

Work Integrated Education

Activity Book

Standard

VII



**Government of Kerala
Department of General Education**

Prepared by

State Council of Educational Research and Training (SCERT), Kerala

2024

THE NATIONAL ANTHEM

Jana-gana-mana adhinayaka, jaya he
Bharatha-bhagya-vidhata
Punjab-Sindh-Gujarat-Maratha
Dravida-Utkala-Banga
Vindhya-Himachala-Yamuna-Ganga
Uchchala-Jaladhi-taranga
Tava subha name jage,
Tava subha asisa mage,
Gahe tava jaya gatha.
Jana-gana-mangala-dayaka jaya he
Bharatha-bhagya-vidhata
Jaya he, jaya he, jaya he,
Jaya jaya jaya, jaya he

PLEDGE

India is my country. All Indians are my brothers and sisters.
I love my country, and I am proud of its rich and varied heritage.
I shall always strive to be worthy of it.

I shall give respect to my parents, teachers, and all elders, and
treat everyone with courtesy.

To my country and my people, I pledge my devotion. In their
well-being and prosperity alone lies my happiness.

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Foreword

Dear children,

School education is the most beautiful phase in life. It is at this stage that we get to know and understand the environment around us. A lovely childhood is our right. At the same time, we have certain responsibilities in the society that we live in. All that we see in the world around us today has been made by the knowledge procured through individual and collective efforts and through mutual cooperation. Innumerable humans do jobs in various professional sectors as food, residence, clothing, travel and tourism, entertainment and technology. This knowledge is an inspiration for us. It rouses our sense of responsibility and reminds us that each one of us has a contribution to make of our own.

No matter how rich or knowledgeable you are, your life cannot be complete until you do a job. The knowledge that we gain is to be used in real life situations, and it is only then that it gathers strength. It is therefore clear that a vocation does not stand apart from the education that is acquired. Work integrated education refers to the utilisation of ideas learned through different subjects in different jobs and the use of acquired skills and proficiencies in real life.

Work integrated education involves the inculcation of multiple skills with a clear sense of purpose. These include skills as working with one's hands, preparing for the job, developing the willingness for it and the ability to use the required instruments. All the subjects that we learn provide the outlooks and skills required for this as well as the opportunities and possibilities for their utilization. This book has been prepared with this aim in mind. This book should be approached in the context of the jobs, their potentials and the availability of materials specific to each region.

This is a book that is not meant for mere reading. Rather, it's an activity book that provides opportunities to examine and explore, execute jobs and enhance skills. It should develop a positive aptitude and attitude towards work. We are blessed with an imaginative brain and free hands. The school subjects provide enough strength and support to successfully integrate these. Let this work integrated education activity book make you competent to face life with confidence.

Warm regards,

Dr. Jayaprakash R K

Director

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Introduction



Extra Reading



Activity Time



Moving Ahead



Key Takeaways

THE CONSTITUTION OF INDIA

PREAMBLE

WE, THE PEOPLE OF INDIA, having solemnly resolved to constitute India into a ¹**[SOVEREIGN SOCIALIST SECULAR DEMOCRATIC REPUBLIC]** and to secure to all its citizens :

JUSTICE, social, economic and political;

LIBERTY of thought, expression, belief, faith and worship;

EQUALITY of status and of opportunity; and to promote among them all

FRATERNITY assuring the dignity of the individual and the ²[unity and integrity of the Nation];

IN OUR CONSTITUENT ASSEMBLY this twenty-sixth day of November, 1949 do **HEREBY ADOPT, ENACT AND GIVE TO OURSELVES THIS CONSTITUTION.**

1. Subs. by the Constitution (Forty-second Amendment) Act, 1976, Sec.2, for "Sovereign Democratic Republic" (w.e.f. 3.1.1977)
2. Subs. by the Constitution (Forty-second Amendment) Act, 1976, Sec.2, for "Unity of the Nation" (w.e.f. 3.1.1977)

AGRICULTURE



If you have the will , you can
reap a harvest even in the sky!





