of Project Ideas

COULD DO
10 MIN.

Discuss the project assigned as the home task in the eighth period, focusing on helping students understand the objectives and addressing any challenges they face.

Theme 6: Why Is Change Important?

Chapter 10: Safety and First Aid

ICT PRO 21st CS

Create a presentation using the Internet* on first aid that will arouse safety awareness.

- Briefly explain first-aid and its importance.
- Write about 10 injuries or illnesses (e.g. minor cuts and scrapes, burns, nosebleeds, bee stings, sprains etc.) and how these can be treated.
- Show pictures or short videos for treating some of the injuries or illnesses.

17

Teacher: Now, let us complete the 'KWL' activity.

SHOULD DO
05 MIN.

Teacher: Take out your notebook and fill in the 'L' column. Write what have you learned in this chapter.
(Wait for students to fill in the chart.)

Teacher: Let us all give a huge round of applause to everyone for their hard work and creativity. Great work, everyone. See you in the next class. Have a wonderful day ahead.

Differentiated Activities

110 km/hr

What is the first thing you should do when someone gets a snake bite?

80 km/hr

What should you use to clean a minor wound?

40 km/hr

What should you do if someone gets a nosebleed?

Home Task

Complete the worksheet -3 given on page 40 of the workbook.

Learning Outcomes

The students will:

Domain	Learning Outcomes
Physical Development	• demonstrate fine motor skills by drawing and colouring images of objects that use natural resources, such as windmills and vehicles.
Socio-Emotional and Ethical Development	• will show empathy in emergencies by staying calm, helping others and taking responsibility for their own safety.
Cognitive Development	• identify the various types of first aid (e.g., for fractures, burns, snake bites) and understand when and how to apply them in different emergency situations.
Language and Literacy Development	• practice communicating effectively in emergencies, including sharing the location of accidents using mobile maps and explaining the necessary first-aid steps.
Aesthetic and Cultural Development	• creatively design and decorate first-aid kits and learn the importance of caring for others in their community.
Positive Learning Habits	• develop responsibility by creating first-aid kits and pledging to play outdoor games, supporting their overall health and well-being.

Starry Knights

Are you confident of the learners being aware of taking preventive measures and providing first aid to those in need? Share the activity they enjoyed the most here.

Give yourself a STAR.

Lesson-11: All About Matter

10 Periods (40 minutes each)

Learn Better (Main Coursebook), Stay Ahead (Workbook), Book of Holistic Teaching, Book of Project Ideas, CRM signs, Poster

Animation, Animated Activities, Concept Map, Dictionary, eBook, I Explain, Quiz, Slideshow, Test Generator

Confirming better
I chew my food properly.

Curricular Goals and Objectives (NCF)

To enable the students:

- to understand the three states of matter and how they change form.
- to explore the structure of matter, including molecules and atoms.
- to identify different types of solutions and their properties.
- to comprehend the causes and effects of physical and chemical changes in matter.

Methodology

Period 1

SHOULD DO
05 MIN.

Teacher: Good morning, students. How are you all today?

Teacher: Great. Before we dive into our lesson, let us take a moment to relax and focus our minds with a short meditation. Ready?

Teacher: Sit comfortably in your chair, with your back straight and feet flat on the ground. Close your eyes gently and take a deep breath through your nose. Hold it for a moment, then slowly breathe out through your mouth.

Let us do these three more times. Breathe in... and breathe out. As you breathe, imagine your mind becoming clear and ready to learn.

Open your eyes and smile at your friends. Let us start our lesson with positive energy.

Confirming better

Teacher: Before we start the class, let us all affirm together something positive, 'I chew my food properly.' Repeat after me: 'I chew my food properly.'

MUST DO
05 MIN.

Teacher: Alright. Today, we are going to begin a new chapter 'All About Matter.' We use a KWL chart to help us organize our thoughts and learning. I have made a KWL format on the blackboard. Please take out your notebooks and draw the same format.

K	W	L

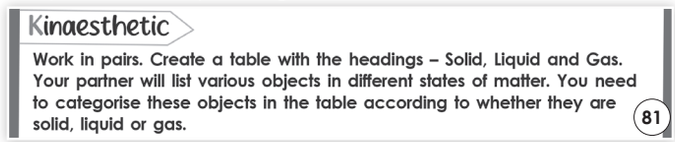
Teacher: Let us start by filling out the 'K' and 'W' columns. Take a few minutes to think and write. If you have any questions, feel free to ask.

Teacher: Before we start the chapter, we will do a quick Re-KAP, which involves revisiting our previous knowledge through creative activities using Kinaesthetic, Auditory and Pictorial methods to make our learning interactive and engaging.

Kinaesthetic

MUST DO
10 MIN.

Teacher: Let us start with a fun activity. In pairs, create a table with the headings – Solid, Liquid and Gas. One of you will list various objects in different states of matter. Your task is to categorise these objects in the table based on whether they are solid, liquid or gas.



Teacher: Work together and think about the properties of different materials. Well done, everyone. You all are doing great work.

Auditory

MUST DO
10 MIN.

Teacher: Let us start the auditory activity. Listen carefully to me. I will ask you some questions and I want you to pay attention to every detail before answering. Are you ready?

Auditory*

Listen to your teacher carefully. Answer the questions. 81

Teacher: In liquids, the particles are a bit apart and can move. Therefore, they can take the shape of any container they are poured in. In gases, the particles are wide apart and they can spread out easily anywhere.

1. Why can liquids flow easily and take the shape of any container they are poured in?
2. Why are gases able to spread out easily?

(Waits for student responses.)

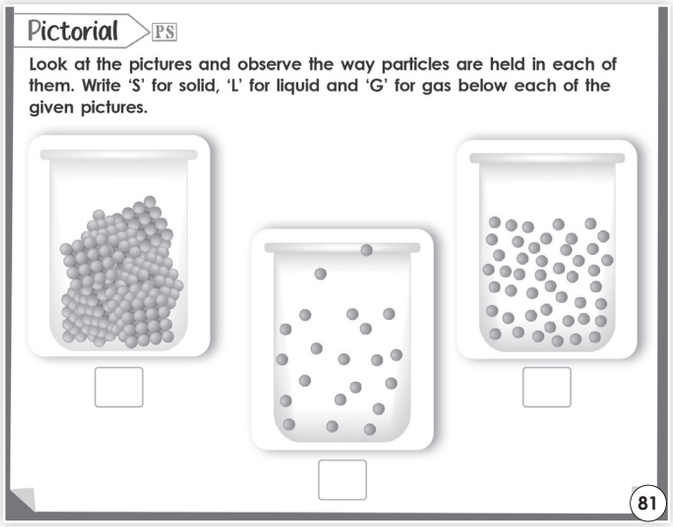
Teacher: Fantastic answers. You were all listening carefully. Now, let us move to the next activity.

Pictorial

MUST DO

10 MIN.

Teacher: Look at the pictures carefully. Observe how the particles are arranged in each state of matter. You need to identify which one is a solid, liquid or gas.



