UTKARSH

SCIENCE ACTIVITY TREASURE

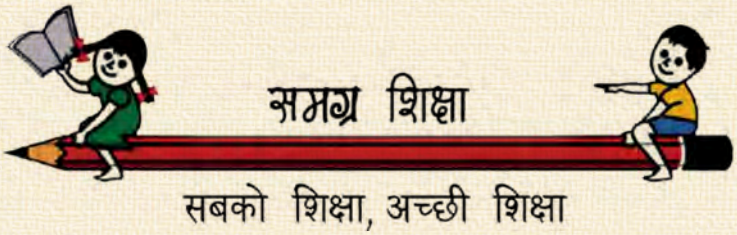
Class-VI

राज्य शैक्षिक अनुसंधान एवं प्रशिक्षण परिषद् दिल्ली
DELHI
SCERT

स्वाध्यायान्मा प्रमदः

समग्र शिक्षा
सबको शिक्षा, अच्छी शिक्षा

स्वाध्यायान्मा प्रमदः



UTKARSH

Science Activity Book for Class VI

State Council of Educational Research and Training
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MESSAGE

The Government of Delhi has been putting up various efforts to provide universal access to quality education to the children studying in the schools of the Directorate of Education, Delhi. We have implemented many programs to ensure equitable and inclusive education in our schools.

The corona virus pandemic has affected the school education immensely in the last two years. Due to the closure of the schools, the students were confined to their homes. We introduced and managed online learning successfully. The teachers were constantly connected with the students through online classes and kept assessing their progress. But during this time, children who had continuously been in difficult circumstances could not join online classes, lagged behind and a great need was felt to connect them to the mainstream school education.

Taking these aspects into account, to encourage children for learning and to ensure their active participation in learning, **'Utkarsh'** book series has been created with the joint effort of State Council of Educational Research and Training, New Delhi and Samagra Shiksha to bridge the gap in education.

This series contains activities based on practical learning which will enable the students to read, write, and perform basic numerical operations and to develop basic competencies in school subjects. The books in this series will also act as an effective medium for their physical, cognitive, social, emotional, moral and cultural development.

The books are based on the concept of play-based, multi-dimensional and discovery-based learning for Hindi, English, Social Science, Science, Urdu, Punjabi, and Mathematics books of activities have been designed for Classes 6 to 8 (Middle Level). Social Science, Science and Mathematics books have been created in both Hindi and English language for achievement of better learning outcomes. Students will learn about human sensitivities, group work, mutual cooperation, courtesy through play and activities and will be able to imbibe these qualities in them to become ideal citizens. It is hoped that a new educational revolution will be ushered in through these books. Students will develop conceptual understanding and the tendencies of creative and logical thinking. Based on empirical pedagogy, these books incorporate diversity of local contexts, multilingualism and respect for the local environment.

I am sure that these books will provide a strong foundation to the students for equitable and inclusive education, and will prove to be a milestone in the world of education.

(MANISH SISODIA)

H. RAJESH PRASAD
IAS

सत्यमेव जयते

प्रधान सचिव (शिक्षा/प्रशिक्षण व तकनीकी शिक्षा/ उच्च शिक्षा)
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MESSAGE

Recent times have been extremely challenging for people all over the world. Now, after two formidable years of corona times, we are again moving towards normal life.

In the field of education in Delhi, though various successful efforts were made to keep students engaged in learning through online teaching, worksheets and online assessment for the last two years, but due to the lack of face-to-face mode of teaching- learning process or a direct contact and communication with students or due to some family and financial reasons there was a gap in the process of learning.

Keeping this new scenario in mind, **'Utkarsh'** book series has been prepared under the Learning Enrichment Program to rise up from the challenge of this learning gap. There are many activity sheets in these books which have been developed on the basis of context specific learning outcomes. Activities have been designed around the social context of learning, taking into account the culture, multilingualism, and environment of the students. These activities are designed according to the emotional and intellectual level of the students so as to ensure active participation of the students in the learning process.

We aim to initiate the all-round development of the students through our efforts.

We hope that the students will become active participants in the process of knowledge creation through these activities.

With best wishes,

(H. Rajesh Prasad)

HIMANSHU GUPTA, IAS
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MESSAGE

"It is said that when the going gets tough, the tough get going."

COVID Pandemic was one such trying time. Although as country, India, tried to deal with this time in a multipronged manner, we are still trying to rise above its negative effects in various aspects of life.

Education sector also saw its negative impact especially in school education. So it has become extremely important to bridge the gap of expected learning outcomes and the current status of learning outcomes. To achieve the goal of providing high quality education to all students we have developed **'Utkarsh'** series. These books have been created for students of classes 6 to 8 and have interesting activities which will develop curiosity, zeal to search, experience and create various opportunities for dialogue, which in turn will provide them a strong foundation for all aspects of life.

In the changing situations it is really important for students to master 21st century skills along with ethics, rationality, empathy and sensitivity so that in future they move towards an enriched life ahead. The 'Utkarsh' series books written on subjects of Mathematics, Science, Hindi, English, Social Science, Urdu and Punjabi will develop the creative abilities of the students and they will be able to connect to their environment and establish coordination.

These books have been designed keeping in view the goal of multidisciplinary and holistic education, in which ample opportunities for learning have been provided. Self-instructional activities like colourful pictures, songs, poems, puzzles, stories, cartoons, posters, games, puppets will attract the attention of the students and motivate them for self-assessment and will further pave the way for effective learning.

I firmly believe that learning difficulties of the students will be catered to and desired learning outcomes will be achieved through the 'Utkarsh' series. These books will prove to be an effective medium in the attainment of desired goals and will contribute directly to build an inclusive, egalitarian and just society.

With best wishes.

(HIMANSHU GUPTA)

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MESSAGE

Dear students,

The last two years have been challenging due to the COVID pandemic for all of us. This pandemic impacted nearly every dimension of life, be it health, employment, economy or livelihood of human life. Even the education sector has not been left untouched by it because of the closure of schools. It not only affected the teaching-learning process, it also had a formidable impact on the possibilities of learning for students, limiting the opportunities of peer learning and directs guidance of teachers. Although online classes helped to maintain the continuity of the teaching-learning process but there were numerous challenges related to the accessibility of online education for students studying in the government schools of Delhi.

This context led to the development of the **'Utkarsh'** series to cater to the new learning needs of the students. This series is a compendium of the worksheets which aim to provide opportunities to the students for self-learning. These worksheets are child-centered and activity-based and they reflect regional, social and cultural domains of the students. These worksheets help the students to explore their environment as a learning resource, as they have many activities that require them to interact with and learn from family members, neighbours, community members, locality and nature.

I am hopeful that this initiative of State Council of Educational Research and Training would play a significant role in inspiring the students of classes 6 to 8 to take ownership of their learning process and to provide the opportunity of accessing quality education.

With best wishes.

(Rajanish Singh)

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Message

It is said that the trying times test out mettle the best. The corona period brought many challenges for us, but these challenges also changed our perspective and inspired us to adopt patience, indomitable courage and self-reliance. During the lockdown for some time, school education could not be done smoothly, due to which the learning process of the children was hampered. In this context, it is important to ask whether children studying online at home are able to acquire knowledge, skills and competencies according to their prescribed class and development level? In the present context, it is relevant that meaningful efforts should be made in the direction of reducing this gap of learning.

To bridge this gap in the level of learning, special course material, in the form of **Utkarsh** series, has been created for students with the combined effort of State Council of Educational Research and Training, New Delhi and Samagra Shiksha. This text material is interesting, responsive, informative and engaging for students. I am hopeful that it will be effective for self-development and will provide students the required competencies. These activities are designed to engage students in observation, critical thinking, creative thinking, questioning, problem- solving, effective communication, decision making, empathy and contemporary problems using play- based, story-based, art integrated and child- centered learning methods.

With best wishes for the bright future of our students.

(Dr. Nahar Singh)

For Teachers...

Respected teacher fellows,

Every book that is meant to provide learning experiences has some unique features which determine its usage. This book has been developed as a learning enrichment material for students with a purpose of ensuring the achievement of learning outcomes. The theme under which the book interacts with learners is activity-based learning, followed by 'assessment as learning'. This means that each chapter has some activity sheets which begin with some activity and then some questions follow, through which learners enrich their learning in science. Each question has some cues/clues in the form of pictures, examples and hints so that the learners are tempted to find answers through the available resources. The learners may take help from their teachers, NCERT textbook, internet or family members to quench the quest. The answers of the questions have not been provided in the book deliberately, to maximize the opportunity to think critically.

Another important feature of this book is the integration of social life of learners with science. Utmost care has been taken that the context of the book relates with the real-life experiences of learners so that the application of conceptual understanding becomes easier. For this purpose, the commonly available material has been used/suggested for doing science activities. Also, the examples and illustrations that have been used are from the surroundings of learners. Some of the tools that are generally considered subject specific like, maps, graphs, stories etc. have been used to make the content interesting as well as integrated.

Each activity sheet entertains one to two learning outcomes only to easily monitor their fulfillment. Efforts have been made for the gamification of the process of assessment. These efforts include riddles, crossword puzzles, word-grids, tail the donkey, odd one out, snake and ladder, picture identification etc. It is hoped that these unique characteristics of the book would make the learning process joyful and interesting even for the low achieving group of students. This would also be helpful in developing interest among learners towards science and its applications.

The language that has been used in the book is contextual and in common usage. This makes the content easy to grasp and comprehend. Besides making the learning process interesting, this book will also help in fulfilling the goals envisaged in 'Mission Buniyad'.

For Students...

Dear students,

This book has been developed to enrich your learning after getting learning experiences from regular classroom interactions. Efforts have been made to align the chapters with the list of class-wise learning outcomes (developed by SCERT, Delhi) as-well-as the chapters of NCERT textbook. You are expected to perform the activities suggested in these activity sheets and then try to answer the questions. This process has been designed in such a way that it would prompt you to learn actively and find answers. The illustrations, exemplar answers and clues would help you to understand the concept and think critically. At certain times, you may need help in doing some activity, to respond to a particular statement or in obtaining an answer. In such situations you must approach your teachers, family members or NCERT textbook as guides and instead of asking for the answers, you must ask them to direct you so that you may find the answers yourself.

To illustrate some fun science activities, QR CODEs are given on pages 21, 51and 78. Scan them and watch them on your smart phone, perform the activities, and enjoy doing science.

It is hoped that this book will help you all to inculcate a habit of self-learning.

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Learning Outcomes

After learning the different chapters, the students will develop certain skills, which are being shown here in the form of learning outcomes. By reading these students themselves or their parents/teacher can monitor their learning process.

Chapter 1: FOOD WHERE DOES IT COME FROM?

1. Identifies different types of food and ingredients.
2. Draws labelled diagrams of parts of a plant.
3. Differentiates between herbivores, carnivores and omnivores.

Chapter 2: COMPONENTS OF FOOD

1. Differentiates between the importance of each component for our body.
2. Classifies food on the basis of nutrients present in the food.
3. Conducts simple investigations to test nutrients present in the food.
4. Relates causes of deficiency diseases with diet.
5. Applies learning of balanced diet in selecting food items for day-to-day life.
6. Shows awareness towards protecting environment by minimising wastage of food.

Chapter-3: FIBRE TO FABRIC

1. Identifies fibres around on the basis of observable features i.e. texture, appearance etc.
2. Differentiates fibres and fabrics based on properties and characteristics.
3. Applies learning of scientific concepts in day- to-day life by selecting season appropriate fabrics.
4. Explains processing of plant fibres.

Chapter 4: SORTING MATERIALS INTO GROUPS

1. Identifies materials and objects on the basis of appearance, features, functions and characteristics.
2. Differentiates materials and objects on the basis of their properties, structure and functions.
3. Classifies the objects based on observations of properties such as solubility, transparency, texture and material it is made from/composition.

Chapter 5: SEPARATION OF SUBSTANCES

1. Differentiates materials on the basis of their properties.
2. Classifies materials as soluble and insoluble.
3. Applies learning of scientific concepts in separating materials.

Chapter 6: CHANGES AROUND US

1. Identifies, differentiates and classifies reversible and irreversible changes.
2. Explains reversible and irreversible changes on the basis of observable features.

3. Conducts simple investigations to seek answers to queries like; can all physical changes be reversed?'

Chapter 7: GETTING TO KNOW PLANTS

1. Identifies and classifies plants around such as herbs, shrubs, trees, creepers and climbers.
2. Differentiates (with examples from surroundings) plants roots as taproot and fibrous roots; venation as parallel and reticulate venation.
3. Draws and explains labelled diagrams of parts of flower.
4. Shows awareness towards protecting environment by taking care of plants.

Chapter 8: BODY MOVEMENTS

1. Identifies joints on the basis of structure and appearance.
2. Draws and explains the diagrams of joints and human skeleton.
3. Explains process of movements in animals.
4. Constructs model of joints or skeleton of animals.

Chapter 9: THE LIVING ORGANISMS CHARACTERISTICS AND HABITATS

1. Identifies the characteristics of living organisms.
2. Differentiates between living and non-living on the basis of their characteristics.
3. Relates the phenomenon of adaptation of animals and plants with their habitats.
4. Shows awareness towards protecting environment by taking care of animals and plants.

Chapter 10: MOTION AND MEASUREMENT OF DISTANCES

1. Identifies different units of measurement.
2. Differentiates between standard and non-standard system of measurement.
3. Classifies different kinds of motion into rectilinear circular and periodic motion.
4. Measures physical quantities and expresses with example in SI units.

Chapter 11: LIGHT, SHADOWS AND REFLECTION

1. Classifies (with examples from surrounding) materials/ objects as transparent, translucent and opaque.
2. Explains processes and phenomenon like formation of shadows; reflection of light from plane mirror.
3. Constructs model of a pinhole camera using material from surroundings and explain its working along with the application of scientific principles.

Chapter 12: ELECTRICITY AND CIRCUITS

1. Identifies electrical cells, bulbs, electrical wires and circuits.
2. Differentiates and explains electrical conductors and insulators.

3. Constructs models using materials from surroundings and explains the working and application of electric torch.

Chapter 13: FUN WITH MAGNETS

1. Identifies and differentiates between magnetic and nonmagnetic materials.
2. Conducts simple investigation to find the alignment of freely suspended magnet.
3. Applies learning of scientific concepts in day today life by using compass needle for finding directions.
4. Shows awareness towards protecting magnets.

Chapter 14: WATER

1. Identifies the necessity of water for life.
2. Relates processes like evaporation and transpiration with water cycle.
3. Draws and explains labelled diagram of water cycle.
4. Applies learning of scientific concepts in day-to- day life by suggesting ways to cope with heavy rain/ drought etc.
5. Shows awareness towards protecting environment by spreading awareness to adopt rainwater harvesting.

Chapter 15: AIR AROUND US

1. Relates processes and phenomenon such as quality of air with pollutants.
2. Explains processes and phenomenon such as variation in the composition of air.
3. Conducts simple investigation to find out why mountaineers carry oxygen cylinders with them etc.

Chapter 16: GARBAGE IN, GARBAGE OUT

1. Explains preparation of vermicomposting.
2. Shows awareness towards protecting environment e.g. minimising wastage.

Content

Date _____

CHAPTER-1: FOOD: WHERE DOES IT COME FROM?

Food materials and their sources

ACTIVITY SHEET-1

Learn with fun:

Make a list of 10 living things from your surroundings and write the food they eat.

	Name of living things	Food they eat
e.g.	Cow	Fodder
1.		
2.		
3.		
4.		
5.		
6.		
7.		
8.		
9.		
10.		

Q.1 Name the staple food of the following sports persons from different states?

_____

_____

_____

Milkha Singh from Punjab

_____

_____

_____

P V Sindhu from Andhra Pradesh

_____

_____

_____

Neeraj Chopra from Haryana

_____

_____

_____

Mirabai Chanu from Manipur

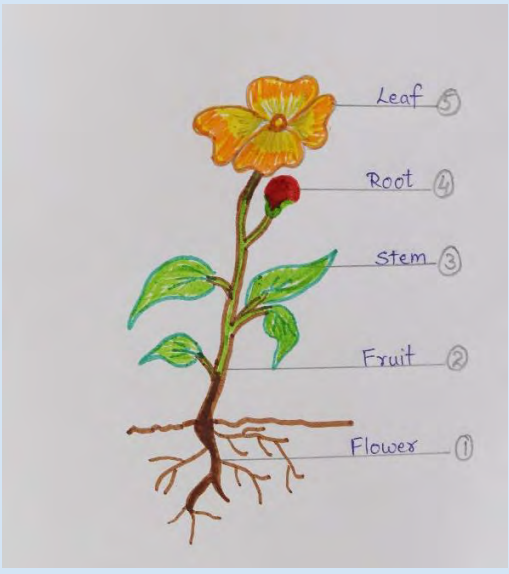
Q.2 Select the ingredients from the box to prepare food items given below the box.

oil, rice, salt, flour, urad dal, water, turmeric, lemon, sugar

Puri _____ Dosa _____

Kheer _____ Lemonade _____

Q.3 Shyam has changed the labeling of the parts of plant in given diagram to check his sister's knowledge. Help her to do the correct labelling.