A Rich Harvest



We are familiar with cultivation in limited space using grow bags.

Research is being carried out on different methods of cultivation in limited space.

Let's learn one of them.



Vertical farming has brought about significant changes in agriculture. Crops are cultivated in slabs arranged vertically in vertical farming. Farming of this kind can be done inside buildings, in urban areas, in confined spaces, or on tall structures. This concept emerged from the necessity for optimal agricultural production. Spinach, tomato, brinjal, ladies finger etc. can be grown this way.

The picture shows a model of vertical farming set up for growing vegetables.





Vertical Garden

The trend of cultivating plants on vertical structures is gaining popularity. This innovative gardening approach is commonly known as vertical garden, which is also referred to as green walls or live walls. It enhances the beauty of the place and is beneficial for the purification of air.



Activity Time

Shall we prepare a vertical garden?

Materials needed:

- Weld mesh (12 gauge) 5 ft tall - 1m
- Shade net or green net (10 cm wider and longer than the mesh)
- 5 ft long $\frac{1}{2}$ inch PVC pipe
- $\frac{1}{2}$ inch pipe cap
- Tags to tie mesh
- A pair of scissors

Let's do it

We shall construct a tower of $1\frac{1}{2}$ m height.

Place the green net inside the mesh and tie both ends of the mesh as shown in the picture. A cylindrical tower is ready now. You can prop this up on soil or in a flat container. Take $1\frac{1}{2}$ m long $\frac{1}{2}$ inch PVC pipe and secure the bottom with a cap.



You can note down the details of vertical farming done in your school, in your activity diary.

You may include the following details:

- The method of construction of towers, its size and numbers.
- Varieties of vegetables grown
- Care provided for the crops
- Period of cultivation
- Expenditure
- Effectiveness of vertical farming
- Things kept in mind while doing vertical farming (availability of sunlight, setting of place,...)

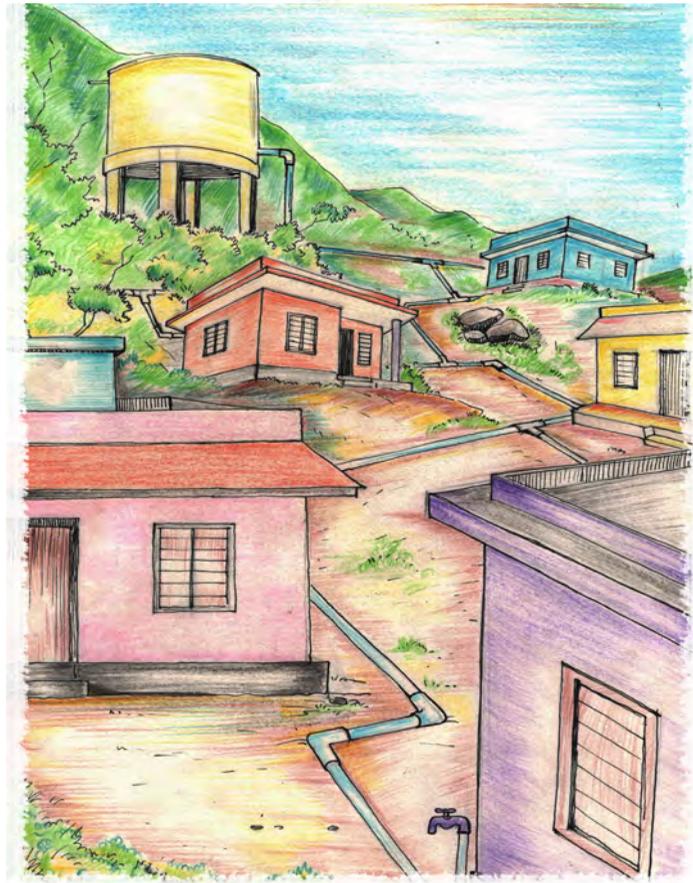
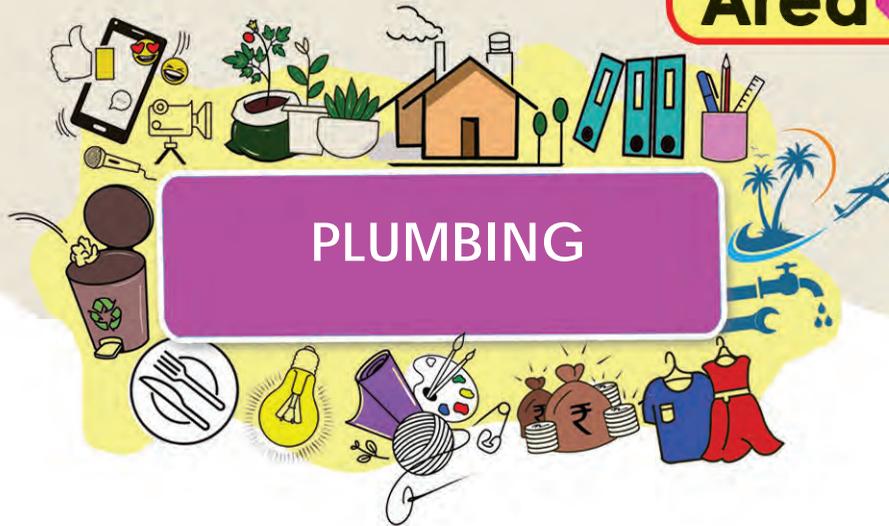