Teacher: For each picture, write 'S' for solid, 'L' for liquid and 'G' for gas below each picture. Think about how the particles are packed in each state.

(Give the students time to think and write 'S' for solid, 'L' for liquid and 'G' for gas. And discuss the correct answer.)

Teacher: Great work, everyone. You are doing excellent work at identifying the states of matter.

Differentiated Activities

110 km/hr

Why do solids have a fixed shape while liquids do not?

80 km/hr

What do gases have in common that liquids and solids do not?

40 km/hr

Which state of matter takes the shape of its container?

Home Task

Write down one example of each state of matter (solid, liquid and gas) and describe how the particles are arranged in each state.

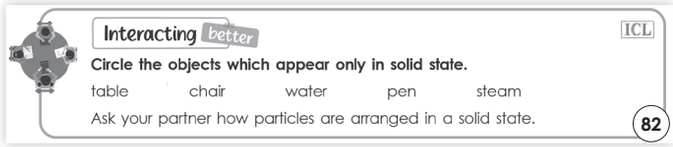
Period 2

Interacting better

MUST DO

10 MIN.

Teacher: Good morning, students. How are you all today?



Teacher: Great. Let us do an interesting activity. I will read out some objects and you need to circle the ones that appear only in solid state. The objects are: table, chair, water, pen and steam.

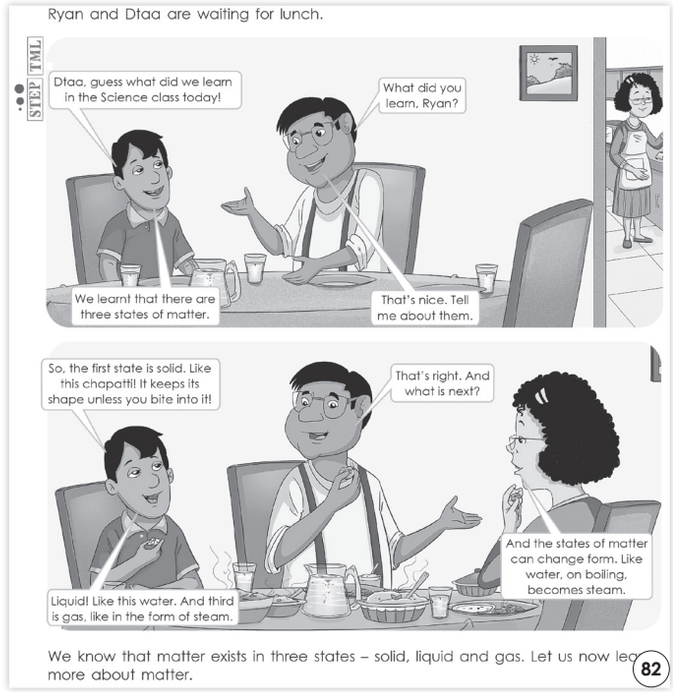
Teacher: Think carefully and circle the solid objects.

Teacher: Now, turn to your partner and ask them how the particles are arranged in a solid state.

(Encourage students to discuss and guide the discussion accordingly.)

(Use CRM signs to settle the class.)

Teacher: Well done, everyone. Keep up the great work.



Teacher: Everyone, please read the picture story given on page 82 of your Main Course Book carefully. It shows a conversation between Ryan and Dtaa. Pay attention to what they learn about the states of matter.

MUST DO

30 MIN.

(Give the students time to read the story.)

Teacher: Now that you have read the story, let us discuss it. Ryan and Dtaa learned about the three states of matter. Can anyone tell me what the first state of matter they discussed is?

Teacher: Yes. The first state is solid. What example did Ryan give to explain the solid state?

Teacher: Correct. Ryan explained that the chapatti is solid because it keeps its shape when you bite into it. What was the second state of matter discussed in the story?

Teacher: Exactly. The second state is liquid. What example did Ryan use to explain the liquid state?

Teacher: Right. Water is a liquid, as it can change its shape to fit any container. Now, what is the third state of matter, and how did Ryan describe it?

Teacher: Yes, the third state is gas, like the steam that rises from boiling water.

Teacher: The states of matter can change form. Can anyone think of an example where matter changes its state?

Teacher: Yes. When water is boiled, it changes from a liquid to a gas, and we see this as steam. What happens to the particles when water turns into steam?

Teacher: Correct. When water boils, the particles gain energy and move faster, turning the liquid into gas. This is an example of a physical change. Great work, everyone. Let us continue exploring how matter changes.

Teacher: Well done. Now, let us check how well we understand the three states of matter with a short activity. You may show the **Dictionary** and **eBook** on the digital platform.

Differentiated Activities

110 km/hr

Why does water change from liquid to gas when heated?

80 km/hr

Can solids change their shape? Give an example.

40 km/hr

What is an example of a liquid?

Home Task

Write down examples of each state of matter (solid, liquid and gas) that you encounter in your daily life. Describe how the particles are arranged in each state.

Period 3

SHOULD DO 05 MIN.

Teacher: Good morning, students. How are you all today?

Teacher: Great. Let us begin today's lesson with a quick game. I will ask some questions and you have to answer them. Ready?

Teacher: Which state of matter has a fixed shape and volume? (Solid)

Teacher: Which state of matter can change shape but not volume? (Liquid)

Teacher: Which state of matter has no fixed shape or volume? (Gas)

Teacher: What happens to water when it boils? (It turns into steam, a gas.)

Teacher: Can a solid change its shape? (No, a solid keeps its shape.)

Teacher: Well done, everyone. You remembered the concepts well. Let us now move on to today's lesson.

(The teacher will read the first four paragraphs of 83 aloud and provide explanations to ensure that the students understand the content.)

WHAT IS MATTER?

Anything that occupies space and has weight is called matter. Matter exists in three states – solid, liquid and gas. For example, chalk (solid), water (liquid) and steam (gas).

Matter can be broken down into small units called molecules. A molecule has all the properties of the substance it belongs to. These molecules are so small that they cannot be seen with the naked eye. 83

MUST DO 10 MIN.

Teacher: Let us start today by learning what matter is. Can anyone tell me the definition of matter?

Teacher: Correct. Matter is anything that occupies space and has weight. Can you think of some examples of matter?

Teacher: Yes. Things like chalk, water and steam are all examples of matter. Now, matter can exist in three states. Can anyone tell me what those three states are?

Teacher: That is right. Solid, liquid and gas. For example, chalk is solid, water is liquid and steam is gas. Well done. Now, let us move on to molecules.

Molecules are made up of atoms

A molecule can be further broken down into smaller units. These units are called atoms. Atoms are known as the building blocks of matter. When the atoms of the same kind combine, they form an element*. When atoms of different types combine, they form a compound. 83

MUST DO 10 MIN.

Teacher: Matter is made up of tiny particles called molecules. Can anyone explain what a molecule is?

Teacher: Yes. A molecule is a small unit that has all the properties of the substance it belongs to. Molecules are so small that we cannot see them with the naked eye. Can anyone think of an example of a molecule?