1._____

2._____

3._____

4._____

5._____

Date _____

Food materials and their sources | **Plant and animal products**

ACTIVITY SHEET-2

Learn with fun:

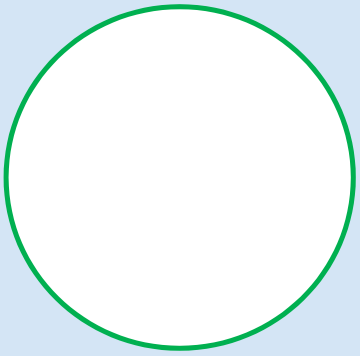
Try to recall any party/ family gathering you have attended and write the names of eatables served there. Identify the source of the food.

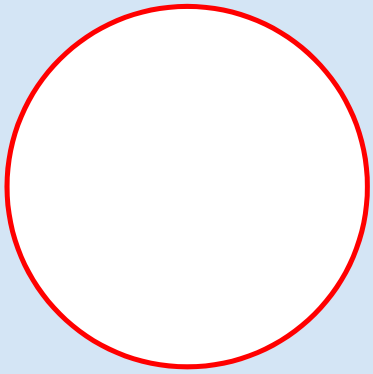
S. No.	Food served there	From where you get	
		From Animal	From Plant

Q.1 Identify the part of plant which the below given eatables belong to. Write in the respective column. One has been already done for you.

Root	Leaves	Fruit	Stem
	Lettuce		

Q.2 Tamanna's mother went to the market and bought potato, egg, tomato, coconut oil, honey, sugar, chana dal, cheese and chicken. Write down the plant products in green circle and animal products in red circle.





Q.3 Match the following:

Column A	Column B
Tiger	Grass
Cat	Rice, Chapati & dal
Buffalo	Nectar
Human Being	Deer
Honey bee	Mouse

Date _____

ACTIVITY SHEET- 3

Learn with fun:

Draw the eatables which are necessary to become healthy and strong in the space given below.

Q.1 Which of the following are Herbivores, Carnivores and Omnivores?

tiger, horse, man, goat, lion, monkey, deer, dog, fox

Herbivores …… …….. ……

Carnivores …….. …… ……

Omnivores …… …….. ……

Q.2 Who am I?

(a) I eat egg and plant products. I am a _____.

i. Herbivore
ii. Carnivore
iii. Omnivore

(b) I eat other animals only, I am a _____.

i. Sparrow
ii. Crocodile
iii. Rabbit

(c) I am an Omnivore because _____.

i. I eat other animals.
ii. I eat both animal and plant products.
iii. I eat only plant products.

Q.3 True or False:

(a) We get our food from animals and plants. ( )
(b) Plants have only one edible part. ( )
(c) Parrots eat only plant products. ( )
(d) Honey is a plant product. ( )
(e) We get sugar from plants. ( )

Date _____

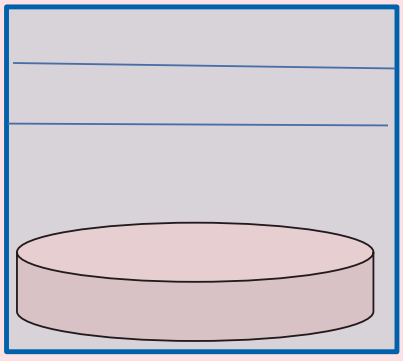
CHAPTER-2: COMPONENTS OF FOOD

Nutrients

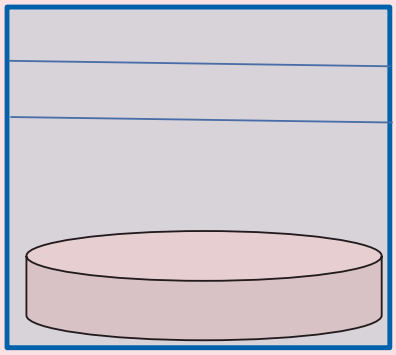
ACTIVITY SHEET- 1

Learn with fun:

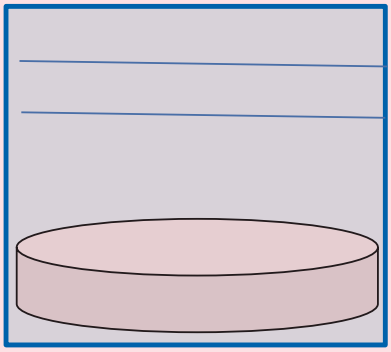
Write the food items you had in your meals yesterday?



Breakfast



Lunch



Dinner

Now place your food items according to the major nutrients present in it (multiple entries can also be made under these heads):

Carbohydrate

_____

_____

_____

Protein

_____

_____

Fats

_____

_____

_____

Vitamin & minerals

_____

_____

_____

Roughage

_____

_____

_____

Now identify, which nutrient is missing in your daily meals?

Q.1 Name the nutrient required:

When my body needs instant energy:

For growth and repair of body:

For protecting our body against diseases:

Q.2 Some food items are enlisted in the table along with the nutrients present in it :

Food	**Nutrient**	**Food**	**Nutrient**
Cheese	Protein Calcium	**Cucumber**	Water Minerals
Corn 	_____ _____	**Peas** 	_____ _____

Add more items in the table and write down the nutrients present in it.

Date _____

ACTIVITY SHEET-2

Learn with fun:

Food labels are loaded with lots of information. Collect few food labels of your favourite food. Discuss with your peers about information provided on food labels, like ingredients, nutrients present, date of expiry etc.

In the given table, add information on the basis of your observations. Add more labels of your own.

Food Items	Date of expiry	Ingredients	Nutrients present
Pasteurized full cream milk 	expiry date	Full Cream Milk	Fat, Protein, Carbohydrate, Calcium

Q.1 Identify the nutrients present in the given food items following experiment:

Food Items	Test performed	Result	Nutrient present
Potato slice	Put few drops of iodine solution/betadine.	Blue black colour appears.	
Egg White	Add few drops of copper sulphate and then caustic soda.	Violet colour appears.	
Rice (soaked and crushed)	Put few drops of iodine solution/ betadine.	Blue black colour appears.	
Pulses (soaked and crushed)	Add few drops of copper sulphate and then caustic soda.	Violet colour appears.	
Ground nut	Press hard between folds of paper.	Oily patch appears on paper.	

Q.2 Circle the odd one out:

(a) Rice Potato Gram Maize

(b) Pulses Egg Mango Milk

(c) Butter Nuts Carrot Ghee

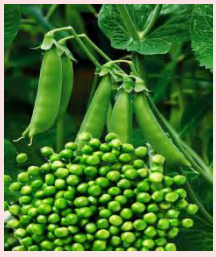
Date _____

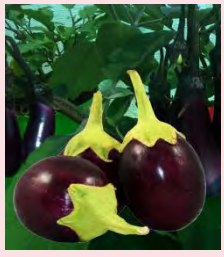
ACTIVITY SHEET-3

Learn with fun:

Given below are pictures of some food items. Add more food items that are traditionally eaten at your home or community in the boxes provided.










Now, put above food items into following categories :

Energy giving foods	Protective foods	Body building foods

Q.1 Who am I ?

Proteins, Glucose, Fats, Roughage, Vitamin D, Vitamin C, Vitamin A

(a) I provide protection and insulation to your body in cold weather along with large amount of energy.

Fat

(b) I am a vitamin made by our body in presence of sunlight.

(c) I help our body to fight against cold and boosts our immunity.

(d) I help to remove undigested food from our body.

(e) I am responsible for proper night vision.

(f) I help in the growth and repair of our body.

(g) I am instant source of energy, so my demand increases while doing physical activities.

Date _____

ACTIVITY SHEET- 4

Learn with fun:

Make a list of food items that you and your family members would like to have if you get a 'magic wand', like paneer tikka, mango, ice cream, cake etc.

_____

_____

_____

Now try to group your favourite foods into:

Junk Food	Nutritious Food

Explore and find out important food items and components present in the diet of the following sports persons

- Neeraj Chopra, an athlete _____
- Viswanathan Anand, Chess champion _____
- Mirabai Chanu, a weightlifter_____

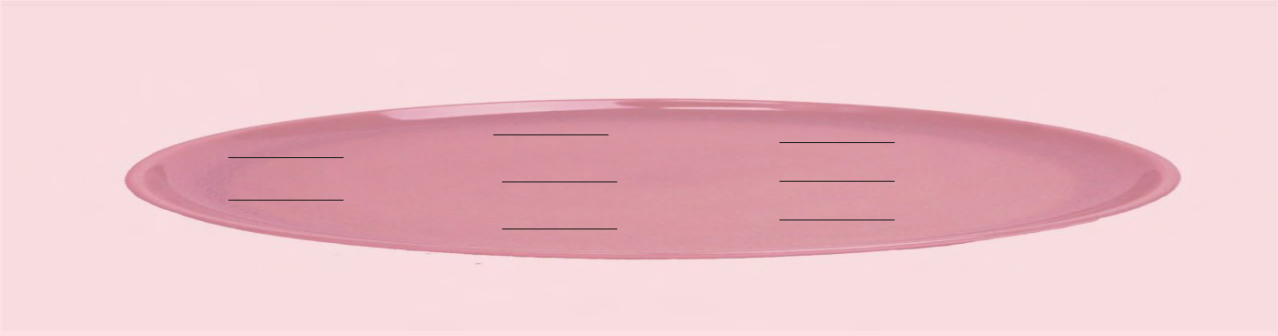
Q.1 Is balanced diet same for everyone or it depends on age, gender, physical activity, health condition of an individual?

Colour/shade the parts of the given circles according to the need of the nutrients of each individual.

Nutrients ➡ Individuals⬇	Carbohydrate	Protein	Fats	Vitamins	Minerals
5 yr. old child					
12 yr. old boy					
12 yr. old girl					
A farmer					
Bus driver					
Grand mother					
A patient					

Q.2 “Create your own meal”

Prepare a plate for yourself. Do the food items in your plate have all the essential nutrients to make your diet balanced?



Suggest changes to make your meal balanced.

Date _____

ACTIVITY SHEET-5

Learn with fun:

The word grid below has some diseases caused due to the deficiency of vitamins and minerals. Let's try to identify the diseases on the basis of symptoms.

D	E	M	C	G	U	D	S	B	C	P	L	O	P	N	B
A	X	Z	W	O	D	O	D	E	S	C	U	R	y	K	E
D	H	R	C	I	J	L	S	A	D	X	V	D	F	G	R
N	I	G	H	T	B	L	I	N	D	N	E	S	S	R	I
H	F	V	X	R	D	A	D	A	R	G	H	J	K	I	B
R	E	G	W	E	M	B	F	E	S	R	P	O	M	C	E
P	I	L	L	I	F	E	I	M	P	F	J	K	N	K	R
O	A	S	I	S	L	L	S	I	L	D	B	H	G	E	I
W	E	A	K	B	O	N	E	A	N	D	T	E	E	T	H
E	R	V	B	C	W	G	R	A	M	C	V	N	B	S	F

Across:

Poor eye sight, Low vision in dark.

Weakening of bones and teeth.

Bleeding of gums, prolonged healing of wounds.

Down:

Swelling of gland in the neck, mental weakness in children.

Weakness, tiredness while walking, whitening of nails, feeling sleepy

Softening and bending of bones.

Weak muscles, lack of energy to do work.

Q.1 Match the following:

Column A	Column B
Vitamin A	Rickets
Vitamin B1	Night blindness
Vitamin C	Goitre
Vitamin D	Beri-beri
Iodine	Anaemia
Iron	Scurvy

Q. 2 Conduct a survey on any ten families in your neighbourhood and try to find out if any member in their family had ever suffered from some deficiency disease. If yes, then what treatment was followed ?

SURVEY FORM	
Name of the participant	
Age	
Gender	
Deficiency disease	
Cause of the disease	
Treatment followed :	

Q.3 Based on the observations from the survey, answer the following questions:

(a) Does the treatment of deficiency diseases require any medicine or can supplements help to overcome the symptoms?

(b) Who suffers more from deficiency diseases, females or males? Give two reasons for your answer.

(c) Does excess of supplements/nutrients also cause problem?

(d) Write a slogan on the above picture.

Date _____

CHAPTER-3 : FIBRE TO FABRIC

Classification

ACTIVITY SHEET-1

Learn with fun:

Take two equal sized pieces of nylon and cotton clothes each. Dip each into separate vessels containing equal amount of water. Take out the pieces of clothes after 2 minutes and notice the amount of water left in the vessel. Now write answers to the following questions:

(a) Which cloth piece absorbed more water?

_____

(b) What type of clothes should we wear in summer season and why?

_____

_____

_____

NYLON

COTTON

Q.1 Match the following:

A	B
	Synthetic fibre
	Wool
	Silk
	Cotton

Q.2 Find and colour the odd one out.

(a) Silk | Nylon | Wool | Cotton

(b) Jute | Polyester | Nylon | Acrylic

(c) Coir | Cotton | Jute | Wool

(d) Leather | Cotton | Silk | Wool

Q.3 Words associated with fibres and fabrics are hidden in this grid. Follow the clues and search for them. (One has been done for you for as an example)

Clues:

(a) Fibres made from chemicals

(b) Fibres obtained from plants and animals.

(c) Threads which constitute a fabric.

(d) It was cultivated in Egypt for making fabrics.

(e) Thin strands which constitute yarn.

N	**S**	I	F	Y	L	U	S	H
O	**Y**	K	L	O	E	V	F	U
Q	**N**	A	T	U	R	A	L	B
P	**T**	J	T	E	B	Z	I	M
A	**H**	R	Y	R	I	R	H	Q
Z	**E**	D	A	T	F	H	K	P
F	**T**	A	R	K	C	L	P	F
L	**I**	H	N	I	A	A	A	I
T	**C**	I	U	J	P	R	U	X
R	Q	P	V	N	T	M	D	M

Q.4 Choose the Clothing material you will use according to the season in your area.

Wool	**Cotton**	**Silk**	**Nylon**	**Polyester**	**Acrylic**	**Jute**	**Khadi**	**Rayon**	**Nylon**

Summer	**Winter**

Date _____

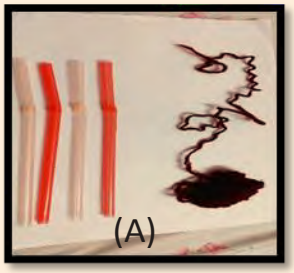
ACTIVITY SHEET-2

Learn with fun:

Weave a bracelet. (Please scan the QR code to see the process)

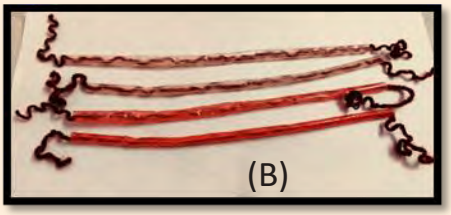
Materials required:

1. Wool of your favourite colour (You can try this with other materials also)
2. Four straws
3. Cello tape

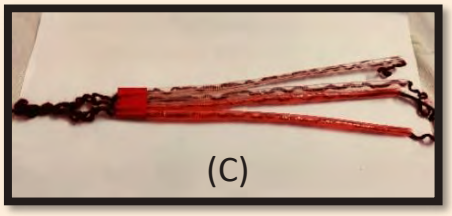

(A)

Method:

- Cut 4 pieces of yarn that are at least eight inches longer than each straw.
- Put each piece of yarn through a straw.
- Tape all four straws together at one end and also tie the four pieces of yarn together.


(B)

- Tie one end of the yarn to the straw on the left.
- Now start weaving the bracelet by taking your yarn over and under the straws by moving it back and forth. Keep pushing each row towards the top.


(C)

- Continue weaving until you reach the other end of the straws. Cut the yarn and knot it at the nearest straw.
- Remove the tape and carefully take the straws out of your weave.
- Tie the yarn ends together at both the corners of your weave.


(D)

Your own hand woven (hand loomed) bracelet is ready.