Moving Ahead



The pictures given above show different models of vertical garden. We shall grow vegetables at home in this manner. Note down the arrangements done for farming and the different stages involved in it, in your activity diary.





Plumbing is one of the most important and necessary services that people rely on.

- Bill Howe



GI pipes and PVC pipes are generally used for plumbing. Let's take a look at the accessories required to install the pipes.

	<p>Coupling</p> <p>Coupling is used to join pipes. It is required to repair broken or damaged pipelines.</p>
	<p>Elbow</p> <p>Elbow is used to redirect water flow in a specific direction.</p>
	<p>Bend</p> <p>Bend has the same use as Elbow. Bends are usually used instead of elbows to facilitate the flow of water directly connected to motor.</p>
	<p>Reducer</p> <p>Reducer is used to connect a pipe of a larger diameter to one of a smaller diameter.</p>
	<p>T Connector</p> <p>T-connector has one inlet and two outlets . It is used to combine water flow from two different pipes into one.</p>



	<p>Hacksaw</p> <p>This tool is used for cutting pipes.</p>
	<p>Pliers</p> <p>Pliers are used to fasten and unfasten plugs.</p>
	<p>Screwdriver</p> <p>A screwdriver is a tool used to tighten and loosen the screws needed to attach the clamps.</p>



Activity Time

Let's make a model of plumbing water and fertilizer to vertical farming towers using the materials given below.

Materials needed

Three quarter Inch of PVC pipe, half inch of PVC Pipe, Elbow, Reducer, Stopper, Fertigation Tank

Arrange the fertigation tank at least 2 m height . Fix the first tower one meter away from the tank. Fix the second tower in such a way that the centre of the second tower is 1 m away from the first tower. Complete the plumbing work by fitting the pipes with accessories so that the water flows smoothly from the tank to the towers.

What are the advantages that your model possesses?

Draw a sketch of the model you have prepared.





Houses are made not just of mud and wood, but of minds as well.