Teacher: Correct. Water molecules are an example. Now, what happens if we break down a molecule even further? What do we get?

Teacher: That is right. When molecules are broken down further, we get atoms, which are the building blocks of matter. Great job. Let us now learn about solutions.

MUST DO 10 MIN.

Teacher: A solution is formed when two or more substances mix together. Can anyone tell me the two parts of a solution are?

SOLUTIONS

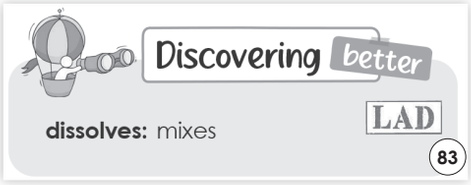
A solution forms when two or more substances mix together. A solution consists of a solute and a solvent. The solute is a substance that dissolves, whereas the solvent is a substance in which the solute dissolves. For example, mixing sugar in water forms a solution. In this mixture, sugar is the solute and water is the solvent.

A mixture is a substance that is made by combining two or more different substances in such a way that no chemical reaction* occurs between them. We can usually separate the components of mixtures.

83

Teacher: Excellent. A solution consists of a solute and a solvent. The solute is the substance that dissolves and the solvent is the substance in which the solute dissolves.

Discovering better



(Explain the term 'dissolves' given in the 'Discovering better' on page 83 of the Main Course Book.)

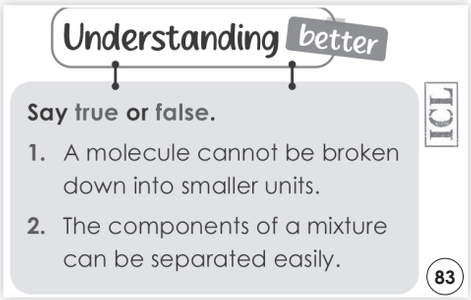
Teacher: Can anyone give me an example of a solution?

Teacher: That is correct. When you mix sugar in water, the sugar is the solute and water is the solvent. Well done. Now, let us move on to the next part of the activity.

Understanding better

MUST DO
05 MIN.

Teacher: Let us check our understanding with a quick true or false activity. I will read a statement, and you will tell me whether it is true or false.



Teacher: First statement: Molecules are the building blocks of matter. True or false?

Teacher: Correct. That is true. Now, the second statement: A solution is made when a solid and liquid cannot mix together. True or false?

Teacher: Well done. That is false. A solution is made when two substances mix together and form a homogeneous mixture. Great work, everyone. You are all doing well.

[Bring the materials (salt, sugar, two glasses of water and a stirring stick or spoon) required for the activity in the next period.]

You may show the **I Explain** on the digital platform.

Differentiated Activities

110 km/hr

What happens when atoms of different types combine?

80 km/hr

What are the two parts of a solution?

40 km/hr

What is a solute in a solution?

Home Task

Write down one example of each state of matter (solid, liquid and gas) and describe how the molecules are arranged in each state.

Period 4

SHOULD DO
05 MIN.

Teacher: Good morning, students. How are you all today?

Teacher: Great. Let us begin today's lesson with a quick game. I will ask some questions and you have to answer them. Ready?

Teacher: What is a molecule made up of? (Atoms)

Teacher: What is an example of a liquid? (Water)

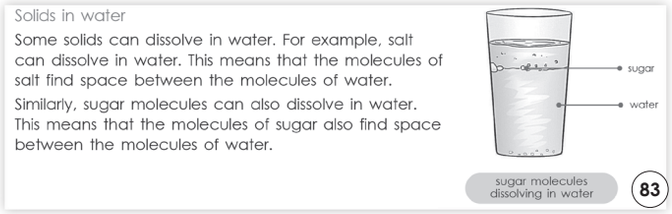
Teacher: What is a solution? (A mixture of a solute and a solvent)

Teacher: What is the solvent in sugar and water? (Water)

Teacher: What are the three states of matter? (Solid, liquid and gas)

Teacher: Well done, everyone. You remembered the concepts well. Let us now move on to today's lesson.

(The teacher will read the last two paragraphs of 83 aloud and provide explanations to ensure that the students understand the content.)



MUST DO
15 MIN.

Teacher: Today, we are going to learn about how solids dissolve in water. Can anyone tell me what happens when we mix salt with water?

Teacher: Yes, the salt dissolves in water. This means that the molecules of salt find space between the molecules of water. What do you think happens to the molecules of salt when they dissolve?

Teacher: Correct. The salt molecules spread out and mix with the water molecules. Now, what do you think happens when we mix sugar with water?

Teacher: That is right. The sugar molecules also dissolve in water. Just like salt, the sugar molecules find space between the water molecules. Great work. Now, let us learn about liquids in water.

Teacher: Now, I will demonstrate how solids and liquids dissolve in water. I have some salt and sugar here. Watch carefully as I add them to the water.

MUST DO
10 MIN.

Teacher: First, I will add some salt to the water. Let us see what happens.

(Add some salt to the water.)

Teacher: As you can see, the salt is dissolving in the water. Now, I will add sugar to another glass of water. Notice how the sugar also dissolves.

Teacher: Keep observing how the salt and sugar dissolve in the water. Notice how the particles spread out and mix with the water molecules.

Teacher: Well done. Now that we have seen the experiment, let us discuss how this happens.

Liquids in water

Some liquids dissolve easily in water. For example, milk can easily dissolve in water. Liquids that can dissolve in each other are called miscible liquids. However, some liquids do not dissolve in each other.

Liquids that do not dissolve in each other are called immiscible liquids. For example, kerosene and diesel do not dissolve in water.

*Check the 'Grasping better' section to learn the meaning of the word.

83

Teacher: Now, let us talk about liquids that dissolve in water. Can anyone think of an example of a liquid that easily dissolves in water?

MUST DO
10 MIN.

Teacher: Yes, milk is a great example. Milk dissolves easily in water. Now, there are some liquids that can dissolve in each other. What do we call these liquids?

Teacher: Correct. Liquids that dissolve in each other are called miscible liquids. Can anyone think of another example of miscible liquids?

Teacher: Yes. Milk and water are examples of miscible liquids. Now, can anyone think of liquids that do not dissolve in each other?

Teacher: Well done. Liquids like kerosene and diesel do not dissolve in water. These are called immiscible liquids. Great work, everyone.

[Bring the materials (Ice cubes, a beaker of water and a spoon or stirring stick) required for the activity in the next period.]

Differentiated Activities

110 km/hr

What happens when two miscible liquids are mixed together?

80 km/hr

Can kerosene dissolve in water?

40 km/hr

What is an example of a liquid that dissolves in water?

Home Task

Write down two examples of solids and two examples of liquids that dissolve in water. Explain how the molecules are arranged when they dissolve.

Period 5

Teacher: Good morning, students. How are you all today?

SHOULD DO
05 MIN.

Teacher: Great. Let us begin today's lesson with a quick game. I will ask some concept-based questions, and you have to answer them. Ready?