Q.1 Label the steps of processing of fibre :



_____ _____ _____

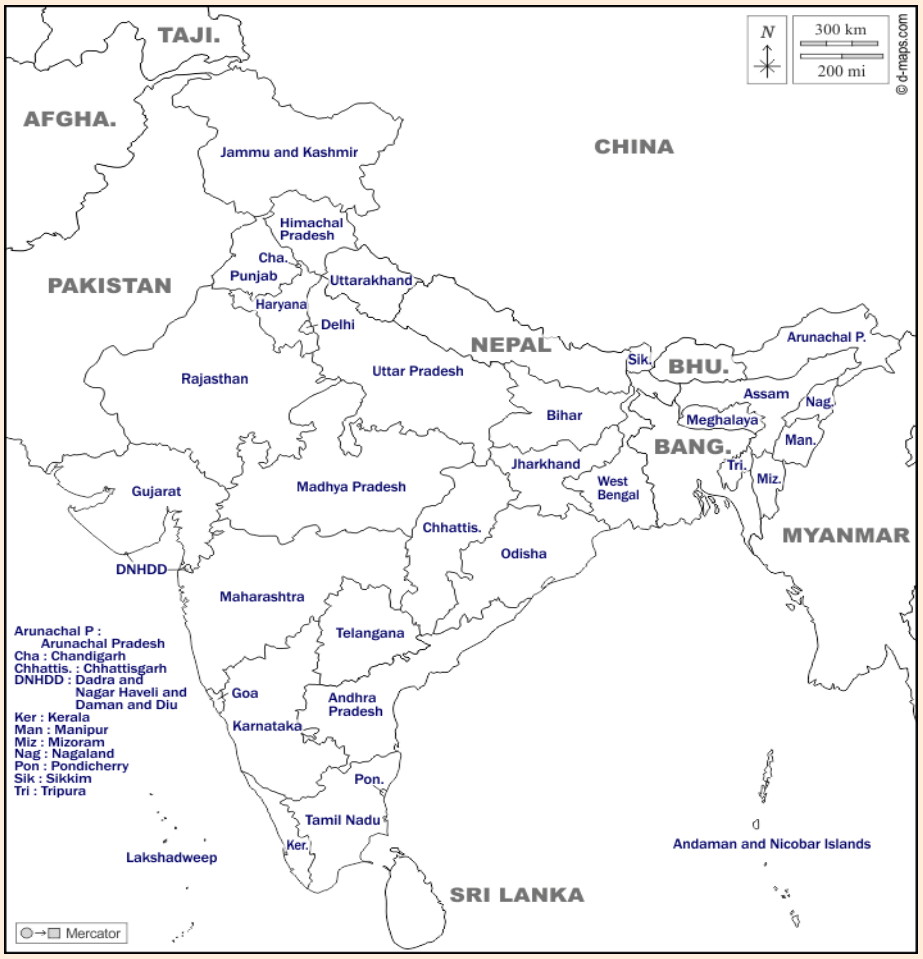
Q.2 Mahatma Gandhi encouraged people to wear clothes made up of home spun yarn. Draw and colour the device used by him to do so.

Name of the device is _____

Q.3 Write the names of two things that can be made from each of the fibre given below:

Cotton	Jute	Nylon	Coir
• i. _____	• i. _____	• i. _____	• i. _____
• ii. _____	• ii. _____	• ii. _____	• ii. _____

Q.4 In the given political map of India, shade the places (any three) where jute is cultivated.



Q.5 Name the Following:

Jute is obtained from this part of the plant._____

This is a device used for spinning. _____

This device is used for weaving of fabrics. _____

Q.6 Notice the style of clothing in three different eras.

Now rate the above three clothing materials on the following parameters. (use three stars for maximum and one star for minimum rating). One has been done for you as an example.

Parameter	Ancient Clothing	Medieval Clothing	Modern Clothing
Durability	★	★★	★★★
Colourfastness			
Smoothness			
Water absorbency			
Eco friendly			
Comfort			

Discuss reasons behind your ratings and write them in the space given below.

_____

_____

_____

_____

_____

Date _____

CHAPTER-4: SORTING MATERIALS INTO GROUP

Sorting materials into groups

ACTIVITY SHEET - 1

Learn with fun:

Let us play a word game. Select the first letter of your name and write as many things as you can starting from that letter. For example if the player's name is **S**udhir, then the letter selected will be **S** and Sudhir has to write names of objects starting with **S**, e.g. sharpener, spoon, sand etc. and if **K**alpana is the player's name then letter will be **K** and words could be kite, knife, key, keyboard etc. Have fun knowing more and more words and objects that start with the first letter of your name.

Q.1

a) In the given picture you can see many objects. Sort them into three separate groups looking at their characteristics? There is a blank table given below, try to sort and either draw or write their names in the table.

b) Also think of the name of each group and write it in the top column of the box meant for heading.

Q.2 You have to make fruit chat, what fruits would you select to make your fruit chat from the food items mentioned below. Write their names in the space given below:

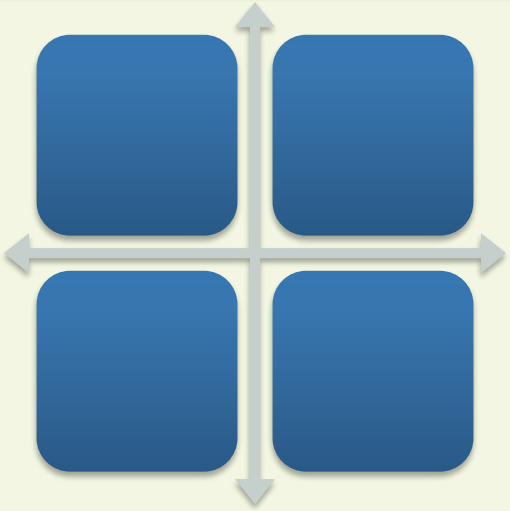
Apple, Coconut, Potato, Banana, Papaya, Jackfruit, Orange, Lemon juice, Spinach, Turmeric, Ladyfinger

Ans._____

_____

Q.3 If you have many things like toys, clothes, shoes & medicines, then categorise them in the four blue boxes given below.

Shirt, slippers, shoes, medicine for fever, doll.



Date _____

ACTIVITY SHEET- 2

Learn with fun: **Two minute challenge**

Write the names of as many objects as you can in two minutes. All students start at the same time and stop together when two minutes are over. You can do it in class, with siblings, with friends and even in an online class. All you need is a paper, pen and two minutes of writing time. Once the time is up, see how many objects you have written in two minutes. Compare the no of words written with your classmates, friends or siblings and find out who came up with largest number of words of objects and who has written unique word of objects.

1. _____ **4.** _____ **7.** _____

2. _____ **5.** _____ **8.** _____

3. _____ **6.** _____ **9.** _____

……..……..and so on (as many as you can)

Q.1 Write the names of at least ten objects from your surroundings.

Ans. _____

_____

_____

Q.2 Write the names of these objects according to the materials they are made from, in the table below :

Ans.

WOOD				
Table				
Chair				

Q.3 What are these objects meant for?

Ans.

OBJECT	PURPOSE
Chair	to sit

Q.4 Encircle the odd one out: One example has been done for you.

(a) Table Chair Desk Apple

(b) Book Fan Pen Copy

(c) Water Juice Oil Bread

(d) Plate Bulb Spoon Bowl

Q. 5 What materials are used when:

Ans. (a) We make lemonade: _____, _____,_____

(b) Carpenter makes furniture: _____,_____,_____

(c) Architect designs a building: _____, _____, _____

(d) Electrician does wiring: _____, _____, _____

(e) Mason builds a house: _____, _____, _____

Date _____

CHAPTER-5: SEPARATION OF SUBSTANCES

Why do we separate?

ACTIVITY SHEET-1

Learn with fun:

Take 5 glass tumblers, spoon and water. Try to dissolve five substances given in the table in water. Keep the water undisturbed for 10 minutes, write your observations in the table.

S. No.	Substances	Did it dissolve? (Yes/ No)	Observations
1.	Soil		
2.	Lemon juice		
3.	One tablespoon oil		
4.	Sugar		
5.	One tablespoon milk		

Q.1 Give reason:

Why do we separate?

(a) Tea leaves from tea.

……

(b) Stones from rice.

……

(c) Husk from grain.

……

Q.2 Arrange the jumbled words (given in the box below) to form the correct names of methods of separation.

nowwining vingsie menseditation rationfilt Cantdeation poraevation kingpicandh

_____

_____

Q.3 Identify the methods of separation shown in the given picture and write their name.

……

……..

……..

……

Date _____

ACTIVITY SHEET-2

Learn with fun:

Write down a few household work done by you and your family members in your house and write the methods of separation involved in them.

Work done	Method of Separation
Serving tea by separating tea leaves from tea.	**Filtration**

Q.1 Tick the correct option:

(a) In a bucket muddy water was kept overnight, impurities will settle

(i) At the top (ii) At the bottom (iii) In the middle

(b) We get salt from sea water by the process of

(i) Sedimentation (ii) Sieving (iii) Evaporation

(c) Rajat has been asked to use Sieve for separating impurities from flour. Which of the following can also be separated using a Sieve?

(i) Mud and water (ii) water and oil (iii) grains from husk

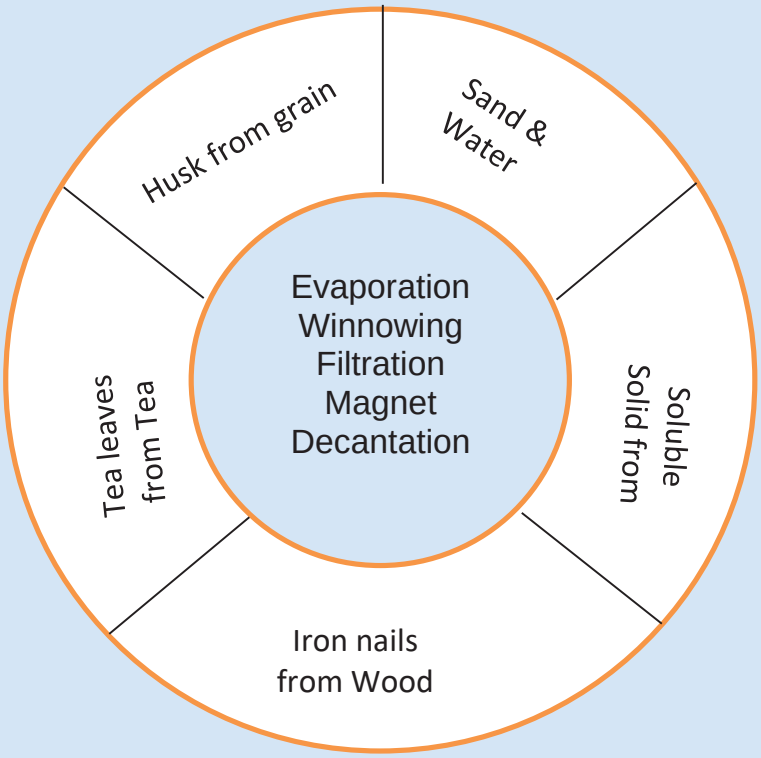
Q.2 Match the following:

A	B
Sedimentation	Potato, lemon and carrot
Evaporation	Water droplets on outer surface of a glass of cold water
Winnowing	Salt and water
Handpicking	Sand and water
Condensation	Husk and grains

Q.3 A packet of salt and iron nails fell into sand by mistake and got mixed with it. Write the steps you will follow and methods of separation you will use to get back salt and iron nails from the sand.

Items	Method of Separation Used	Steps to be followed
Salt		
Iron nails		

Q.4 Choose the correct method of separation from the inner circle of wheel to separate the components of the mixtures given in the outer box.



Q.5 Write the methods of separation you have observed in your household work done by your family members. Also state any alternate method of separation which can be adopted for the same work.

S. No.	Household Work	Method of Separation used	Alternate method of separation

Date _____

ACTIVITY SHEET-3

Learn with fun:

Take 2 tablespoons of water in a bowl and mix half tablespoon of salt in it. Place it out side and let it dry. Write your observations and the process observed.

Process Observed	Observations

Q.1 True or False

(a) More of salt can be dissolved in a solution by heating it. ( ).

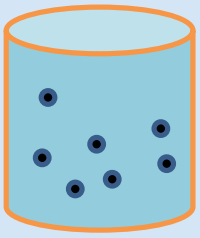
(b) We can dissolve any amount of sugar in water. ( )

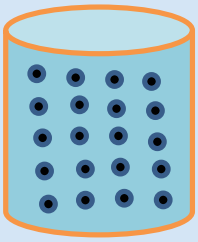
(c) Salt is obtained from seawater by the process of evaporation. ( )

(d) We can separate cream from milk by filtration. ( )

(e) A saturated solution is one in which no more solute can be dissolved. ( )

Q.2 Reema's teacher gave her two slips which had unsaturated solution and saturated solution written on it. Help her to place the tables/slips correctly on the beakers.





_____ _____

Date _____

CHAPTER-6: CHANGES AROUND US

Reversible / Irreversible changes

ACTIVITY SHEET-1

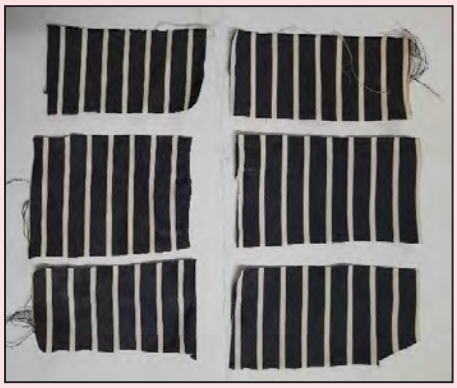
Learn with fun:

Do the following activities and in each case, observe the change in shape, size, state and colour

- Fold a Handkerchief and then unfold it.

- Roll a ball of dough to make chapati and then make the ball from rolled chapati.

- Cut a piece of cloth into pieces and then organize pieces of cloth to get back the cloth.



- Heat the tip of a needle and then allow it to cool down.

- Observe melting of ice cubes and then freeze the water to get back ice cube.

Now look for some more changes around you and note if these changes can be reversed:

(i) _____

(ii) _____

Q.1 On the basis of your observations, write Yes or No.

(a) Handkerchief gets back to its original shape and size_____

(b) The uncooked chapati can be converted into a ball of dough. _____

(c) Cut pieces of cloth can be organized to get intact cloth. _____

(d) The needle tip looks same after cooling. _____

(e) Shape size and state of water changes after freezing. _____

Q.2 Is it possible to get original form of material back once the following changes have occurred. Write whether the change is "reversible" "irreversible".

(a) Bag full of cement gets wet due to rain and solidifies.

Ans _____

(b) Our clothes get wet due to rain.

Ans _____

(c) Onion is chopped into small pieces.

Ans _____

(d) Chapati is rolled and baked from dough.

Ans _____

(e) Paper is torn into small pieces.

Ans_____

(f) Sugar is dissolved in water to make sugar solution.

Ans _____

Q.3 Let's try this activity:

Take some water in a container. Add one teaspoon salt into it. After sometime, we find that salt is dissolved in water. Can we get back salt from salt solution?

_____

Now let's do it Evaporate the salt solution. Some solid is left behind in the container, when all the water evaporates. The solid that is left behind in the container is _____

Salt

(a) Simple water

(b) Salt added to water

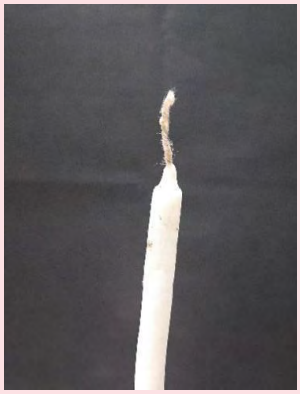
(c) Salt solution

Date _____

ACTIVITY SHEET-2

Learn With Fun:

Light a candle. Write down all the changes you notice happening in the wax and wick while it burns. Now blow out the candle so that it gets extinguished and notice the changes. Write your observations in the table.



Properties	**Unburnt Candle**	**Burning candle**	**Extinguished candle**
Colour of the wick	White	It turns black	It remains black
Shape	Dome like structure at the top of candle	Dome _____ (rises/ reduces)	A depression is formed at top
Size	No change	_____ (Increase/decrease)	Increase/decrease/ remains constant
State	No change	_____	Melted wax solidifies

Take some warm milk in a bowl and add a bit of curd to it. Leave this milk overnight. Note down the change in the properties of milk initially taken and new substance formed:

Properties	Initially taken material (Milk)	New substance formed (Curd)
Colour	White	No change in colour
Shape	As per shape of container	_____
Taste	_____	_____
State	_____	_____

Q.1 Now look around yourself and find out more changes in which some new substance is formed? For example – Rusting of iron.

(a)_____

(b)_____

(c)_____

(d)_____

(e)_____

Q.2 Identify if any new substances are formed in the following changes. Write Yes/ No and also write the name of the new substances formed.

(a) Burning of match stick when we light it.
_____

(b) Burning of wick when we light it.
_____

(c) Melting of wax at the top of the candle.

_____

(d) Formation of vapours of wax on heating.

_____

(e) The vapourized wax starts burning and release gases.

_____

Q.3 Group the changes on following basis -

1. Heating a substance **2. Mixing it with some other substance.**

Write '1', '2' or both for your answer:

(a) Cooking of food _____

(b) Digestion of food _____

(c) Hardening of plaster of Paris _____

(d) Melting of butter _____

Q.4 Fill in the blanks writing the appropriate words given in the box below:

mixing, heating, physical, contract, expand

(a) Changes caused due to change in physical properties are called _____ changes.

(b) A change may occur by _____ a substance or by _____ it with some other substance.

(c) Metals _____ on heating and _____ on cooling.

Date _____

CHAPTER-7: GETTING TO KNOW PLANTS

Classification

ACTIVITY SHEET-1

Learn with fun:

- **Sow a seed or plant a sapling in a waste container. Water it every day and take care of it. Notice the changes taking place in the sapling. Record your observations in the space given below.**

  _____

  _____

  _____

  _____

- **Conduct a field visit. Observe a few plants and record your observations in the table given below. (One has been done for you as an example)**

Name of Plant	Size	Colour of its Leaf	Shape of its Leaf	Texture of its Leaf	Smell of leaves (after crushing them)	Colour of its flower	Whether edible / Decorative / Wild
Grass	Small	Green	Needle	Smooth	General smell of leaves	White	Wild

Q.1 Dry a small plant by placing it between two sheets of a newspaper for a few days. Paste the dried plant in the space given below and label its different parts.