Measure and Draw



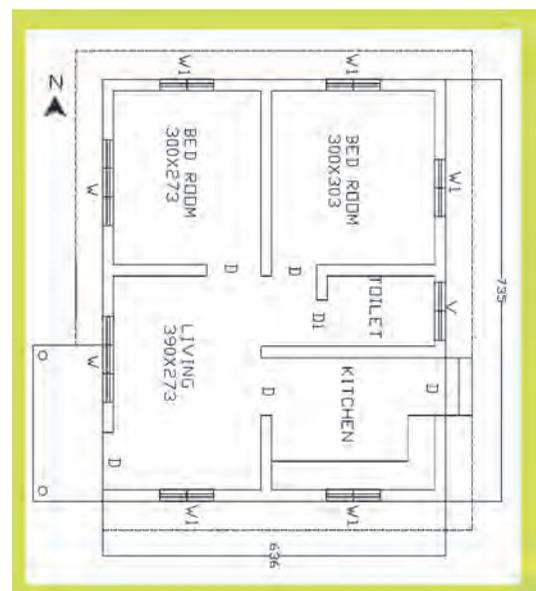
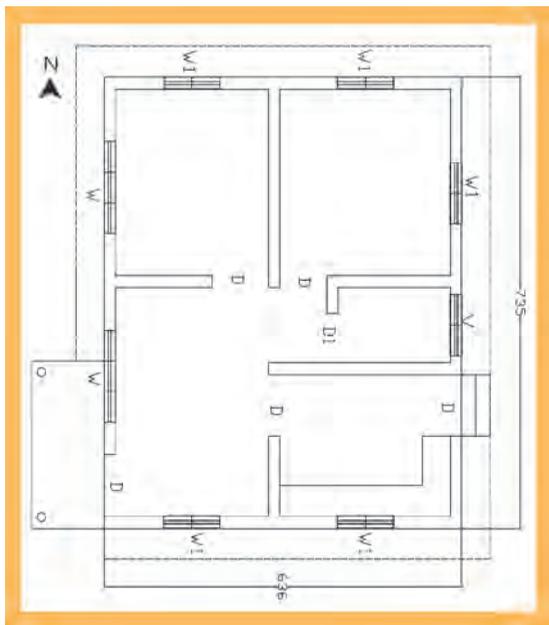
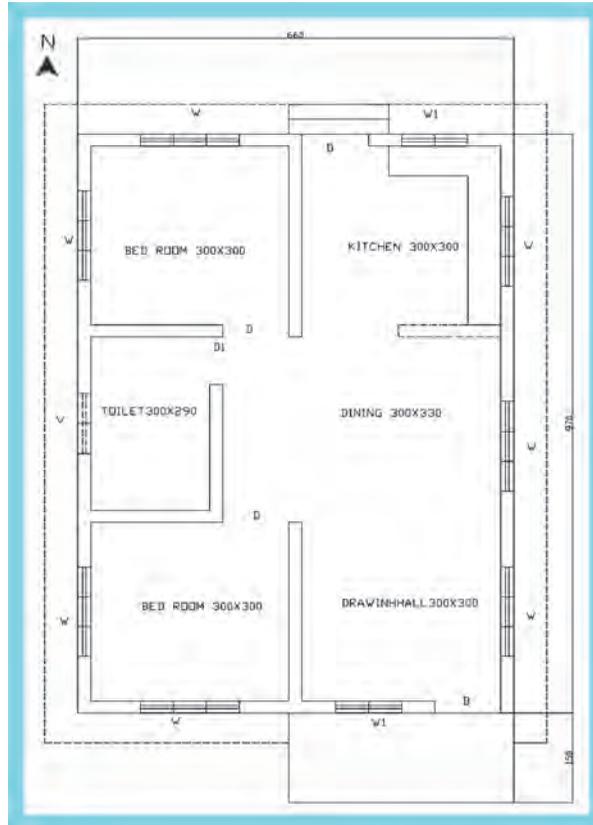
The Government Higher Secondary School building at Onattukara is attractive. There are 18 rooms in the three storeys. The long verandah and the modern classrooms add a special elegance to the school. The library, various laboratories, washroom, drinking water facilities, mess hall, kitchen, all are neatly setup in the school. The layout of the school is given below.