Teacher: When salt is added to water, what happens to the salt particles? (They dissolve in the water.)

Teacher: What do we call liquids that mix together to form a solution? (Miscible liquids.)

Teacher: What is the name for liquids that do not mix together, like oil and water? (Immiscible liquids.)

Teacher: Can sugar dissolve in water? Why or why not? (Yes, sugar dissolves in water because the sugar molecules spread out and mix with the water molecules.)

Teacher: When milk is added to water, what happens to the milk particles? (They dissolve in the water.)

Teacher: Well done, everyone. You have understood these concepts very well. Let us now move on to today's lesson.

(The teacher will read the first two paragraphs of 84 aloud and provide explanations to ensure that the students understand the content.)

Gases in water

Gases, such as nitrogen, oxygen, ammonia and carbon dioxide, can dissolve in water. Oxygen is present in water in dissolved form. Fishes and other aquatic animals respire by taking up dissolved oxygen from water. You can observe the gases dissolved in water when you put a beaker filled with water on the burner. You will see that bubbles form in the beaker when the water boils. Aerated drinks* have gas (carbon dioxide) in dissolved form, which is added to them under great pressure.

84

Teacher: Let us start by talking about gases in water. Can anyone tell me which gases can dissolve in water?

MUST DO
10 MIN.

Teacher: Yes. Gases like nitrogen, oxygen, ammonia and carbon dioxide can dissolve in water. Have you ever wondered how fishes breathe in water?

Teacher: Correct. Fish and other aquatic animals take in dissolved oxygen from water. Now, if we put a beaker of water on a burner, what do you think will happen when the water boils?

Teacher: Excellent. You will see bubbles form in the beaker. These bubbles are the gases dissolved in the water, escaping as the water heats up. Did you know that aerated drinks have gas dissolved in them?

Teacher: Yes, carbon dioxide is added to drinks under high pressure. Well done, everyone. Now, let us learn about changes in matter.

CHANGES IN MATTER

Heating and cooling bring about changes in matter. For example, when we heat a liquid (water), it turns into gas (steam). Also, when a liquid (water) is cooled, it turns into solid (ice).

84

Teacher: Heating and cooling can cause changes in matter. Can anyone think of an example where heating causes a change in matter?

MUST DO 10 MIN.

Teacher: Yes, when we heat a liquid like water, it turns into a gas, which we call steam. What happens when we cool a liquid like water?

Teacher: Correct. When we cool water, it turns into a solid, like ice. Isn't that amazing? So, heating and cooling can change the state of matter from solid to liquid and liquid to gas or vice versa.

Teacher: Great work. Now, let us move on to an activity to explore these concepts further.

Teacher: Let me show you a simple activity that demonstrates how matter changes with heating. I have a beaker of water and some ice cubes.

MUST DO 15 MIN.

Teacher: Now, I will add the ice cubes to the water. I want you to observe carefully as the ice melts and changes into liquid water.

(Add the ice cubes to the water.)

Teacher: As you watch, think about how the state of the ice changes. Can you see it turning from solid (ice) to liquid (water)?

Teacher: Excellent observation. You are doing great work noticing how the matter changes. Keep paying attention to the changes in the matter.

You may show the **Animation** on the digital platform.

Differentiated Activities

110 km/hr

What happens to the gases dissolved in water when it boils?

80 km/hr

What do we call the gas dissolved in aerated drinks?

40 km/hr

What happens to water when it is cooled?

Home Task

Write down one example of a substance that changes from solid to liquid and another from liquid to gas. Describe how heating or cooling causes these changes.

Period 6

Teacher: Good morning, students. How are you all today?

SHOULD DO 05 MIN.

Teacher: Great. Let us begin today's lesson with a quick game. I will ask some questions and you have to answer them. Ready?

Teacher: What happens when ice is heated? (It melts and turns into water.)

Teacher: What happens when water is boiled? (It turns into steam, a gas.)

Teacher: What is the process called when a liquid changes into a gas? (Evaporation or boiling.)

Teacher: Can gases dissolve in water? (Yes, gases like oxygen and carbon dioxide dissolve in water.)

Teacher: What is an example of a gas that dissolves in water? (Oxygen or carbon dioxide.)

Teacher: Well done, everyone. You remembered the concepts well. Let us now move on to today's lesson.

(The teacher will read the third to sixth paragraphs of 84 aloud and provide explanations to ensure that the students understand the content.)

Physical change

Physical change indicates change in the state of matter. This means from solid to liquid, liquid to gas or gas to solid. These changes are reversible and temporary in nature.

For example, on heating, solid wax turns into liquid wax. However, on cooling, the liquid wax turns into solid wax. Similarly, the melting of ice cubes and crumpling of paper are some physical changes.

84

Teacher: Today, we are going to learn about physical changes. Can anyone tell me what happens in a physical change?

MUST DO 10 MIN.

Teacher: Yes. A physical change happens when the state of matter changes. For example, when a solid changes to a liquid, like when ice melts into water.

Teacher: These changes are reversible and temporary. Can anyone give me another example of a physical change?

Teacher: Great. The melting of ice cubes and crumpling paper are examples of physical changes. Now, think about the melting of wax. When we heat solid wax, what happens?

Teacher: Exactly. The wax melts into liquid wax and when we cool it down, it turns back into solid wax. Well done.

Discovering better

(Explain the terms given in the 'Discovering better' on page 84 of the Main Course Book.)

MUST DO 05 MIN.

Discovering better

LAD

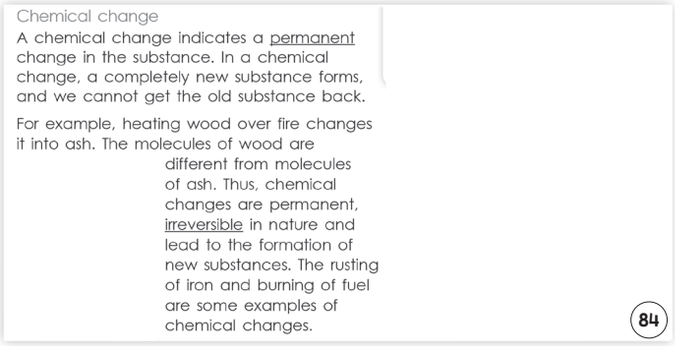
reversible: that can be returned to its previous form

temporary: short-term

permanent: here, cannot be reversed

irreversible: that cannot return to its previous form

84


Chemical change

A chemical change indicates a permanent change in the substance. In a chemical change, a completely new substance forms, and we cannot get the old substance back.

For example, heating wood over fire changes it into ash. The molecules of wood are different from molecules of ash. Thus, chemical changes are permanent, irreversible in nature and lead to the formation of new substances. The rusting of iron and burning of fuel are some examples of chemical changes.

84

Teacher: Now, let us talk about chemical changes. Can anyone explain what happens in a chemical change?

MUST DO 10 MIN.

Teacher: Yes, a chemical change happens when a completely new substance is formed and this change is permanent and irreversible. Can anyone think of an example of a chemical change?