Q.2 Complete the pairs:

(a)

	Tree
	

(b)

Herb	
Shrub	

(c)

Stem	Conducts Water
Leaf	

(d)

Green and Tender Stem	
Hard but Thin Stem	Shrub

Q.3 Look at the following pictures. Identify them as Herb, Shrub, Tree, Creeper or Climber. Add two more examples to each category.

Type_____
Examples_____

Type_____
Examples_____

Type_____
Examples_____

Type_____
Examples_____

Type_____
Examples_____

Q.4 Look at the picture of the plant and label the following:

(a) The part which absorbs water and minerals from the soil.

(b) The part which conducts water to different plant parts.

(c) The part which makes food.

Date _____

ACTIVITY SHEET- 2

Learn with Fun:

- Visit a park. Observe the venation of the leaves in different plants. Choose two leaves having two different types of venation and dry them. Paste the dried leaves in the space given below :

Reticulate	Parallel

- Uproot some grass from a nearby park carefully and observe its roots. Now recall the structure of Radish or Carrot (which are modified roots)
  Draw both the kinds of roots in the space below.

Roots of Grass	Structure of Radish / Carrot

Q.1 Unscramble the following letters to make name of plants having parallel and reticulate venation. Add a few more examples of your own.

Parallel venation	Reticulate venation
1. TEAWH : _____	1. ORES : _____
2. CIER : _____	2. GOMAN : _____
3. TUNOOCC : _____	3. SIUTL : _____
4. _____	4. _____
5. _____	5. _____

Q.2 Given below are names of certain plants. Write 'R' if plant has reticulate venation and 'P' if it has parallel venation. Mention the type of roots by using the letter 'T' for tap root and 'F' for fibrous root. One has been done as an example.

Diagrams are given for reference.

Tap Root	Fibrous Root	Parallel Venation	Reticulate Venation

Name of Plant	Type of venation	Type of Root
Grass	P	F
Peepal		
Sugarcane		
Maize		
Tulsi		
Bamboo		
Banana		
Carrot		
Turnip		
Radish		

Date _____

ACTIVITY SHEET- 3

Learn with fun (Parts of a flower):

Materials Required-

(a) Wheat flour (5 table spoons)

(b) Refined oil (2 tea spoons)

(c) Pinch of salt

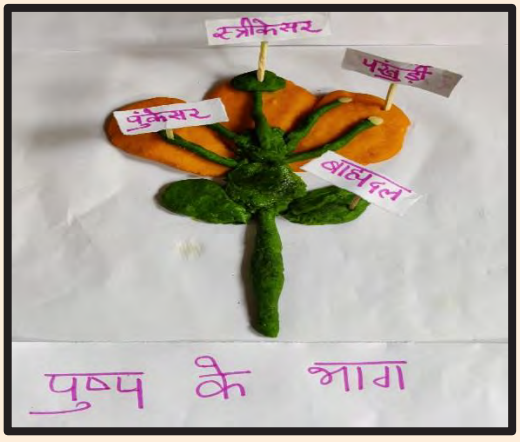
(d) Green food colour

(e) Yellow food colour/ Turmeric powder

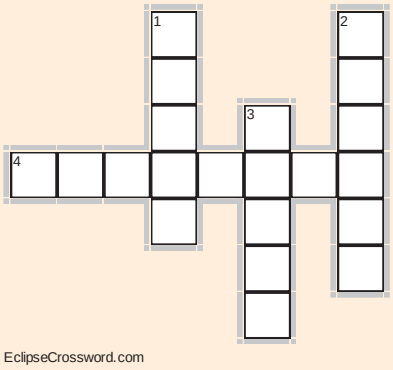
(f) Tap Water

Method

- Mix ingredients mentioned above and knead a tight dough of yellow and green colour separately.
- Use this dough to make a flower as shown in the picture.
- Flag it using match sticks and thick paper strips.
- Make carpel and pistil also and flag their parts also.



Q.1 Crossword Puzzle:



Across

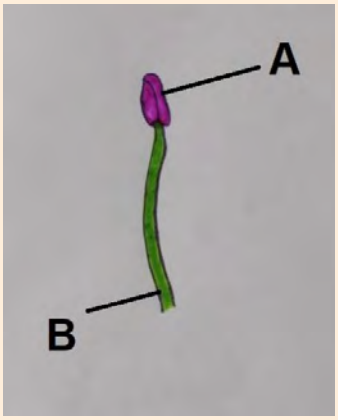
4. Lower part of a Stamen.

Down

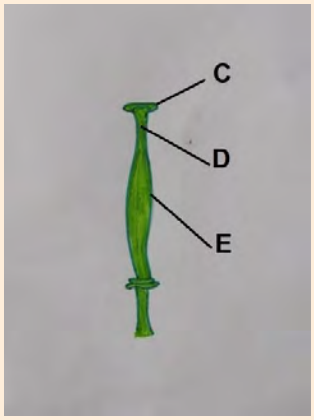
1. Coloured part of a flower.
2. The inner most part of a flower.
3. Small leaf like structures which cover bud.

Q.2 Draw your favourite flower or paste a dried flower and label its various parts.

Q.3 Label A, B, C, D and E in the figures shown below:



STAMEN



PISTIL

Date _____

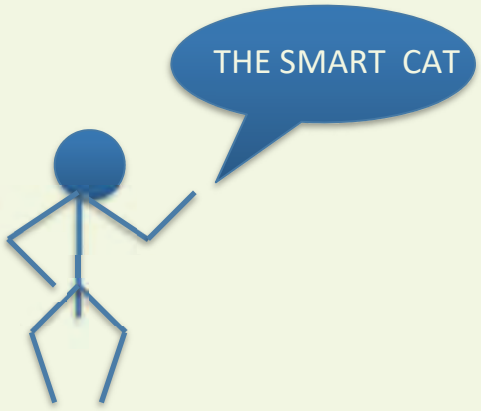
CHAPTER-8: BODY MOVEMENTS

Human Body

ACTIVITY SHEET-1

Learn with fun:

Let's play "**The Smart Cat".** Leader is the smart cat and will do different body movements. This activity can be done online as well as offline with school groups or at home with your brothers, sisters and friends. Choose a leader. Leader will give command and rest of the group members will follow the leader (Copy the Cat). The Leader can stand in the center and rest of the group members will stand in a circle around the Leader. "**The Smart Cat"** will make arm movements, leg movements, neck movements and bending movements just like we do while exercising. You can make it more fun by adding dance moves and funny movements like moonwalk. Five movements five times each, then we can change the leader and give everyone a chance to be **The Smart Cat** once. Have fun and move as many body parts as you can (arms, legs, neck, back, hands, wrists, fingers, feet and toes etc.)



Q.1 Can you identify the parts of the body in pictures which can be moved rotated. If yes write their names :

(a) _____

(b) _____

(c) _____

Q.2 Observe the various parts of your body and findout the various joints present there.

Ans. _____

_____

_____

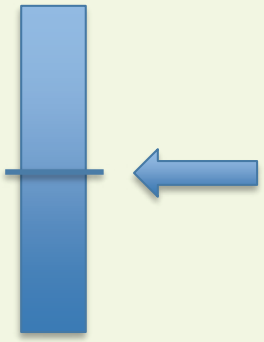
Q.3 Draw the joints in your body parts which move only in one direction.

(a) (b) (c)

Date _____

ACTIVITY SHEET-2

Learn with fun:



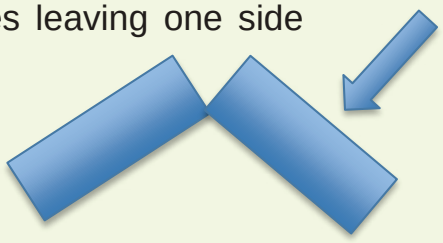
Let us make a joint and observe how it moves.

Materials required-

1. Cutter/scissor
2. Any rectangular cardboard box

You can also use hollow rubber tube or any other relevant material available.

Procedure: Cut the edges of the box on three sides leaving one side attached in the middle of the cardboard box. Box is now cut into two halves but attached at one end. Fold the cardboard at attached end. Now move the arms of the box.



Please scan the QR code to watch the video.

Observe and find answers (one word only) :

1. Do they move?

_____

2. In how many directions do they move?

_____

3. Can you co-relate this movement with any of our body movement ?

_____

Q.1 Draw the joints mentioned below in the box :

(a) Hinge Joint

(b) Ball and Socket Joint

(c) Pivot Joint

Q.2 Are all the joints mentioned above of the same type? If not, how many types of joints are there in the human body? Write their names.

Ans.

_____

_____

_____

Q.3 Find the names of different types of joints in human body in the matrix given below :-

B	N	O	S	T	G	K	I	M	Y	H
Z	A	W	E	O	S	J	H	P	U	I
S	P	L	O	M	T	D	M	I	H	N
I	U	U	L	J	E	C	K	D	B	G
P	L	G	M	&	Q	F	I	W	F	E
T	P	B	L	V	S	B	T	Z	D	J
M	I	N	I	N	H	O	T	J	A	O
L	V	O	M	M	L	T	C	G	S	I
B	O	S	B	J	U	I	A	K	J	N
F	T	D	T	U	E	C	P	I	E	T
R	U	C	H	K	L	P	Y	R	J	T

Date _____

ACTIVITY SHEET-3

Learn with fun :

Think of an animal and try to walk like it. You can also use hand movements or gestures to show the way that animal walks. Suppose you chose a bird and you can't fly but you can use your hands and join your thumbs and flap your palms and fingers to show how the bird flies.

Q.1 Try to observe as many animals as you can and see what kind of body movements they show. Based on your observations, give at least four examples :

	Name of the Animal	**Type of Movement**
Example :	Fish	Muscular Movement / swims
a)	_____	_____
b)	_____	_____
c)	_____	_____
d)	_____	_____
e)	_____	_____

Q.2 Find out some examples of organisms without skeleton. Draw any two of them below :

Q.3. Identify the animals with and without exoskeleton Make  **in the space given if it has exoskeletal for and a**  **if it does not have exoskeleton :**

1. **Ant** _____
2. **Cat** _____
3. **Cow** _____
4. **Cockroach** _____
5. **Lizard** _____

Date _____

CHAPTER-9: THE LIVING ORGANISMS – CHARACTERISTICS AND HABITATS

Living, non-living & surroundings

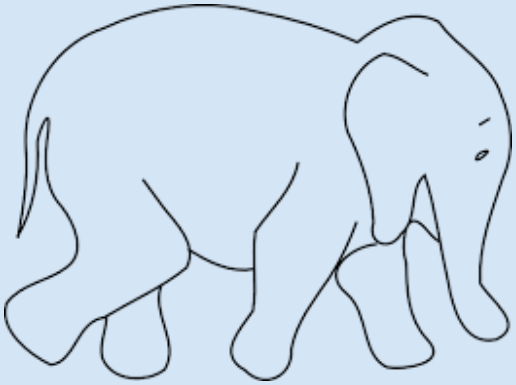
ACTIVITY SHEET-1

Learn with fun:

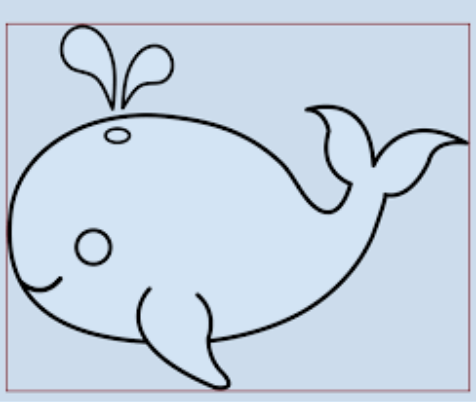
Given below are some pictures. Identify them and write their names in the appropriate box.

Living things	Non living things

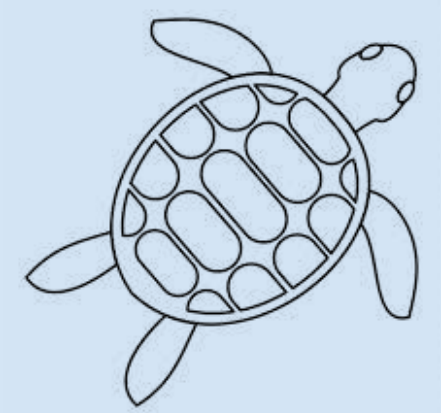
Q.1 Outline sketch of different animals are given below. Colour the animal blue who live in water, brown, who live in desert and green, who live on grasslands. Write one more example with respect to each animal living in similar environment.



A



B



C

D

E

F

Examples of animals living in similar environment:

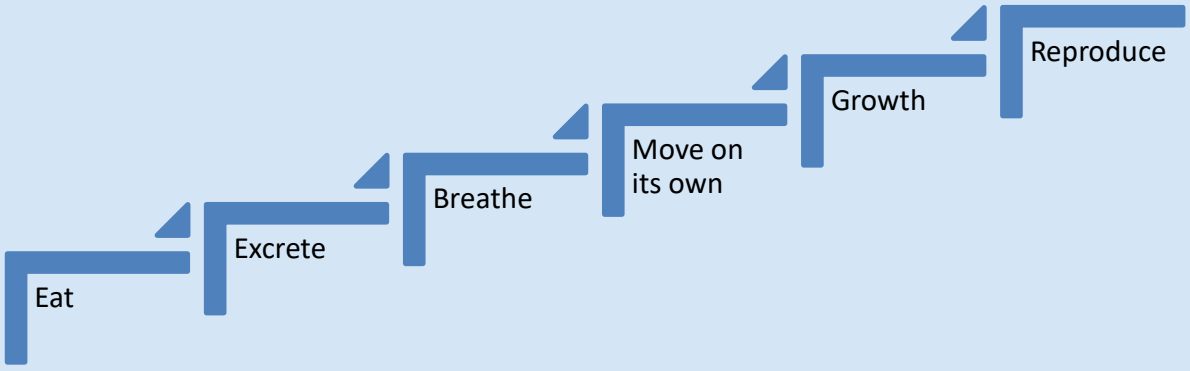
A.	C.	E.
B.	D	F.

Date _____

ACTIVITY SHEET-2

Learn with fun:

There are 6 characteristic steps given below to identify the living things. Try to identify from the given list how many steps each of them is able to climb?



S. No.	Living Beings	Step 1	Step 2	Step 3	Step 4	Step 5	Step 6
1	Dog						
2	Car						
3	Plant						
4	Fish						
5	Stone						
6	Desk						
7	Parrot						

Q.1 Let's play a right and wrong game. Put tick (✓) and cross (x) in the columns given according to the characteristics of living things. Add 5 living things on your own and repeat the same for them too in the space given below.

Characteristics of living things	Excrete waste	Respire	Show growth	Need food	Respond to stimuli	Reproduce
Elephant						
Chalk						
Frog						
Mosquito						
Fan						
Lizard						

Q. 2 Select the correct word from the below given box and fill in the blanks:

Excretion, Nutrition, Growth, Movement, Sensitivity

(a) Getting energy from food _____

(b) Young ones grow into adult _____

(c) Getting rid of the waste _____

(d) Blinking of eyes as something comes near_____

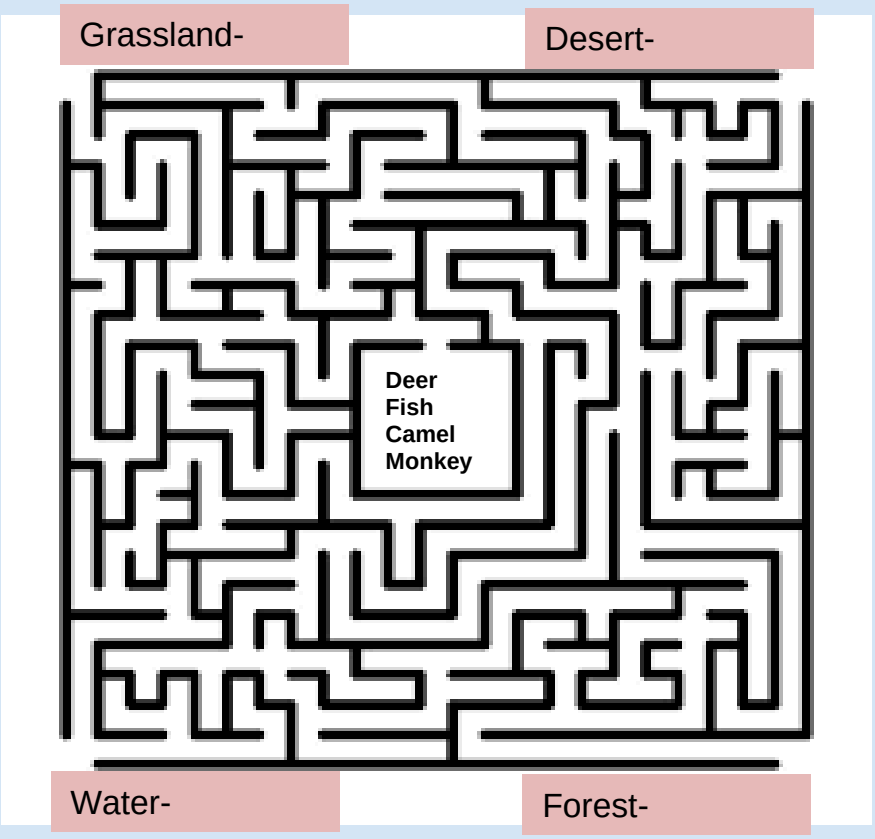
(e) Cat chasing the mouse_____

Date _____

ACTIVITY SHEET-3

Learn with fun:

Help the below given living beings to trace and reach their habitat (surroundings in which organisms live).