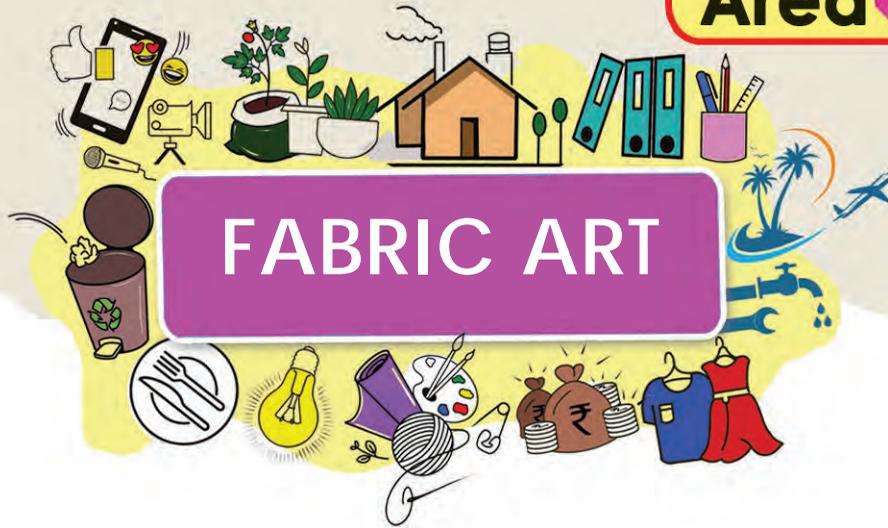




Activity Time

Given below are the plans of different type of houses





Weaving our dreams...



The queen had actually pulled out the shiniest fibre on earth - the silk fibre - from her teacup. This is a popular lore behind an incident that is considered to be one of the major milestones in the textile sector.

Threads made from various fibres are available today.

Write down the names of the fibres you are familiar with

- cotton
-
-



Fibres

Fibre is the basic component required in fabric making. The beauty, softness, durability and price of the fabric are determined by the fibres used. In addition to the fibres obtained from nature, fibres are also prepared using different chemical substances.

Given below is a chart that classifies fibres based on their characteristics.

Fibres		
Natural fibres		Manmade (Synthetic)
Plant origin	Animal origin	
Cotton	Silk	Nylon
Coir	Wool	Spandex
Hemp		Rayon
Linen		Modal
Sisal		Polyester
Plantain fibre		
Pineapple		
Jute		



Is there any difference in the clothes worn by people engaged in different professions?

Listed below are some of the commonly used fibres and their specialities.

Fibre	Characteristics
Cotton	<ul style="list-style-type: none">• absorbs moisture• is soft and comfortable• burns completely into ash and burnt cotton smells like burnt paper• is known as the King of fibres
Wool	<ul style="list-style-type: none">• helps to retain the body warmth• can absorb water thrice its weight• melts, but doesn't burn completely when it is burnt• burnt wool smells like burnt hair
Silk	<ul style="list-style-type: none">• is soft and shiny• absorbs moisture• is strong• melts on burning• burnt silk smells like burnt hair• is known as the Queen of fibres
Polyester	<ul style="list-style-type: none">• is ideal for making strong threads suited for stitching• melts and burns in the presence of fire• burns with a chemical odour
Viscose Rayon	<ul style="list-style-type: none">• is soft and comfortable• absorbs moisture• completely burns into ash. Burnt viscose/burnt rayon smells like burnt paper



The method of stitching different pieces of fabric materials together is termed as Patchwork. The Potli bag is a product which can be easily made through this method.



A square shaped piece is cut out from the large patch worked fabric piece. The opposite sides are folded and stitched so that a cord can be passed through.

The fabric is folded into half and the other two sides are stitched up.

Pass the cord through the folded and stitched sides and the potli bag is ready

Likewise, what other products can be made?

Try it...

Exhibit the prepared products in the class.