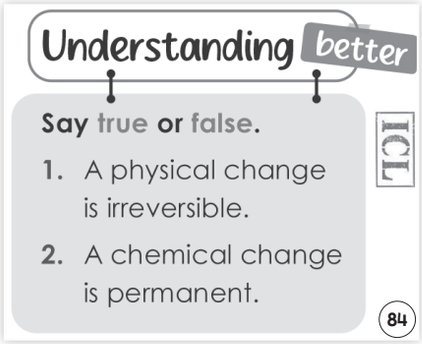
Teacher: Excellent. Heating wood changes it into ash. The molecules of wood are completely different from the molecules of ash.

Teacher: Another example of a chemical change is when iron rusts. The rusting of iron cannot be reversed. Well done, everyone.

Understanding Better

MUST DO 05 MIN.

Teacher: Let us check our understanding with some true or false statements. I will read the statements and you tell me if they are true or false.



Teacher: First statement: A physical change is reversible. True or false?

Teacher: Correct. That is true. Now, the second statement: A chemical change is temporary and reversible. True or false?

Teacher: Well done. That is false. Chemical changes are permanent and irreversible. Let us try another one. Third statement: Burning wood is a chemical change. True or false?

Teacher: Excellent. That is true. You are doing a great job.

Poster

MUST DO 05 MIN.

Teacher: Let us take a moment to look at the poster on the wall.

(Please display and discuss the posters prominently in the classroom to reinforce the learning about physical and chemical changes. Encourage students to observe the posters and discuss the different examples of physical and chemical changes.

Teacher: Great observation, everyone.

You may show the **Concept Map** and **Slideshow** on the digital platform.

Differentiated Activities

110 km/hr

What is the difference between a physical and a chemical change?

80 km/hr

Can the process of rusting be reversed?

40 km/hr

What happens to water when it is heated?

Home Task

Write down two examples of physical changes and two examples of chemical changes. For each, explain whether the change is reversible or irreversible.

Period 7

SHOULD DO 05 MIN.

Teacher: Good morning, students. How are you all today?

Teacher: Great. Let us begin today's lesson with a quick game. I will ask some questions, and you have to answer them. Ready?

Teacher: Is melting of ice a physical or chemical change? (Physical change)

Teacher: Is burning wood a physical or chemical change? (Chemical change)

Teacher: Can a physical change be reversed? (Yes)

Teacher: Is rusting of iron reversible? (No)

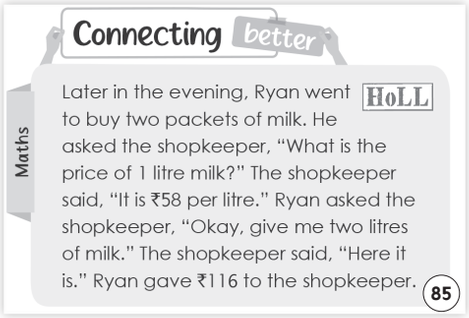
Teacher: What happens to water when it boils? (It turns into gas)

Teacher: Well done, everyone. You remembered the concepts well. Let us now move on to today's lesson.

Connecting better

MUST DO 10 MIN.

Teacher: Today, we will connect our understanding of maths with a real-life situation. Ryan went to the shop to buy two packets of milk. He asked the shopkeeper, "What is the price of 1 litre of milk?" and the shopkeeper replied, "It is ₹58 per litre."



Teacher: Now, Ryan wanted to buy 2 litres of milk. Can anyone calculate how much he will pay for 2 litres of milk?

Teacher: Yes, you are right. ₹58 per litre multiplied by 2 litres equals ₹116. This is an example of multiplication in real life.

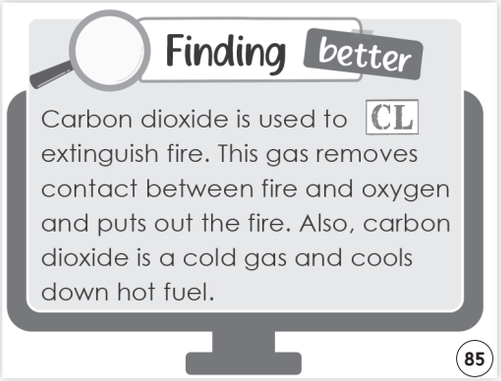
Teacher: What does this transaction teach us about how prices are calculated?

Teacher: Correct. It shows us how to use multiplication to find the total price based on the quantity of the product. Great work, everyone. Now, let us move on to our next section: Finding Better.

Finding better

Teacher: Carbon dioxide is used to extinguish fire. Can anyone tell me why carbon dioxide is used to put out fire?

MUST DO
05 MIN.



Teacher: That is correct. Carbon dioxide removes the contact between fire and oxygen and helps cool down the fuel. It is a cold gas that helps put out the fire.

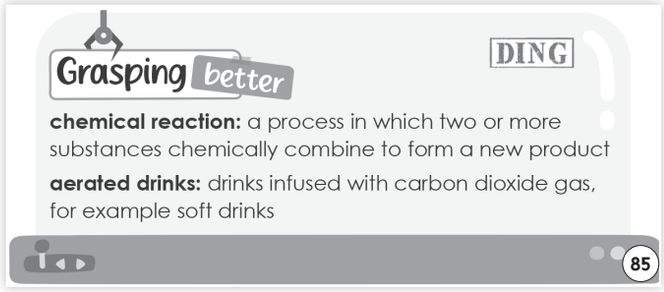
Teacher: Great job. Now, let us look at the next part, Grasping better.

Grasping better

MUST DO
05 MIN.

Teacher: Let us discuss chemical reactions. A chemical reaction happens when two or more substances mix together and form a new product. Can anyone give me an example of a chemical reaction?

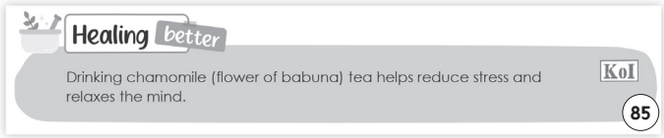
Teacher: Yes. When carbon dioxide gas is dissolved in aerated drinks, like soft drinks, it forms a fizzy product. That is a chemical reaction. Well done, everyone.



Healing better

MUST DO
10 MIN.

Teacher: Now, let us talk about healing. Drinking chamomile tea, which is made from the flower of babuna, can help reduce stress and relax the mind.



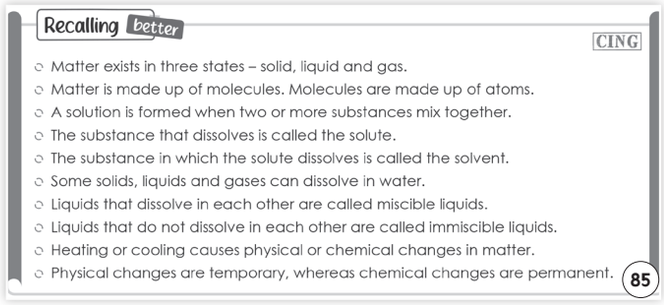
Teacher: Has anyone ever tried chamomile tea before? What do you think it might feel like?