In addition to the animals given above, name one more animal on your own which can accompany these animals to their respective habitat.

Deer_____ Camel_____

Fish_____ Monkey_____

Q.1 Who am I? Try to find this out by reading my characteristics.

(a) I have a streamlined body and I use oxygen dissolved in water.

_____

(b) You hear my voice in the rainy season and I am comfortable in land as well as water.

_____

(c) I have strong leg muscles and I am a carnivorous.

_____

(d) I am the heaviest animal on land with the biggest ears.

_____

(e) I live in a burrow to save myself from extreme heat waves.

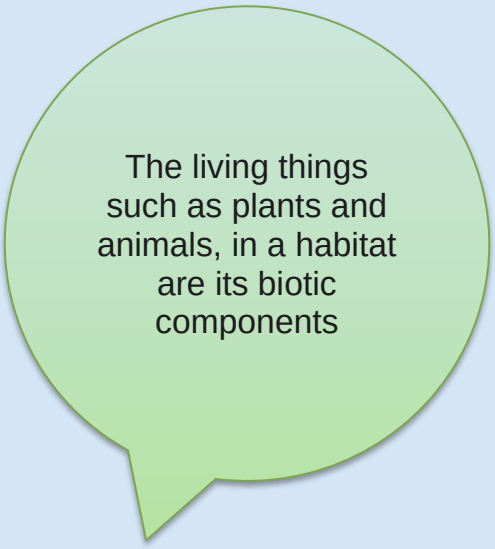
_____

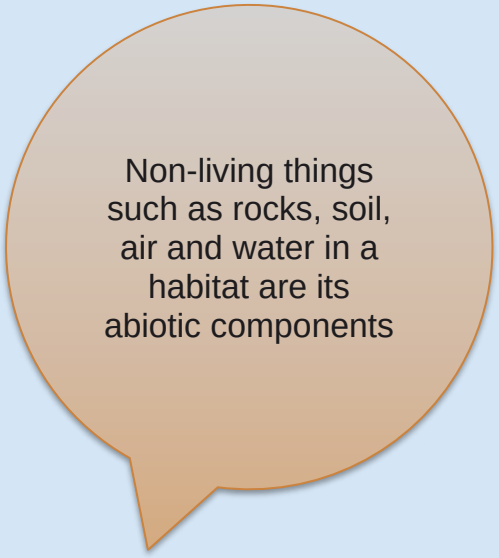
Now, create 5 more similar riddles like the ones mentioned above and get them solved by your family.

(a) _____
(b) _____
(c) _____
(d) _____
(e) _____

Q.2 Draw four organisms that belong to the habitats that are shown in the sketches given below.

Q.3 Rekha's teacher asked her to read the two bubbles given.

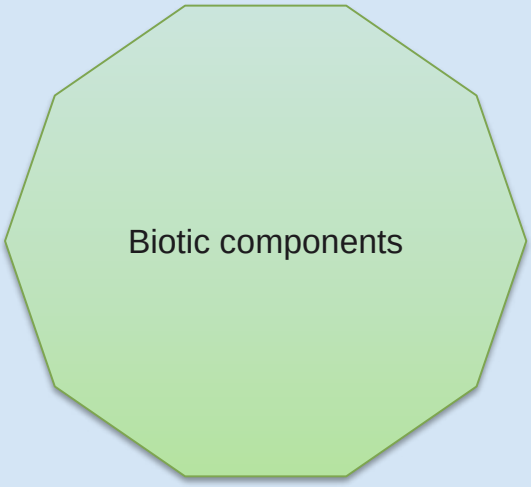


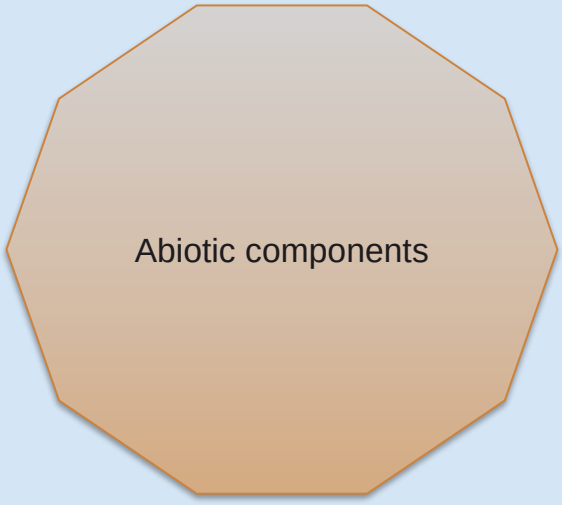


Then she mixed the various components of a habitat in the given box. Now help her to segregate according to the labels shown below (biotic components and abiotic components)

Mountain, housefly, rivers, pigeon, ant, tree, cat, bricks, soil oxygen

Add some more components from your side too.





Date _____

CHAPTER-10: MOTION AND MEASUREMENT OF DISTANCES

Some measurements

ACTIVITY SHEET-1

Learn with fun:

There are various modes of transport that are used to travel or transport material from one place to another. Identify the modes of transport visible to you in the given picture:

Can you name some more modes of transport, other than those seen in the picture, like aeroplane, yatch, metro etc.

Write various modes of transport involved in delivery of a cell phone on an online platform from Taiwan:

Classify all above transport modes into:

- Modes of transport on land.

By road _____

On rails _____

- Modes of transport through water.

_____

- Modes of transport by air.

_____

Q.1 Write down the vehicle you will choose to move from one place to other in following cases (multiple options can be selected). Also share the reason of your choice with your peers :

(a) Delhi to Bangalore _____

(b) New Delhi railway station to your home _____

(c) From your school to your home _____

(d) Delhi to London _____

(e) Mumbai to Saudi Arab _____

(f) Delhi to Rohtak _____

(g) From Earth to Moon _____

Discuss in small groups why you have selected that particular mode of transport. Is it necessary to know how far the place is before travelling?

Ans _____

Q.2 Now let us measure the length and width of following objects using foot/ cubit/ hand span/ fingers (you too may add more examples to the list):

Hand span

Fingers

Cubit

Foot

Using any other body part or object, such as:
Arm span
String
Stick etc.

You can choose multiple ways to measure the same object:

(a) Length and breadth of the room

Length: 17 Hand spans, 9 Cubits, 16 foots, 7 Steps, 8 sticks, 5 shoe laces,_____
Breadth:_____
_____

(b) Length and breadth of a door.

_____
_____

(c) Length and breadth of the windows.

_____
_____

(d) Length and breadth of a black board.

_____
_____

(e) Length and breadth of the desk top.

_____
_____

(f) Any other you want to measure.

_____
_____

Is the measurement of an object done by you and your friend is the same? If not, discuss why is it so?

_____
_____

Date _____

ACTIVITY SHEET-2

Learn with fun:

Try to measure the thickness of some curved surfaces. Are you able to measure the thickness using your hand span or scale? If not, then how will you do it? Yes, use a string or thread to move around the object and then measure the length of the thread with the help of a scale or you can also use measuring tape used by a tailor.

S. No.	Object	Measurement in cm	Measurement in inches
1	Pencil		
2	Round Water bottle		
3	Marker pen		
4	Tree trunk		
5	Your waist		
6			
7			
8			

Q.1 Which of the following is the correct way of measurement in the following picture, tick the correct answer.

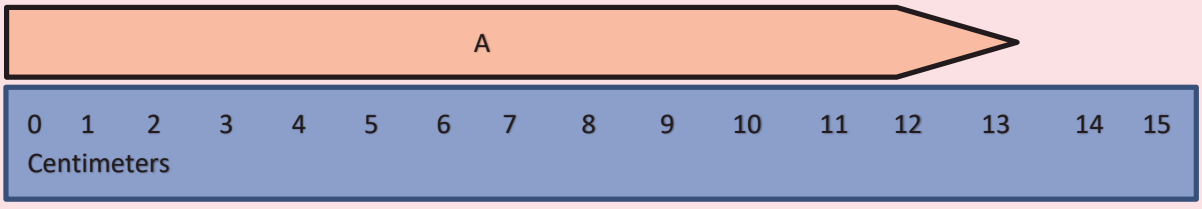
(a) A is correct.

(b) B is correct

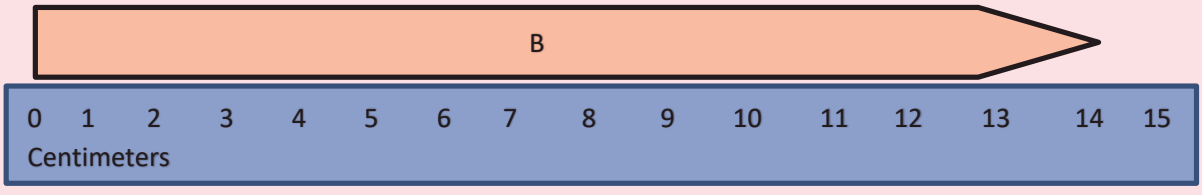
(c) C is correct

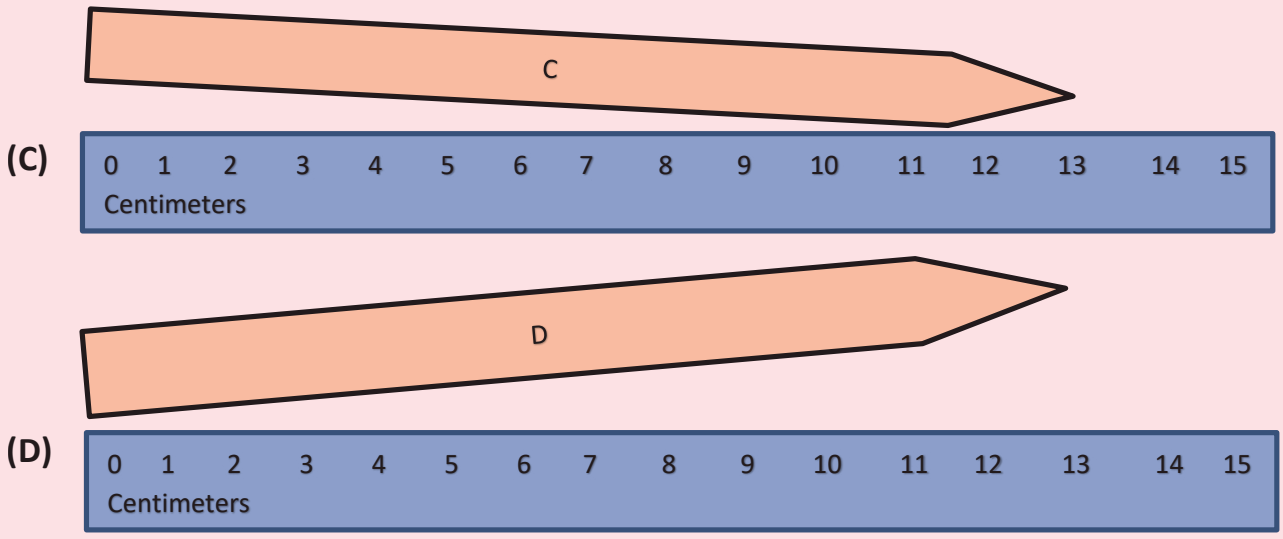
(d) D is correct

(A)



(B)





Q.2 Match the object with most preferable measuring unit:

S. No.	Object	Measuring unit
(a)	Pencil	
(b)	Length of shoe laces	
(c)	Measurement for shirt	
(d)	Height of door	
(e)	Length of football ground	
(f)	Our height	
(g)	Thickness of copper wire	
(h)		
(i)		
(j)		

Q.3 Convert the following lengths into the units given below:

	9870 mm	**98 mm**
(a) Centimetre:	_____cm	_____cm
(b) Metre:	_____m	_____m
(c) Kilometre	_____km	_____km

Q.4 Although various units are used for measurement of length but SI unit of measuring length is _____.

Choose the correct answer:

(a) Millimetre
(b) Centimetre
(c) Metre
(d) Kilometre

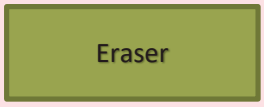
Date _____

ACTIVITY SHEET-3

Learn with fun:

Write down the length of following objects by counting the number of blocks:

1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**



Length of eraser = _____ blocks.

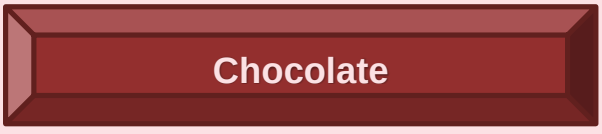
Length of pencil = _____ blocks.

Length of blue line on pencil = _____ blocks.

Length of arrow = _____ blocks.

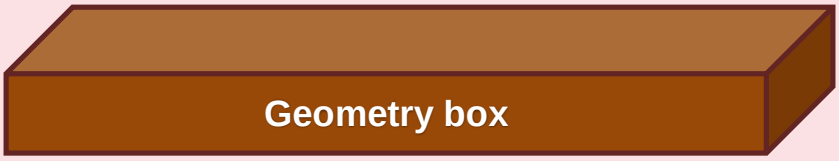
Length of ribbon = _____ blocks.

Q.1 Using a ruler measure the dimensions of following objects :

(a) 

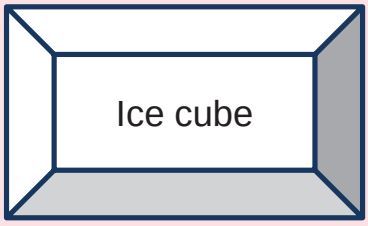
Length =_____ cm, Width = _____ cm, Height = ___ cm

(b)



Length =_____ cm, Width = _____ cm, Height = ___ cm

(c)



Length =_____ cm, Width = _____ cm, Height = ___ cm

(d)

Length =_____ cm, Width = _____ cm, Height = ___ cm

Q.2 Draw a line segment for each measure (add a few on your own):

(a) 6 cm

(b) 3.5 cm

(c) 4.8 cm

(d) 7.2 cm

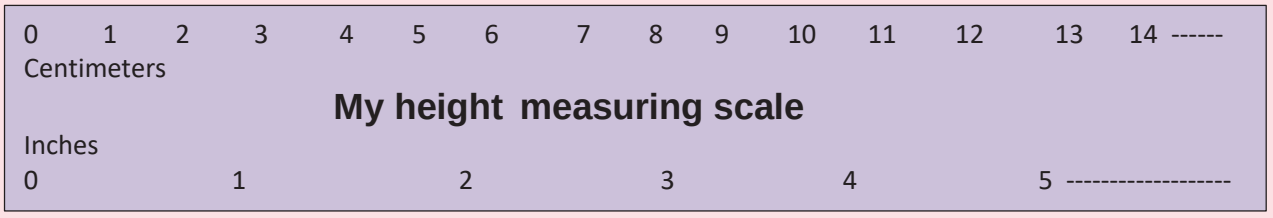
(e) 4.5 inch

(f) _____cm

(g) _____ inch

Q.3 Activity time. Let's do it !

Make a big scale for yourself by joining chart paper strips (up to 70 inches long), marking inches on one side and centimetre on other with the help of a ruler. Paste this scale on wall and measure the height of all the students of your class and note down maximum and minimum height in the class in centimetre, inches and then convert into feet.



My height : _____ cm = _____ inch = _____feet + _____ inch

Maximum height : ____ cm = _____ inch = _____feet + _____ inch

Minimum height : ____ cm = _____ inch = _____feet + _____ inch

Date _____

ACTIVITY SHEET-4

Learn with fun:

Observe following situations around you and identify the type of motion :

(a) A pea-hen walking on a straight path

_____

(b) A ball falling straight down

_____

(c) Motion of a fan's blade

_____

(d) Movement of the hands of a clock

_____

(e) Movement of a pendulum

_____

(f) Motion of a swing

_____

Q.1 Often it is seen that objects undergo combinations of different types of motion. On the basis of your observation can you identify two different motions occurring together:

(a) A Ball rolling on the floor

Rolling of ball-**Circular and** Movement in forward direction-**linear**

(b) Spinning top

_____**and**_____

(c) Motion of tyres of a moving bus

_____**and**_____

(d) Motion of Earth around the sun

_____**and**_____

(e) Any other motion you want to mention?

_____**and**_____

(f)

Periodic and _____

(g)

Curved and _____ (Curvilinear motion)

Q.3 Identify different types of motion occurring in a sewing machine:

(a) Movement of needle _____

(b) Movement of wheel (hand-handle) _____

(c) Movement of paddle foot _____

Q.4 Write two examples of each kind that you see around yourself

(a) Linear motion _____ and _____

(b) Circular motion _____ and_____

(c) Periodic motion _____and _____

Date _____

CHAPTER - 11: LIGHT, SHADOWS AND REFLECTION

Classification

ACTIVITY SHEET-1

Learn with fun:

We have observed that things cannot be seen without light and eyes help us to detect light. Some of us may have visual challenges and are not able to detect light completely or partially. Braille and Tactile games are quite resourceful in such situations. Let us create and play a tactile game.