**Engage, Enlighten, Encourage and most importantly,
Just be yourself ! Social Media is a community effort,
everyone is an asset.**

- Susan Cooper



You know that a variety of topics are shared through social media.

Different types of content	
Education	Sports
Cinema	Travel
Music	Agriculture
Health	Food
Craft	Entertainment news

How many kinds of topics are shared through social media like this?

Have you seen these types of presentations on social media?

Which are the topics you are interested in?

Have you noticed the different ways of posting contents?

Texts, pictures, videos, audio clips are the different formats through which different contents are presented. Selecting a suitable format for each content is a skill.

Have you engaged in these type of activities?

If yourself or your friends have presented any content on social media, just share it with the class.

Do you know why the content on social media get a wider audience?

This is because of the peculiarities of social media listed below.

- It's interesting
- Provides new knowledge and ideas
- Accessibility
- Can be shared and stored
- Can be used or avoided as per interest
- Provides entertainment, and aids in learning and acquiring vocational skills.
- Comparatively short content
- Attractiveness in presentations





Digital content

Digital content includes information that can be digitally transmitted (streamed), stored or shared in computer files. Content creation is possible using texts, images, videos, audios and software. Computers, laptops, smartphones, and other digital devices have the facility to receive, store, share and manage content using technologies such as the Internet.

You can prepare for it by following the steps given below.

1. Selection of the topic

The topic selected must be from your area of interest. The audience's aptitude should always be considered. Some areas are given below.

- | | |
|---------------------|--|
| Skill area | - Related to work, practical life, agriculture and cooking. |
| Area of expression | - Presentation of artistic expressions like literature, art, music, etc. |
| Sharing moments | - Related to celebrations, gatherings etc. |
| Sharing experiences | - Related to travel, daily life, studies, friendships etc. |
| Introducing | - Books, food, new knowledge, products etc. |

2. Refining the content

- Collect information related to the content.
- Check and organize facts and ideas.
- Write, edit and refine content.



4. Choosing a platform for publishing.

Understand the format of the platform you plan to publish on (eg: school wiki)

5. Digital preparation of the content.

- Set up tools to prepare and share content. (mobile phone, camera, computer, mic etc)
- Design visuals using various tools
- Add multimedia elements using various tools

Kden live, Blender VSE, InShot	Video editing
Krita, Blender	Animation
Canva	Graphic design
Scribus, LibreOffice	DTP
Audacity	Audio recording, voice mixing
KITE Lens	4Kvideo Recording ,Background Setting, Image- Sound Mixing, Adding Graphics

6. Assessment of experts

Improvising the content as assessed by the teachers and subject experts.

7. Publishing

8. Audience comment and assessment



Let's prepare together..

Did you understand how to create digital content ? Prepare a sample digital content with your friends.



Content creation is a field where multiple tasks need to be completed simultaneously. Therefore, it will be difficult to complete many things individually. Moreover, since there are numerous tasks to be completed, it is advantageous to assemble friends who are interested in each respective field to enhance the quality of products. Remember that collaboration leads to a better product.





Moving Ahead

Prepare and present a digital content on a lesson of your choice. The indicators given below can be used for this.