Teacher: Yes, it is very relaxing. Well done, everyone. Now, let us move on to the last part, Recalling better.

Recalling better

MUST DO
05 MIN.

Teacher: Now, let us recall what we have learned so far with a few questions. I want you to answer them and I will explain the answers to help you understand even better.



Teacher: First question: What are the three states of matter?

Teacher: Well done. The three states of matter are solid, liquid and gas. We know that solids keep their shape, liquids flow and gases fill the space they are in.

Teacher: Next question: Can you explain what happens when two substances mix together to form a solution?

Teacher: Exactly. When two substances mix together and dissolve in each other, they form a solution. For example, when sugar dissolves in water, it forms a solution.

Teacher: Now, how do heating or cooling affect matter?

Teacher: Great. Heating or cooling causes matter to change its state. For example, heating water changes it from liquid to gas (steam) and cooling water changes it from liquid to solid (ice).

Teacher: What types of substances can dissolve in water?
Teacher: Good job. Some solids, liquids and gases can dissolve in water. For example, salt and sugar can dissolve in water.
Teacher: Finally, what is the difference between a physical change and a chemical change?
Teacher: Excellent. A physical change is temporary and reversible, like melting ice, while a chemical change is permanent and irreversible, like burning wood.
Teacher: You did fantastic work recalling all the concepts today. Well done, everyone.
You may show the **Animated Activities** and **Quiz** on the digital platform.

Differentiated Activities

110 km/hr

What is the term used for a chemical reaction where new substances are formed?

80 km/hr

What is the gas that is used to put out fires?

40 km/hr

What is the process that happens when sugar dissolves in water?

Home Task

Complete the 'Trying better' activity given on page 85 of the Main Course Book.

Period 8

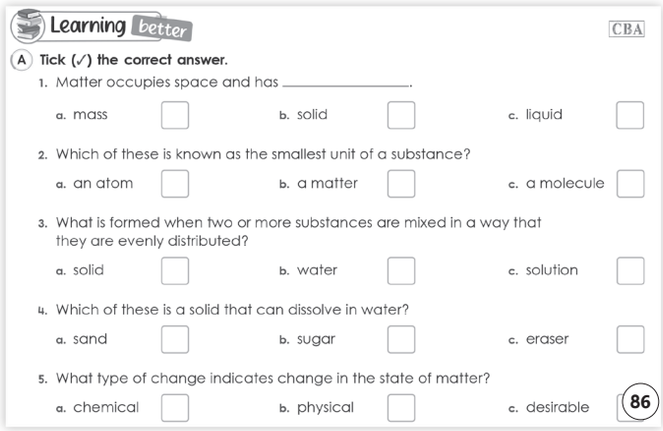
SHOULD DO 05 MIN.

Teacher: Good morning, students. How are you all today?
Teacher: Great. Let us begin today's lesson with a quick game. I will ask some questions and you have to answer them. Ready?
Teacher: What happens when carbon dioxide is dissolved in a drink? (It creates bubbles.)
Teacher: What type of change is melting ice? (Physical change.)
Teacher: What does the term "miscible liquids" mean? (Liquids that dissolve in each other.)
Teacher: Can heating change the state of matter? (Yes.)
Teacher: What is an example of a chemical change? (Burning wood.)
Teacher: Well done, everyone. You remembered the concepts well. Let us now move on to today's lesson.

Learning better

MUST DO 05 MIN.

Teacher: Everyone, please open page 86 of your Main Course Book. In Exercise 'A' of 'Learning better' you have to tick the correct answer. Are you ready to get started?
Teacher: Great. Let us begin with the first question. Matter occupies space and has_____.



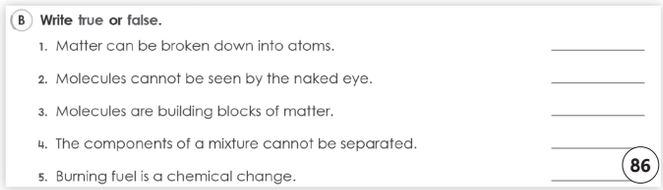
Learning better CBA

A Tick (✓) the correct answer.

1. Matter occupies space and has _____.
   a. mass ☐ b. solid ☐ c. liquid ☐
2. Which of these is known as the smallest unit of a substance?
   a. an atom ☐ b. a matter ☐ c. a molecule ☐
3. What is formed when two or more substances are mixed in a way that they are evenly distributed?
   a. solid ☐ b. water ☐ c. solution ☐
4. Which of these is a solid that can dissolve in water?
   a. sand ☐ b. sugar ☐ c. eraser ☐
5. What type of change indicates change in the state of matter?
   a. chemical ☐ b. physical ☐ c. desirable ☐

86

Teacher: The correct answer is mass. Well done.
(Similarly, complete all five questions. And discuss the correct answers.)



B Write true or false.

1. Matter can be broken down into atoms. _____
2. Molecules cannot be seen by the naked eye. _____
3. Molecules are building blocks of matter. _____
4. The components of a mixture cannot be separated. _____
5. Burning fuel is a chemical change. _____

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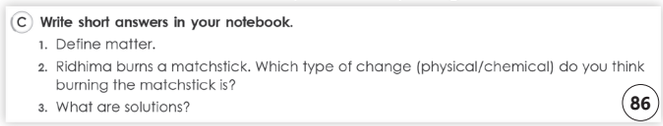
Teacher: Let us start Exercise 'B' of the 'Learning better' section, you have to write either true or false in the space provided. Are you ready to get started?

MUST DO 05 MIN.

Teacher: Great. Let us begin with the first question. Matter can be broken down into atoms.
Teacher: Yes. It is true.
(Similarly complete all five questi ons)
Teacher: Let us explore some short-answer questions. In Exercise 'C' of the 'Learning better' section, you have to write a short answer. Are you ready to get started?

MUST DO 10 MIN.

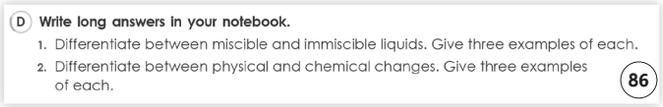


C Write short answers in your notebook.

1. Define matter.
2. Ridhima burns a matchstick. Which type of change (physical/chemical) do you think burning the matchstick is?
3. What are solutions?

86

Teacher: Great. Let us begin with the first question. Define matter.
(Students have to write the answers for the given questions in about 40 to 50 words in their notebook. Wait for the students to write the answers.)
(Similarly, complete all three questions and discuss the correct answer with the class.)
Teacher: Let us explore some long-answer questions. In Exercise 'D' of the 'Learning better', you have to write a long answer. Let us begin with the first question. Differentiate between miscible and immiscible liquids. Give three examples of each.



MUST DO
15 MIN.

(Students have to write the answers for the given questions in about 100 to 150 words in their notebook. Wait for the students to write the answers.)

(Similarly, complete the second question and discuss the correct answer with the class.)