Take a cardboard sheet and cut out pairs of alphabets/ numbers from it. Paste these alphabets/numbers on another cardboard sheet such that pairs are far away from each other. Now blindfold your friend and ask him/her to identify the same alphabet/number by merely touching them. Picture of such sheet is shown below for reference.

.

Q.1 Look at the objects given below. Separate those which produce their own light from those which don't and put them in the table given.

Objects which produce their own light	Objects which do not produce their own light
Luminous	Non - Luminous

Add some more examples to both the columns at your own.

Now pick objects from the first column and put them in the order below:

Brightest	Very bright	Quite bright	Least bright

Think of some more objects that are luminous and are brighter than the objects given above.

Q.2 Given below is a list of materials. Hold each of these materials in front of torch light or laser light and see if light can travel through it or not. Record your observations in the table given below.

Name of the material	Whether light passed through completely/ partially or did not pass
Dark coloured cloth	
Cellophane sheet	
Card board	
Tissue paper	
Tinted glass	
Water	
Aluminium foil	
Tracing paper	
Light coloured cloth	

Add more materials to your list and observe whether light passed through them completely/partially or did not pass at all.

Q. 3. Follow the hints and give one word for the following.

HINTS:

(a) We all emit our own light.

(b) We all allow light to pass through.

(c) We all allow light to pass through, but partially.

(d) We do not emit light but reflect it.

(e) We do not allow light to pass through.

a)

b)

c)

d)

e)

Date _____

Classification | **Explains shadows and reflections**

ACTIVITY SHEET-2

Learn with fun:

Let's make a very simple pin hole camera.

Materials required: A paper cup, tracing paper /butter paper, thread

Note: You can create your own tracing paper by rubbing some oil (coconut) on plain white paper.

1. Make a small hole at the bottom of the paper cup using a pin.
2. Take a piece of tracing paper (larger than the mouth of the paper cup) and tie it across the mouth of the cup using thread.
3. Now in a dark room, point the pinhole at a window or any single light source (laser light).

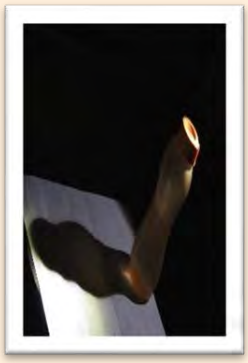
Have fun!

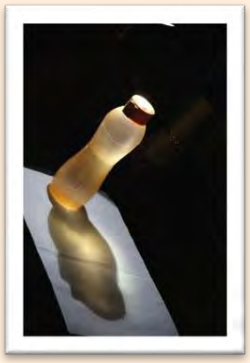
Scan the QR code to watch the instructional video.

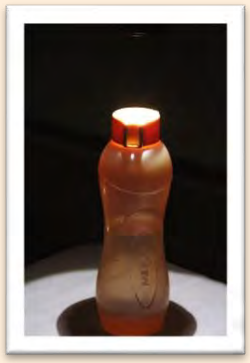
Observe around you and give examples of natural/manmade pin hole cameras.

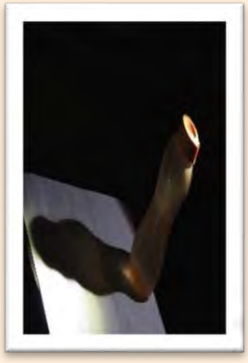
Q.1 Shadow Game

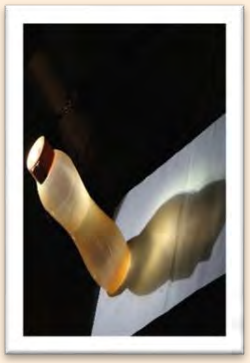
Observe the direction of light falling on the object and choose its correct shadow:

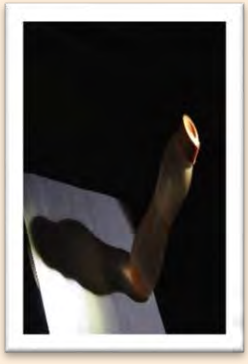


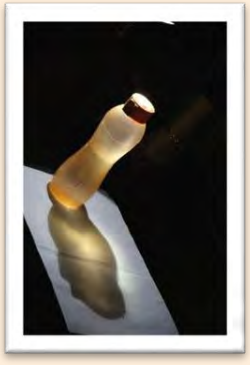












Change the position of light, colour of light or take a different object and record your observations in the space given below:

_____

_____

_____

Now on the basis of above activity write 'yes' or 'no' in the space provided.

(a) We can obtain shadow, without any source of light.

(b) We cannot obtain shadow without a screen or a surface.

(c) Shadows give us information about colour of the object.

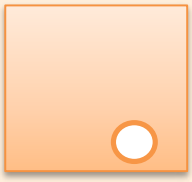
(d) Shadows do not give information about size of the object.

(e) Shadows give us information about exact shape of the object.

(f) Transparent objects can also produce shadows.

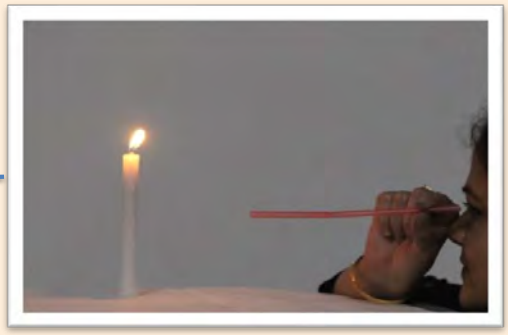
Q.2 Play this mirror game with your family or friends. Ask each of the participants to draw the mirror image of the following letters/objects. The one who draws maximum number of correct images, would be the winner. You can add more letters and objects at your own.

(One has been done for you as an example)

Objects/ Letter	**Mirror Image**
L	
M	
	

R

Q.3 Using a candle and a pipe we have created different set ups. In which of the following set up would you be able to see the candle. Write Yes /No in the space provided.



This activity shows that light travels in a_____line.

Q.4 Complete the mirror half of the following:

What difference have you observed in some of the images you have drawn in Q.2 and in this question?

_____

_____

_____

Q.5 Using a laser light, a mirror and a protractor create the following arrangement and complete the path of the reflected ray.

Date _____

CHAPTER-12: ELECTRICITY AND CIRCUITS

Electric cell

ACTIVITY SHEET-1

Learn with fun: **Electricity survey**

Do a survey of electric appliances and gadgets used in your house. Observe their sources of energy like, main electric power supply, battery, cell or none.

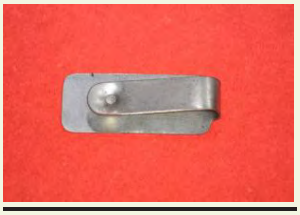
Notice how many gadgets you have listed need electricity to run. Your list may include T.V., refrigerator, radio, wall clock, transistor, music system, juicer mixer etc.

Make a list of these appliances/gadgets in the table given below:

Name of the Gadget	Source of Electricity
Example: T.V.	Main power supply
1.	
2.	
3.	
4.	
5.	
6.	
7.	

Q.1 Identify the pictures shown in the boxes and write their names

(a) 

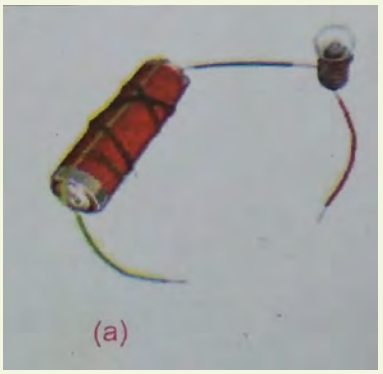
(b) 

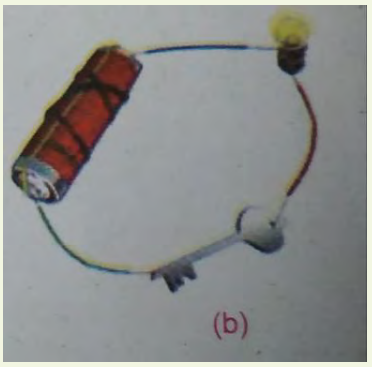
(c) 

(d) 

(e) 

Q.2 (a) In which of the two pictures shown below, the bulb will glow?





(b) What is the reason of your choice to your answer in favour of (a) or (b)?

_____

(c) Which objects / materials / items according to you will help the bulb to glow other than metal key, Choose from the list given below and make a box around them:

Rubber slippers	Potato	Metal Key	Plastic Bucket
Clothes	Glass	Metal spoon	Screw driver
Rubber gloves	Wooden Spatula	Eraser	Sharpener

Q.3 Answer only in one word:

Glow, electric cell, battery, two, switch

(a) A device that is used to break the electric circuit

(b) Electric energy to the torch is provided by a

(c) If the electric circuit is complete, the bulb will

(d) Number of terminals in each electric cell

(e) Combination of two or more electrical cells

Date _____

ACTIVITY SHEET-2

Learn with fun:

We all celebrate the festival of Deepawali, Eid, Guruparv by decorating our houses with lights. Different People use different things like diyas, candles, fairy lights and a string of small fancy lights.

In the space given below, draw the picture of the arrangement of bulbs in the strings of these fancy lights.

Recently you must have observed changing in the use of choice of decorative lights. More and more people are now using fancy string of bulbs or LED lights instead of diyas and candles. Does it have something to do with energy efficiency and them being environment friendly? What do you think about it ?

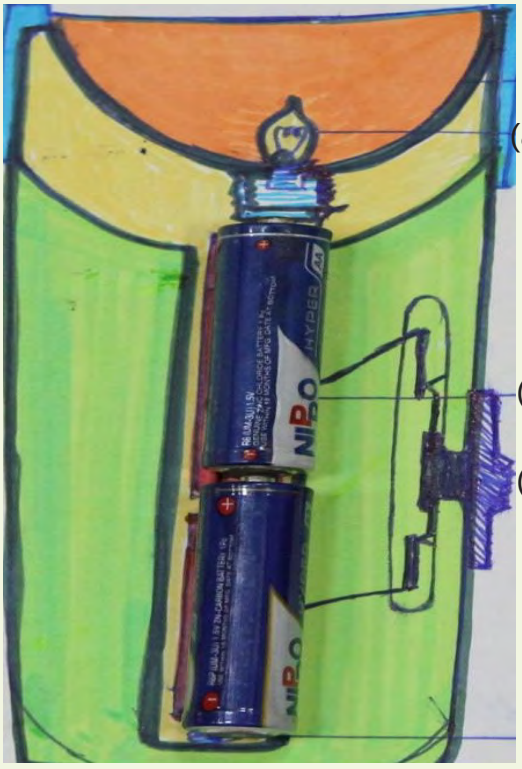
_____

_____

_____

Date _____

Q.1 Given below is a coloured diagram of a simple gadget. Identify and label its parts:



(a) _____

(b) _____

(c) _____

Q.2 Draw any two circuits below, one in which bulb is glowing and second where bulb is not glowing :

Q.3 Identify the things given below as conductors or insulators:

(a) Rubber slippers _____

(b) Plastic bucket _____

(c) Aluminium foil _____

(d) Rubber gloves _____

(e) Iron buckle _____

(f) Screw driver _____

Q.4 Observe the picture given below and write down which parts are good conductors of electricity and which parts are insulators:





Write the names of Conductors:

_____

_____

_____

Write the names of Insulators:

_____

_____

_____

Date _____

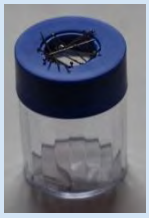
CHAPTER - 13: FUN WITH MAGNETS

Magnetic and non-magnetic materials

ACTIVITY SHEET-1

Learn with fun:

Guess my name after reading the sentences given below:



a) I help the pins in a pin holder not to fall even when it is held upside down.

Ans……..

b) When you are shutting the door of a fridge, you find that it closes automatically from a certain distance and does not open unless pulled again with force.

Ans……..

Q.1 Try to find the things/places where you have seen the magnets being used and state the manner in which they are used. One has already been done for you.

S. No.	Things/ Places where magnets are used	Purpose of using
1.	In a lady's purse	In keeping the mouth of the purse close
2.		
3.		
4.		
5.		
6.		
7.		

Q.2 Colour me red if I am the odd one out in the group.

i) Wood, Copper, Eraser, Pencil

ii) Iron, Paper, Aluminium, Gold

iii) East-West, North-South, South-North, West - West

Q.3 Take a magnet and bring it closer to the objects given in the box below. Try to segregate the objects into below given categories according to the way each of them behaves with the magnet. You can add some items of your own to the list.

Plastic chair, nail, water bottle, shoe, pen, spectacles, iron door

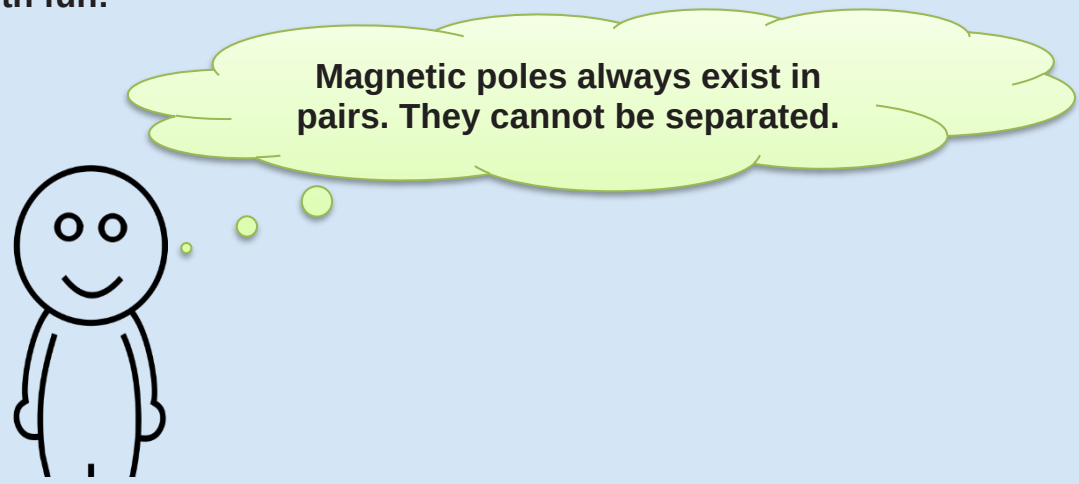
Things which get attracted to the magnet

Things which do not get attracted to the magnet

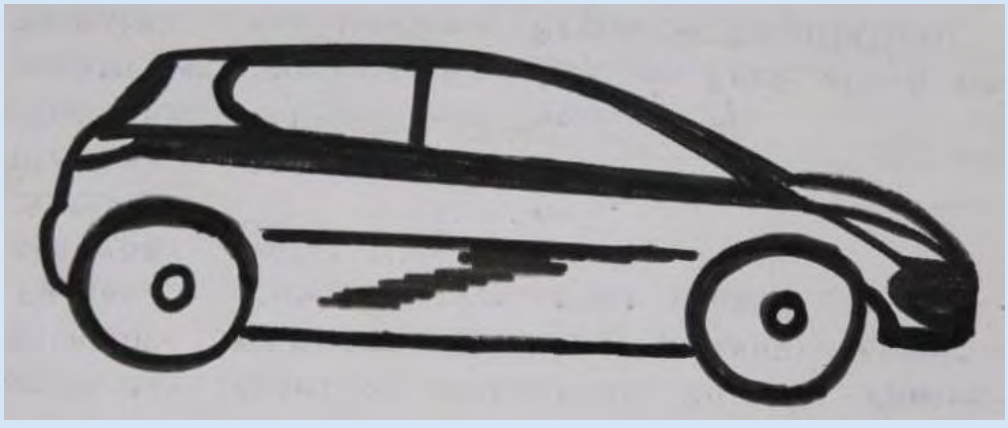
Date _____

ACTIVITY SHEET-2

Learn with fun:



Avinash has a toy car having a bar magnet hidden inside its body along its length. Using another magnet help him to find out which pole of the magnet is facing the front side of the car? Write steps to be followed.

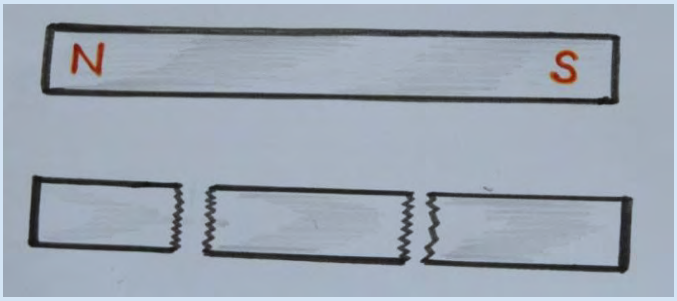


Ans. _____

_____

_____

Q.1 If a Bar magnet is cut into three pieces, how many poles do you get? Mark them in the given picture.



Ans. _____

Q.2 Given below is a picture of some magnets. Write N for North and S for South for each of the magnets.

Q.3 Look at the given picture and name the part of the magnet where maximum iron filings are stuck.

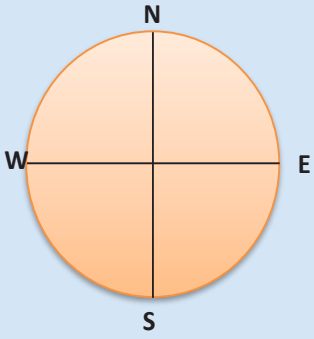
Ans. _____

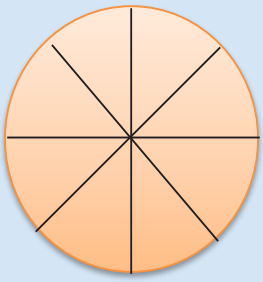
Date _____

ACTIVITY SHEET-3

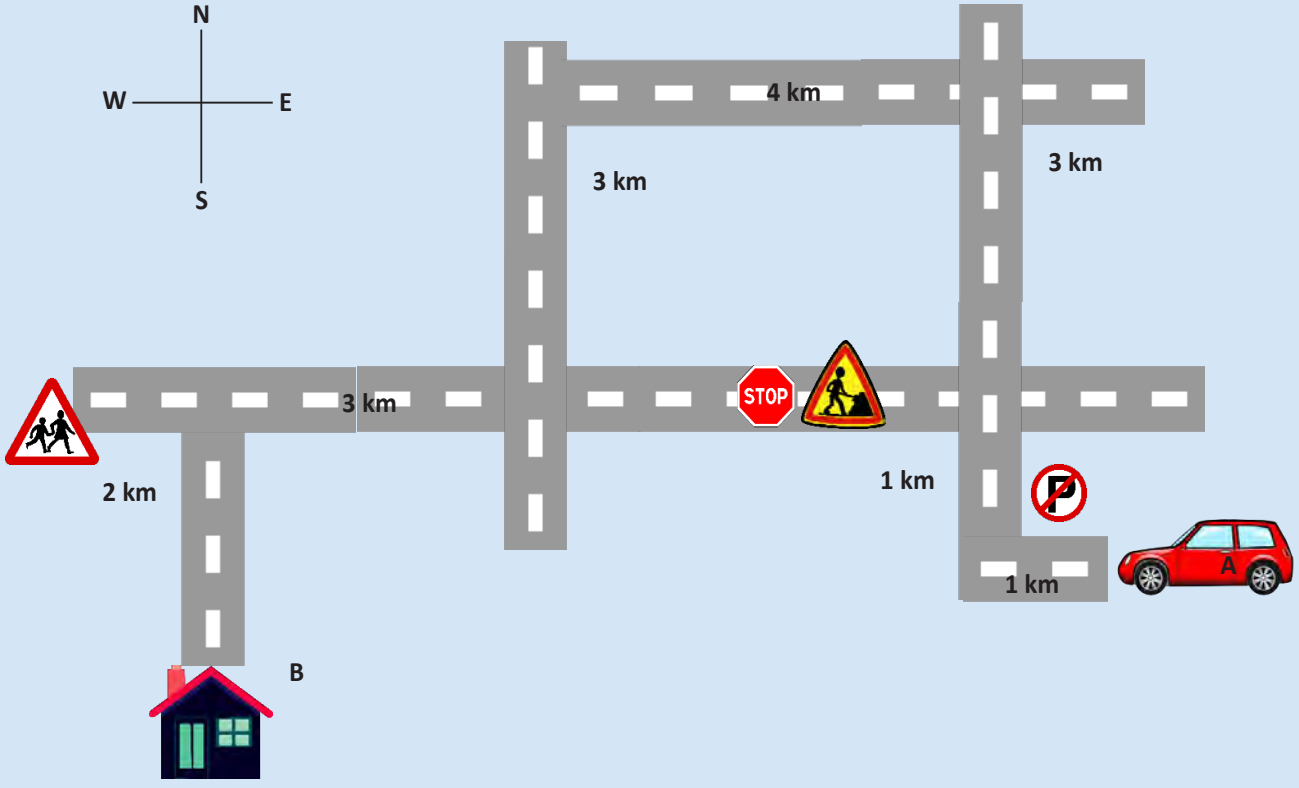
Learn with fun:

Let's play a game of directions. Fill in the name of directions given in the picture. One is done here as an example.





Q.1 Sonu is travelling on a road with some signs. Help her to drive safe to reach her destination with the help of given directions.



(a) Identify the road signs given in the diagram and write below.

1. _____
2. _____
3. _____

(b) Provide instructions in the form of directions in order to help Sonu travelling by car from point A to reach her home situated at point B. The first one has been done for you.

(i) From point A travel 1 km straight towards west.

(ii) _____

(iii) _____

(iv) _____

(v) _____

(vi) _____

Q.2 Ashwini is travelling by sea with her friends. Which instrument is she going to use there to travel in the right direction? Tick on the correct option from the choices given below.

(a)

(b)

(c)

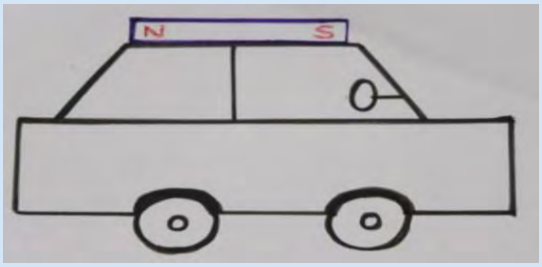
(d)

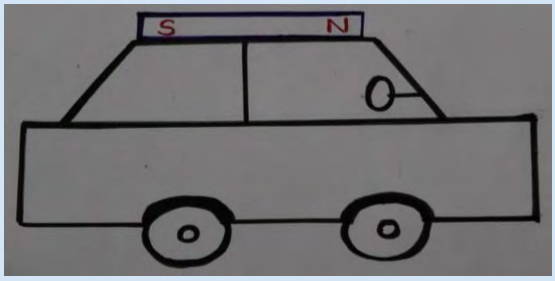
Date _____

ACTIVITY SHEET-4

Learn with fun:

Below given are two pictures of toy cars having bar magnet. Help Geeta in drawing the cars according to the instructions given.





(a) Geeta wants toy cars to move closer to each other

(b) Geeta wants toy cars to move away from each other

Q.1 Shyam completed his FUN WITH MAGNETS homework and went to drink water. His younger sister was sitting there and she erased some words. Help him to complete it.

Column 1	Column 2
N---N	_____
N-- _____	Attraction
S---N	_____
_____---S	Repulsion

Date _____

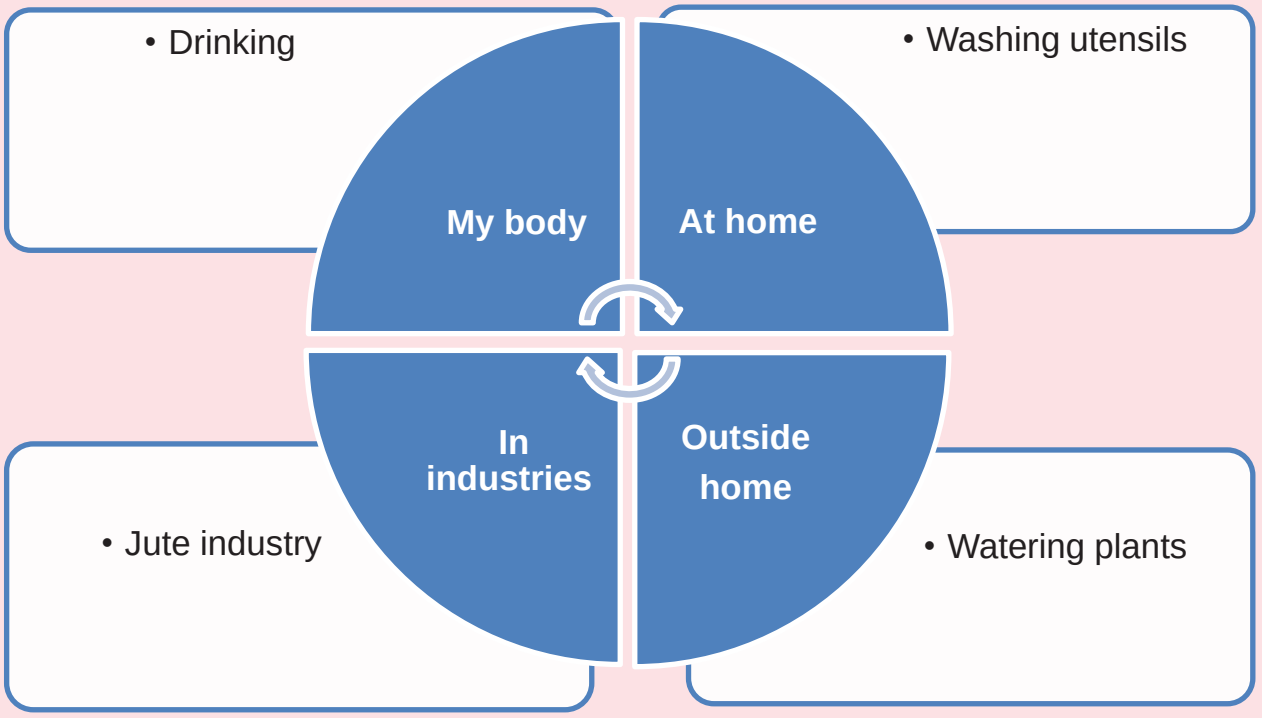
CHAPTER-14: WATER

Water usage and its sources

ACTIVITY SHEET-1

Learn with fun:

We use water for (add more examples in each box):



Q.1 Identify various activities where usage of water is more than a bucket. Can you think of the ways to minimize usage of water? Give any two examples where you were able to do so.

(a)_____

_____

(b)_____

_____

Q.2 Which of the following activities you will prefer to save water. Tick mark your answer:

(a) Bathe using bucket and mug / taking shower.

(b) Washing your vehicle occasionally / mopping with a wet cloth.

(c) Mopping the floor / washing the floor to clean it.

Q.3 Identify various sources of water in the word grid and write them under specific heading:

A	T	S	E	A	T	H	S	H
H	A	N	D	P	U	M	P	O
B	P	O	O	L	B	A	R	N
O	W	R	I	V	E	R	I	M
R	A	R	C	A	W	A	N	J
E	T	N	E	K	E	I	G	O
W	E	D	C	S	L	N	I	C
E	R	G	A	I	L	A	K	E
L	E	A	P	O	N	D	N	A
L	E	S	S	W	E	L	L	N

Fresh surface water sources	Fresh ground water sources	Fresh ground water sources
River	Handpump	Ocean
lake	Borewell	Sea

Date _____

ACTIVITY SHEET-2

Learn with fun:

Observe the following instances around yourself and discuss with your peers how and why it occurs. Write down the process (evaporation / condensation / transpiration) occurring in the space provided. Add two more examples of your own & also write the process involved.

(a) Floor dries up after mopping.

_____

(b) Wheat grains dry when we spread them after washing.

_____

(c) Water droplets seen on leaf surface in early morning during winters.

_____

(d) Water droplets appear on the surface of water bottle taken out from refrigerator and kept in open.

_____

(e) Water in the tea-pan reduces when we boil it for some time.

_____

(f) Vegetables dry up when kept in open during summers.

_____

(g) Leaves wilt during noon in summers.

_____

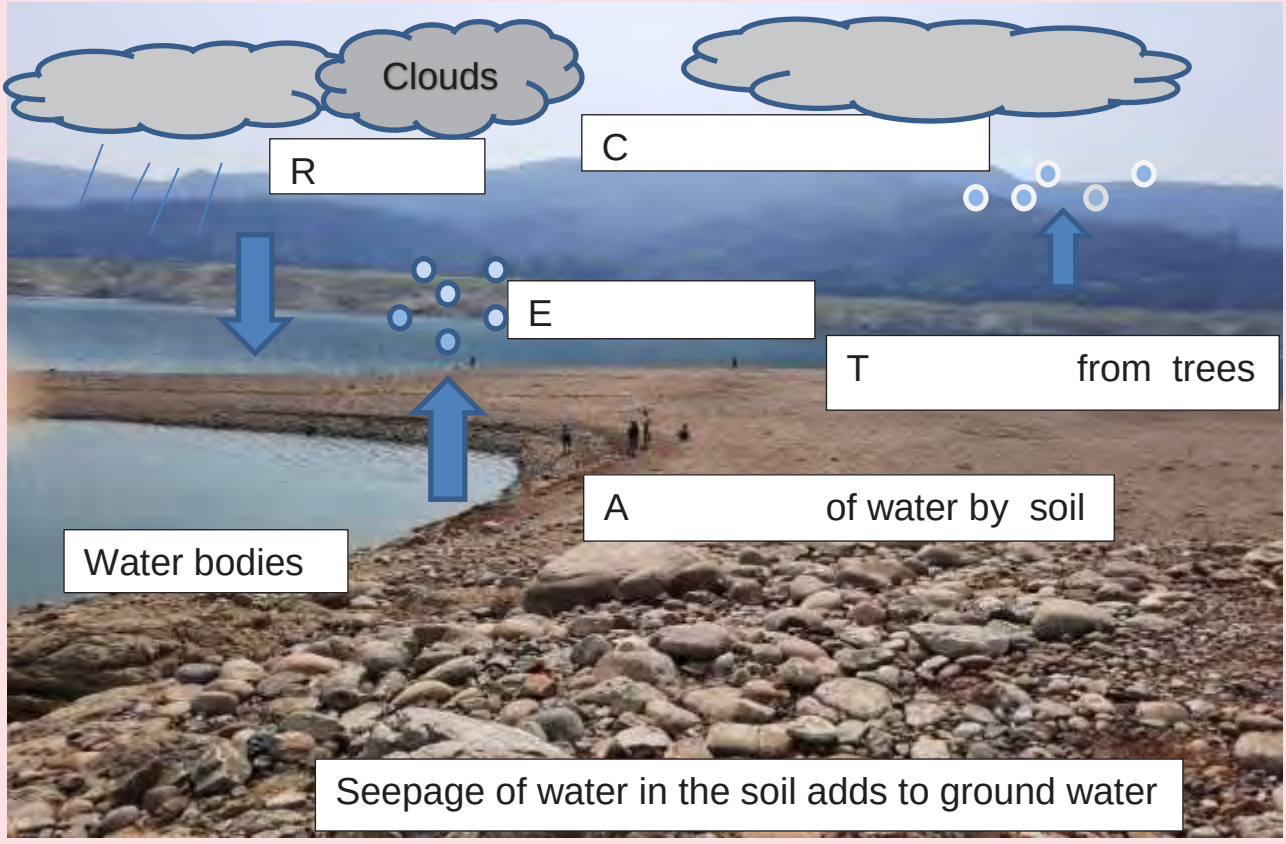
(h) _____

_____

(i) _____

_____

Q.1 Identify and write in the box various phenomenon occurring in the nature, in the given picture :



The circulation of water from the ocean and the surface of the earth into air as vapour, returning as rain, hail or snow and finally going back to the oceans, is known as _____.

Q.2 Complete the following:

Excessive Rainfall leads to

Less Rainfall leads to

Name a few states in India which are affected by:

(a) Excessive rainfall:

_____

(b) Less rainfall:

Also show these regions in the map of India with two different colours and paste in your notebook.

Q.3 Availability of ground water is affected due to:

(a) Reduction in vegetation

(b) Concretization (covering with concrete) of most of the land.

(c) Over exploitation of resources.

(d) All of the above

Date _____

ACTIVITY SHEET-3

Learn with fun:

Take a walk around your school or home and try to locate places where water is used. Fill the details below to show how water can be used more wisely (write or draw). Add a few more examples of your own.