(Instruct the students to bring their Little Book in their next class.)

Differentiated Activities

110 km/hr

What is the difference between physical and chemical changes? Give one example of each.

80 km/hr

What happens when a solid is heated?

40 km/hr

What are the three states of matter?

Home Task

Complete the 'Creating better' activity (Homemade lava lamp) given on page 87 of the Main Course Book.

Period 9

SHOULD DO
05 MIN.

Teacher: Good morning, students. How are you all today?

Teacher: Let us begin today's lesson with a quick game. I will ask some fresh questions and you have to answer them. Ready?

Teacher: What happens to water when it boils? (It turns into steam)

Teacher: Can gases be dissolved in liquids? Can you give an example? (Yes, oxygen in water)

Teacher: When a substance changes from gas to liquid, what is this called? (Condensation)

Teacher: What is an example of an immiscible liquid? (Oil and water)

Teacher: When a liquid is cooled, does it turn into a gas or a solid? (Solid)

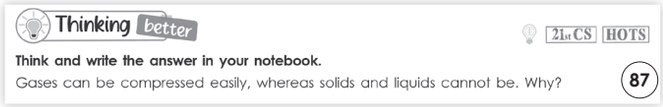
Teacher: Well done, everyone. You did a fantastic job. Let us now move on to today's lesson.

Thinking better

MUST DO
10 MIN.

Teacher: Let us start with a thinking activity. I want you to think carefully and write the answer in your notebooks.

Teacher: Why can gases be compressed easily, whereas solids and liquids cannot?



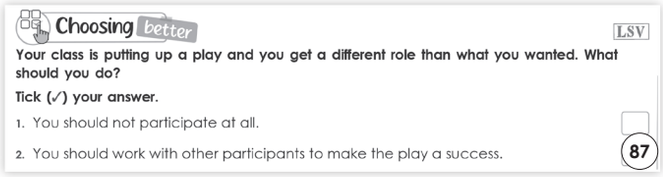
(Give the students time to think and write.)

Teacher: Great thinking. Gases can be compressed easily because the particles are far apart, while in solids and liquids, the particles are tightly packed, making it difficult to compress them. Well done.

Choosing better

MUST DO
05 MIN.

Teacher: Now, let us move to a scenario. Your class is putting up a play and you get a different role than what you wanted. What should you do?



Teacher: I will read the two options for you. Please tick the one that you think is correct:

Teacher: Option 1: You should not participate at all.

Teacher: Option 2: You should work with other participants to make the play a success.

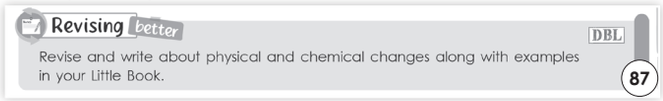
(Give the students time to choose.)

Teacher: Well done. The correct answer is Option 2. You should always work with others to make the play a success, even if you do not get the role you wanted. Excellent choice, everyone.

Revising better

MUST DO
05 MIN.

Teacher: Let us revise the concepts we have learned today. I want you to write about physical and chemical changes along with examples in your Little Book.



Teacher: Remember, physical changes are temporary and reversible, like melting ice, while chemical changes are permanent, like burning wood.

(Let the students write.)

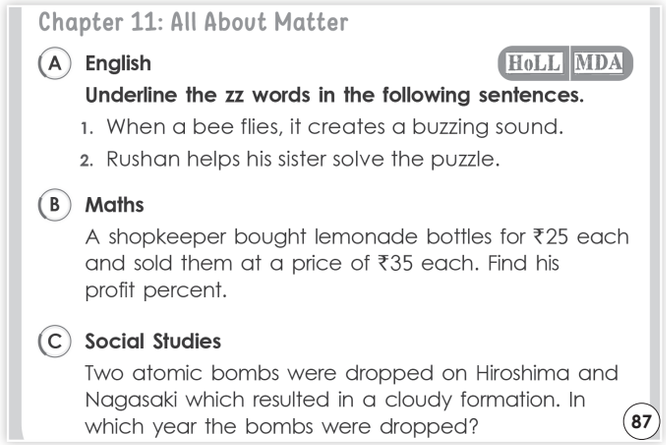
Teacher: Excellent. Well done for revising and understanding these concepts. Keep your notes neat and clear. Now, let us move on to the next section.

Book of Holistic Teaching

MUST DO
15 MIN.

Refer to the Book of Holistic Teaching, page number 25 under the title 'All About Matter.' Complete the activities mentioned in this section and ensure that the students complete them. These activities are designed to enhance their holistic

understanding and engagement with the topic. Provide any necessary support and materials to help the students successfully finish the activities.



Chapter 11: All About Matter

(A) **English** HoLL MDA

Underline the zz words in the following sentences.

1. When a bee flies, it creates a buzzing sound.
2. Rushan helps his sister solve the puzzle.

(B) **Maths**

A shopkeeper bought lemonade bottles for ₹25 each and sold them at a price of ₹35 each. Find his profit percent.

(C) **Social Studies**

Two atomic bombs were dropped on Hiroshima and Nagasaki which resulted in a cloudy formation. In which year the bombs were dropped?

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(Instruct students to bring their workbooks in their next class.)

Differentiated Activities

110 km/hr

Explain why gases can be compressed but solids and liquids cannot.

80 km/hr

What is the difference between a physical and a chemical change?

40 km/hr

Can solids be compressed easily?

Home Task

The Project Idea, given in the book of Project Ideas, page 17 under the title 'All About Matter.' This project should be assigned to the students as a home task to work on. Ensure that the students understand the project requirements and provide any necessary guidance or materials they might need.

Period 10

SHOULD DO 05 MIN.

Teacher: Good morning, students. How are you all today?

Teacher: Let us begin today's lesson with a quick game. I will ask some fresh questions and you have to answer them. Ready?

Teacher: What happens when a liquid turns into a gas? (It evaporates or boils.)

Teacher: If we cool a gas down, what will happen to it? (It will turn into a liquid.)

Teacher: Can all liquids dissolve in water? (No, only some liquids can dissolve.)

Teacher: When you heat a solid, what does it turn into? (It turns into a liquid.)