Place where water is used	**Ways water might be wasted in this place**	**Ways to save water**
 Drinking water taps at school	 Dripping taps	Turn off taps tightly after each use. Fix leaky taps.
 Toilet seats in wash room		
 Wash basins		Using low flow taps in wash basin

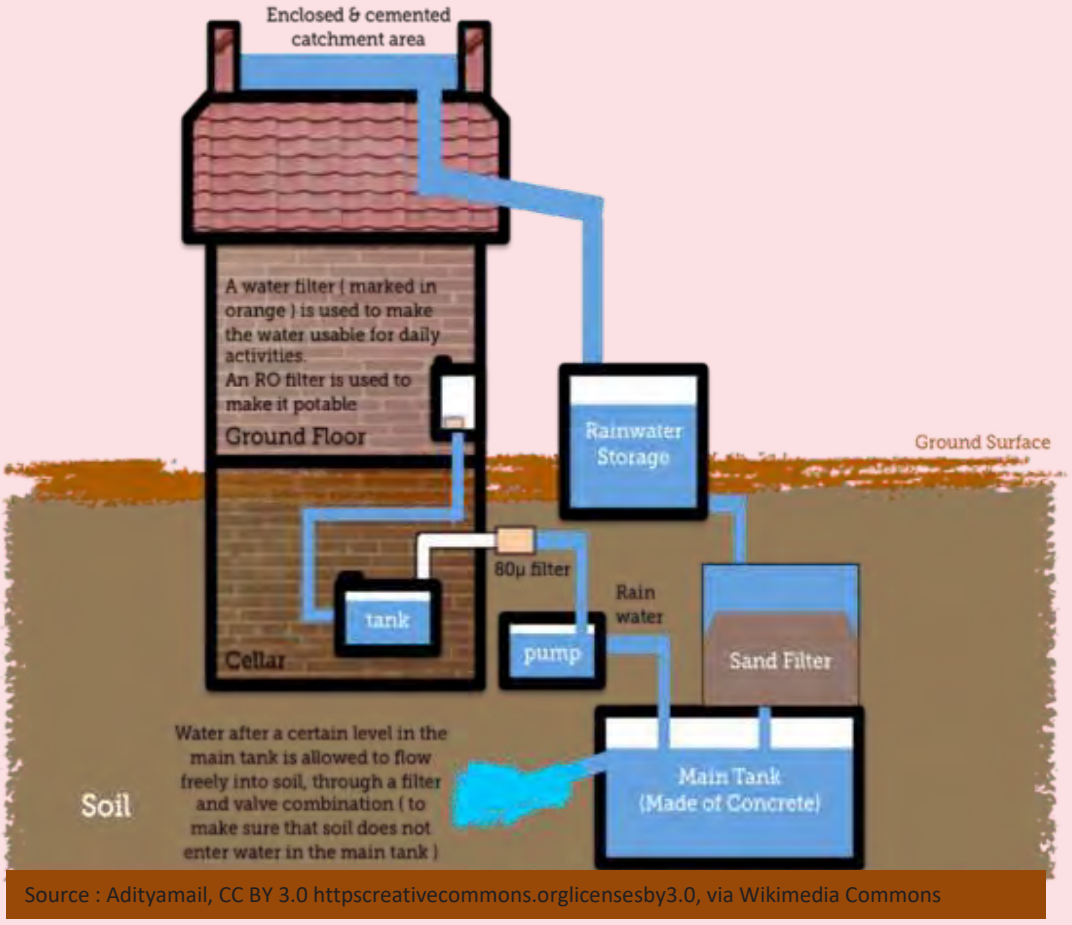
 Lawns and garden in school	Over watering lawns or plants	 Use waste water for growth of plants and trees.
 Drinking water		 Serve drinking water only when requested

Q.1 Make a poster or write a slogan on water conservation. One slogan is given as an example.

“Catch water where It falls”

Q.2 Have you noticed any man made water collecting structures in your locality? Give a term for collecting rain water and storing it for later use.

Q.3 Observe the below picture of rainwater harvesting technique and write down various steps involved in purification of water. Discuss with your peers and teacher how you can contribute in collection and usage of rain water at your own level.



Source : Adityamail, CC BY 3.0 httpscreativecommons.orglicensesby3.0, via Wikimedia Commons

Write any five things that you can do with this water:

(a)_____

(b)_____

(c)_____

(d)_____

(e)_____

Date _____

CHAPTER-15: AIR AROUND US

Air and its components

ACTIVITY SHEET-1

Learn with fun:

We have learnt that air is necessary for everyday life activities. Draw pictures of a few activities which you think are not possible without air. One has been done for you as an example.

Q.1 Put the arrows in the right direction to show interdependence of plants and animals on each other ?

OXYGEN

CARBON DIOXIDE

Now fill in the missing letters to spell the terms that define the statement.

(a) Process by which green plants produce oxygen**.**

P __ O__ O__Y__T__E__I__

(b) Process by which plants and animals produce carbon dioxide**.**

R__S__I__A__I__N

Q.2 Put a circle around the activity/ object that makes use of air pressure?

Q.3 Look at the pictures and answer the questions that follow:

(a) Which component of air is shown by part A?

(i) Oxygen
(ii) Nitrogen
(iii) Carbon dioxide
(iv) Water vapour

(b) What can be shown from this activity?

(i) Water contains air

(ii) Water does not contain air

(iii) Soil contains air

(iv) Soil contains water

(c) What is shown by the experiment given below?

(i) Air exerts pressure

(ii) Air is necessary for burning

(iii) Air occupies space

(iv) Air has mass

Date _____

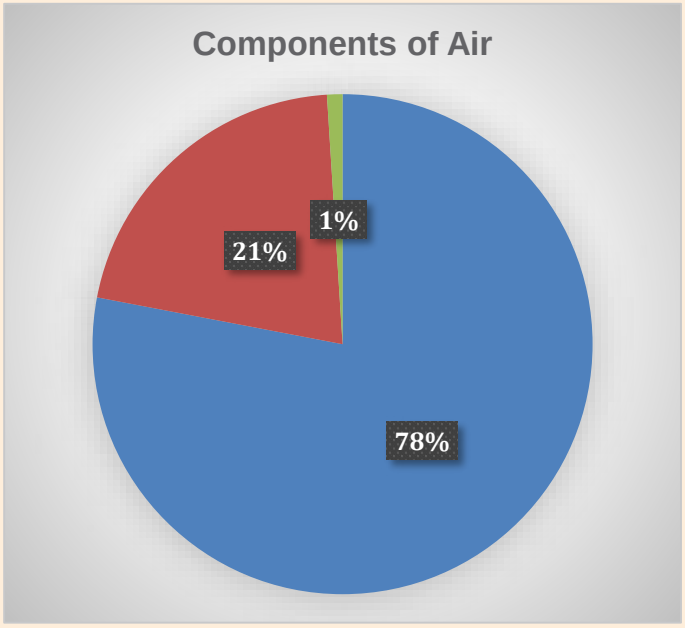
(d) What can be concluded from this activity?

(i) Air contains water
(ii) Air contains oxygen
(iii) Air contains dust particles
(iv) None of the above

(e) Earthworms come out of soil during heavy rains because

(i) Water fills space occupied by air in soil
(ii) They want to drink water
(iii) They want food
(iv) None of the above

(f) Which component of air is shown by red part of the pie chart?



(i) Oxygen
(ii) Carbon dioxide
(iii) Nitrogen
(iv) Water vapour

Date _____

ACTIVITY SHEET – 2

Learn with fun:

Hey Shubham, Lets play mission Green……

Mission Green? Tell me the rules

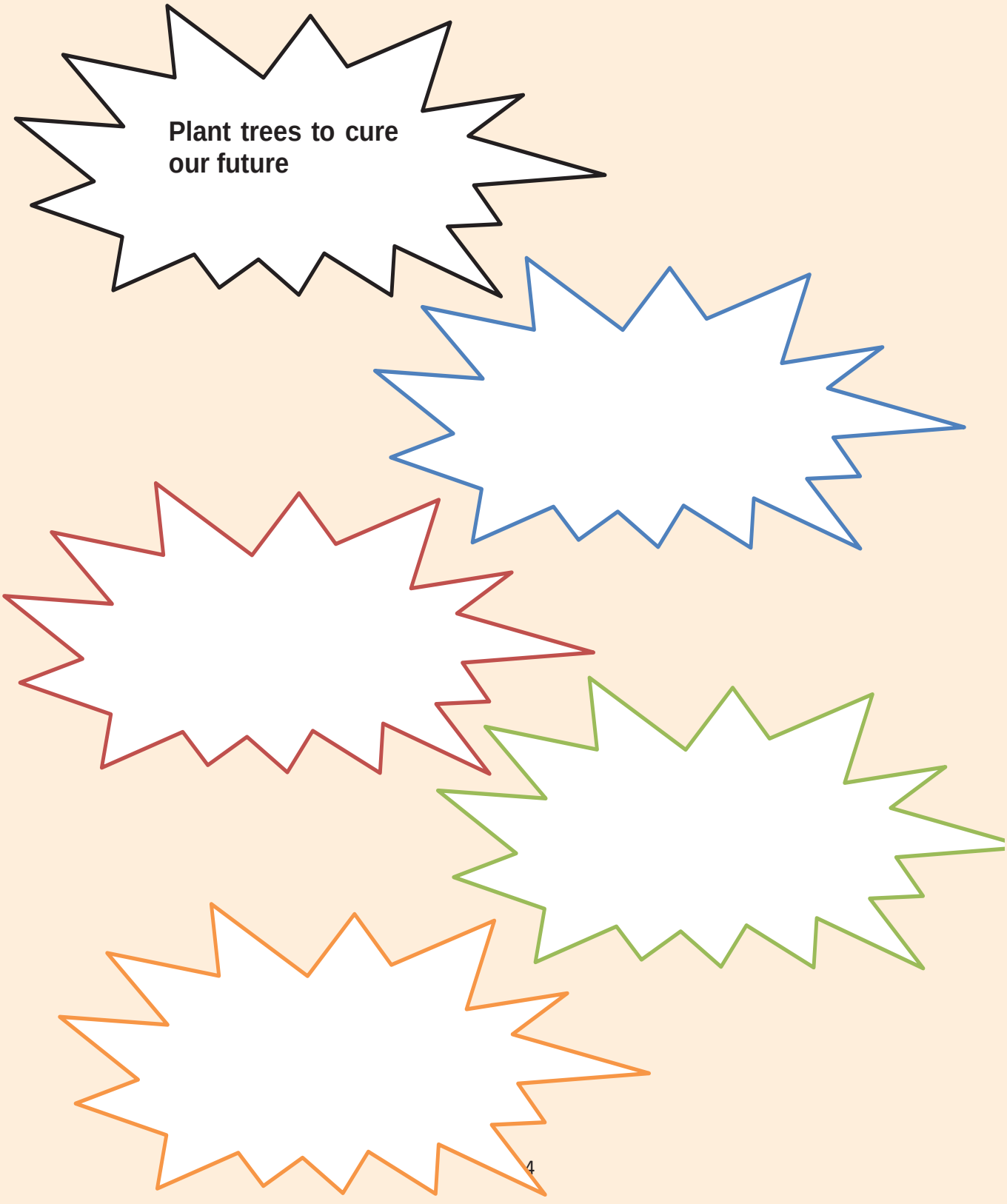
It's Simple. We will throw a dice on the board and move our piece. If we land on environmental friendly activity we take 4 steps ahead and if it is not we have to take 3 steps back.

Wow !!! Let's play…….

70 FINISH	69	68	67	66 Establishing forest reserve	65	64
57	58	59	60	61	62	63
56 Industrial emission	55	54 Cutting a tree	53	52	51	50
43	44	45 Car pooling	46	47	48	49
42	41	40	39 Cycling	38	37	36
29	30 Forest Fire	31	32	33	34	35
28	27	26	25	24	23	22
15	16	17	18 Burning fossil fuel	19	20	21
14	13	12	11	10 Mining	9	8
1 START	2 Planting a tree	3 Using CNG	4	5	6	7 Burning garbage

Q.1 You must have seen or heard about dense smog in Delhi. Collect several pictures related to such pollution and paste them in the space given below.

Q.2 Write a few slogans of your own on the topic 'Reduce Air Pollution'. (One has been done as an example).



Q.3 Read weather report from newspaper every day. Collect data about pollutants present in the air in your state / UT. Make comparison with other states. Paste a few reports in the space given below. Think of several ways by which you can reduce air pollution. (One such report has been given as an example)

TEMPERATURE DATA: IMD, POLLUTION DATA: CPCB, MAP: INSAT/IMD (TAKEN AT 18.00 HRS)

Forecast for Tuesday: Heavy/very heavy rainfall likely at isolated places over Gujarat, Gangetic West Bengal, Jharkhand, Chattisgarh, coastal Andhra Pradesh, Telangana, coastal Karnataka, Tamil Nadu, Puducherry, Karaikal and Kerala. Thunderstorm with lightning likely at isolated places over Assam, Mizoram, Odisha, Madhya Pradesh, Marathwada and Andaman & Nicobar Islands

CITY	RAIN	MAX	MIN
Agartala	–	35.8	25.1
Ahmedabad	1.7	31.8	25.7
Aizawl	0.5	–	19.2
Allahabad	–	35.1	26.6
Bengaluru	0.4	27.0	20.2
Bhopal	–	31.8	23.6
Bhubaneswar	9.9	30.2	25.1
Chandigarh	–	35.8	25.2
Chennai	–	33.8	26.7
Coimbatore	–	29.1	22.8
Dehradun	2	34.0	22.3
Gangtok	–	22.2	16.1
Goa	–	30.2	24.1
Guwahati	–	37.0	25.9
Hubballi	–	27.0	21.0
Hyderabad	3	25.0	23.8
Imphal	0.6	30.4	20.9
Jaipur	–	33.0	25.0
Kochi	42	25.4	23.4
Kohima	2	29.0	18.6
Kolkata	4	33.3	26.5

CITY	RAIN	MAX	MIN
Kozhikode	25	26.2	24.6
Kurnool	–	28.9	25.7
Lucknow	–	36.0	27.1
Madurai	0.8	32.7	24.3
Mangaluru	0.3	28.2	23.4
Mumbai	3	29.3	24.0
Mysuru	–	29.0	21.3
New Delhi	–	34.3	26.0
Patna	–	35.5	26.4
Port Blair	27	26.7	24.3
Puducherry	–	33.1	23.3
Pune	1.8	29.1	21.4
Raipur	–	30.0	25.0
Ranchi	3	30.3	22.6
Shillong	2	26.8	16.9
Shimla	–	27.0	18.2
Srinagar	–	30.1	14.8
Thiruvananthapuram	80	29.1	23.2
Tiruchi	–	34.0	25.2
Vijayawada	108	27.8	24.6
Visakhapatnam	267	28.0	23.8

Rainfall data in mm; temperature in Celsius)

Pollutants in the air you are breathing

CITIES	SO_2	NO_2	CO	PM2.5	PM10	CODE
Ahmedabad	.70	.46	.34	...96	.110	
Bengaluru	...5	.46	.55	...21	...65	
Chennai	...3	.24	.81	...30	...62	
Delhi	.72	.37	.43	.148	.135	
Hyderabad	.28	.19	.22	...52	...66	
Kolkata	.15	.20	.17	...39	...60	
Lucknow	...6	.10	.56	...64	...99	
Mumbai	.20	.10	...–	...63	.103	
Pune	133	179	109	...35	...29	
Vishakhapatnam	.20	.31	.25	...14	...31	

Yesterday

In observation made at 4.00 p.m., Moradabad, Uttar Pradesh recorded an overall air quality index (AQI) score of 180 indicating a moderate level of pollution. In contrast, Madikeri, Karnataka recorded a healthy AQI score of 14

Quality Code: Poor Moderate Good (Readings indicate average AQI)

Sulphur Dioxide. Short-term exposure can harm the respiratory system, ing breathing difficult. It can affect visibility by reacting with other air cles to form haze and stain culturally important objects such as statues monuments.

Nitrogen Dioxide. Aggravates respiratory illness, causes haze to form by ding with other air particles, causes acid rain, pollutes coastal waters.

Carbon monoxide. High concentration in air reduces oxygen supply to cal organs like the heart and brain. At very high levels, it can cause iness, confusion, unconsciousness and even death.

2.5 & PM10: Particulate matter pollution can cause irritation of the eyes, e and throat, coughing, chest tightness and shortness of breath, reduced g function, irregular heartbeat, asthma attacks, heart attacks and prematu

PICTURE CREDIT: THE HINDU

Q.4 Collect a few pictures from newspapers and old magazines which show activities that reduce air pollution. Paste pictures in the space given below to create your collage. One picture has been given as an example

PICTURE CREDIT: THE NAVBHARAT TIMES

Date _____

CHAPTER-16: GARBAGE IN GARBAGE OUT

Garbage

ACTIVITY SHEET-1

Learn with fun:

Shyama was returning from her grandparents house by bus with her parents. As the bus crossed border and entered Delhi she saw a huge heap of garbage, as big as a mountain. A foul smell entered her nostrils as the windows of the bus were opened.

Can you guess what Shyama might have seen?

Q.1 Where does your family throw the garbage generated in your house everyday?

_____

_____

Q.2 Match the following:

(a) 

Landfill

(b) 

Red worms

(c) 

Vermicompost

Q.3 Explain vermicomposting in detail.

Q.4 List the activities of eco club in your school. Write your observations regarding the activities in the space provided below.

(a)

(b)

(c)

(d)

(e)

Date _____

ACTIVITY SHEET-2

Learn with fun:

Look around and find plants around you, big or small. Visit the closest Nursery and meet its owner and workers, gardeners working in that Nursery. You have to observe the type of soils they use to keep their plants grow best. Find out what do these people add to the soil to make their plants grow properly. Collect a few samples some from nursery and others which are growing without being taken care of and observe them closely. List the differences in their appearance, growth and colour.

1. _____
2. _____
3. _____

Q.1. Look at the pictures given below and can you explain what is being conveyed ?

Ans. Date _____

_____

_____

Q.2. What are the benefits of vermicomposting ?

Ans._____

_____

Q.3.How will you make your own manure for nourishing the proper growth of your plants ?

Ans. _____

_____

Q.4. Have you seen any of your family members, using methods other than vermicomposting for the growth of their plants ?

Ans. _____

_____

Date _____

Activity Sheet - 3

Learn with fun:

Let us create some useful and interesting item and have some fun. When we reuse waste products into some useful and creative it is called recycling. Today we will learn to make a puppet from a bottle.

Let's make bottle puppet together.

Q.1 Now it's your turn, share your ideas of recycling with us.

_____

_____

_____

Date _____

Q.2 Everyone knows plastics are harmful for us, still we use so many items made from plastics. What are your suggestions to stop using plastics to protect our environment ?

Ans.

_____

_____

Q.3. How will you recycle the following materials ?

(a) Plastic bottles _____

(b) Kitchen waste _____

(c) Building waste (construction sites) _____

(d) Old clothes _____

(e) Metal waste _____

NOTES