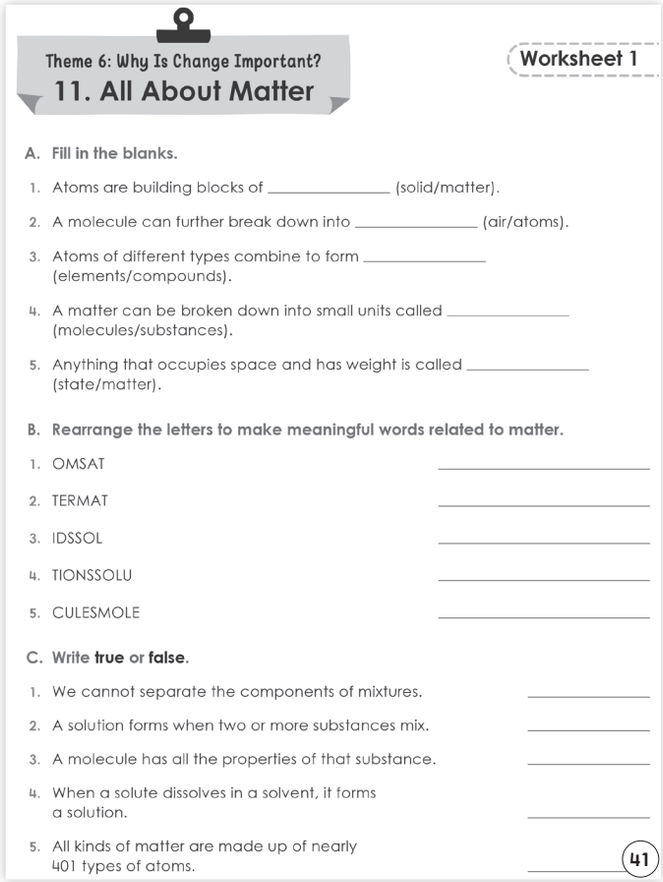
Teacher: What is an example of a reversible change? (Melting ice back into water.)

Teacher: Well done, everyone. You remembered the concepts well. Let us now move on to today's lesson.

Worksheet – 1

MUST DO 10 MIN.

Teacher: Let us do some activities from the workbook. Everybody, please open page 41 of your workbook and answer the questions given in worksheet - 1.



Theme 6: Why Is Change Important?

11. All About Matter

Worksheet 1

A. Fill in the blanks.

1. Atoms are building blocks of _____ (solid/matter).
2. A molecule can further break down into _____ (air/atoms).
3. Atoms of different types combine to form _____ (elements/compounds).
4. A matter can be broken down into small units called _____ (molecules/substances).
5. Anything that occupies space and has weight is called _____ (state/matter).

B. Rearrange the letters to make meaningful words related to matter.

1. OMSAT _____
2. TERMAT _____
3. IDSSOL _____
4. TIONSSOLU _____
5. CULESMOLE _____

C. Write true or false.

1. We cannot separate the components of mixtures. _____
2. A solution forms when two or more substances mix. _____
3. A molecule has all the properties of that substance. _____
4. When a solute dissolves in a solvent, it forms a solution. _____
5. All kinds of matter are made up of nearly 401 types of atoms. _____

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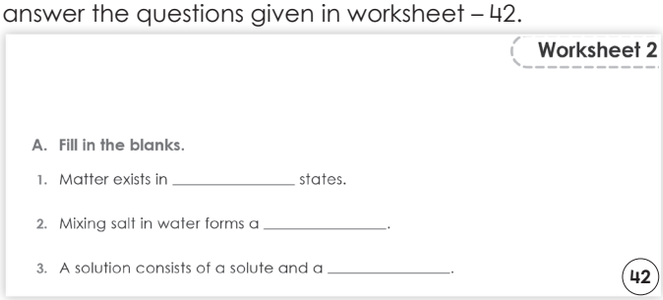
(Let the students answer the questions on their own. Then discuss the answer by writing the correct answer on the blackboard.)

Worksheet – 2

Teacher: Let us do some activities from the worksheet - 2. Everybody, please open page 42 of your workbook and answer the questions given in worksheet – 42.



Worksheet 2

A. Fill in the blanks.

1. Matter exists in _____ states.
2. Mixing salt in water forms a _____.
3. A solution consists of a solute and a _____.

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3. A solution consists of a solute and a _____.

4. Molecules cannot be seen by _____.

5. A solute is a substance that gets _____ in the solvent.

B. Rearrange the letters to make meaningful words related to matter.

1. UTESOL _____
2. ENTSOLV _____
3. ANCESUBST _____
4. MICALCHE _____
5. OUNDSCOMP _____

C. Write true or false.

1. Salt cannot dissolve in water. _____
2. All solids can dissolve in water. _____
3. All liquids can dissolve in each other. _____
4. Sugar molecules find space among molecules of water. _____
5. Salt molecules cannot find space among molecules of water. _____

(Let the students answer the questions on their own. Then discuss the answer by writing the correct answer on the blackboard.)

MUST DO 10 MIN.

You may generate additional practice worksheets using the **Test Generator** given on the digital platform.

Book of Project Ideas

COULD DO 10 MIN.

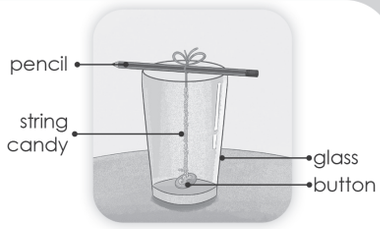
Discuss the project assigned as the home task in the ninth period, focusing on helping students understand the objectives and addressing any challenges they face.

Chapter 11: All About Matter

Make a string candy. CT PRO 21st CS

Materials required: a pan, water, sugar, pencil, string, glass, candy and a button

- Take a pan and ask an adult to boil water in it.
- Add a spoonful of sugar and stir it. Keep on adding the sugar until no more sugar can dissolve.
- Pour the sugar water into a glass and tie a string in the middle of a pencil and hold it down by tying it to a button.
- Set this pencil across the rim of a glass, as shown. Allow the glass to sit in a warm place without being disturbed for 3–4 days.
- When the water evaporates, it will leave sugar crystals on the string. Your string candy is ready!



Teacher: Now, let us complete the 'KWL' activity.

SHOULD DO 05 MIN.

Teacher: Take out your notebook and fill in the Last column. Write what have you learned in this chapter.

(Wait for students to fill in the chart.)

Teacher: Let us all give a huge round of applause to everyone for their hard work and creativity. Great work, everyone. See you in the next class. Have a wonderful day ahead.

Differentiated Activities

110 km/hr

What happens to the particles when a solid dissolves in a liquid?

80 km/hr

What happens to the particles of water when it is frozen?

40 km/hr

What happens when the water gets very cold?

Home Task

Complete 'Activity 5' (Making oobleck) given on page 88 of the Main Course Book.

Learning Outcomes

The students will:

Domain	Learning Outcomes
Physical Development	• demonstrate the ability to conduct simple experiments to observe and classify different states of matter.
Socio-Emotional and Ethical Development	• collaborate with peers to classify substances as solids, liquids or gases, showing teamwork and mutual respect.
Cognitive Development	• identify the three states of matter with examples, differentiate physical and chemical changes, explain the composition of matter through atoms and molecules and classify substances as soluble or insoluble in water.
Language and Literacy Development	• read, comprehend and summarise scientific information about matter using appropriate terminology and explain key concepts verbally and in writing through structured responses and discussions.
Aesthetic and Cultural Development	• recognise the importance of matter in daily life by exploring real-world applications such as water purification, air quality and material usage in industries.
Positive Learning Habits	• develop curiosity and responsibility by asking relevant questions, making predictions and recording observations about matter and its changes.

Starry Knights
Is learning about the states of matter in their surroundings interesting for the learners? Share one of the anecdotes here.

Give yourself a STAR.