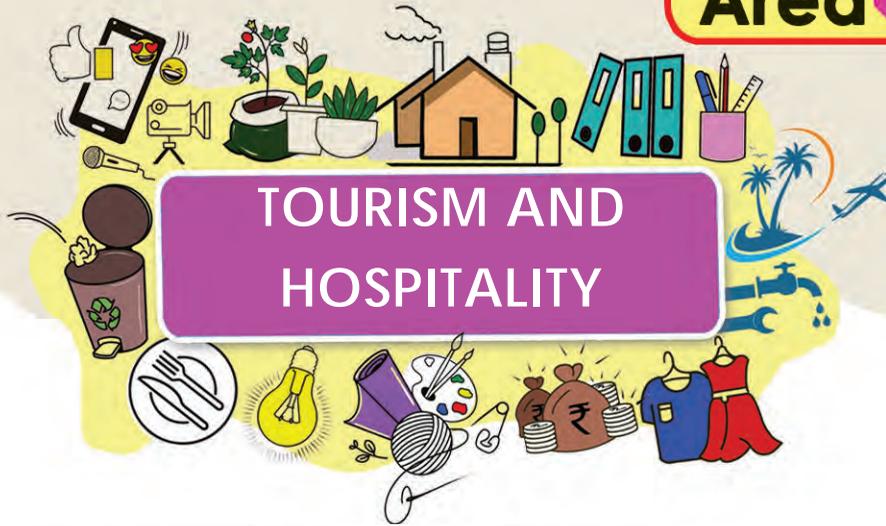
- The name of the lesson, concepts and titles should be given clearly.
- Important information in the lesson should be presented in a simple way.
- Appropriate pictures, figures, charts, important concepts in the lesson etc can be used.
- Examples, hyperlinks, QR code scanning and external websites can be included.



Key Takeaways

Gains			
I know the different sections of media.			
I know the content features of the media.			
I know the different forms of digital content.			
I am aware of the phases involved in the production of digital content.			
I know what resources are useful for creating digital content.			
I know how to prepare digital content with my friends.			





TOURISM AND HOSPITALITY



**Travelling broadens our perspectives.
Travelling enriches life with amazing sights.
Every journey is a reminder that there is still
a long way to go.**



- To Amusement Parks
- To participate in festivals
- To nearby towns
- School Study Tours
-
-

Hello kids, what kind of travel do you enjoy?

Here are some pictures of popular tourist destinations in Kerala.

Write down the location and specialities of these tourist destinations.



Sl. No.	Tourist destinations and their specialities	District





The picture of a tourist place is given here

What all things do you notice?

Find out the various ways in which tourism can contribute to the development of a region.

- Sale of curios and handicrafts are progressing.
- Progress in the field of tourism related industries such as hotels and accommodation.
- Tourism is a significant contributor to job creation.

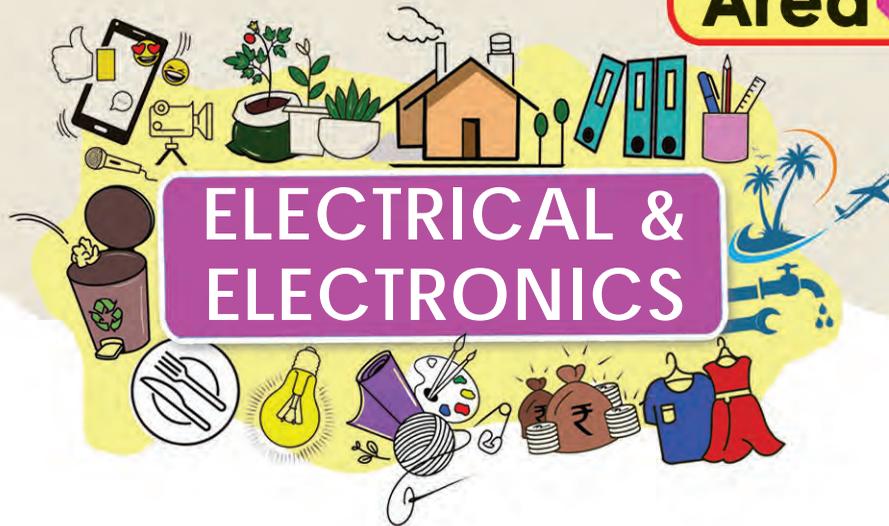


In 1986, Kerala became the first state in India to recognize tourism as an industry. When we travel to tourist destinations, we get the chance to see and participate in various activities salient to that particular location. Further, we can observe the preparation, distribution and exchange of tourism products, which makes tourism a global industry.



"Kerala provides a seamless experience that pleases both our eyes and mind."





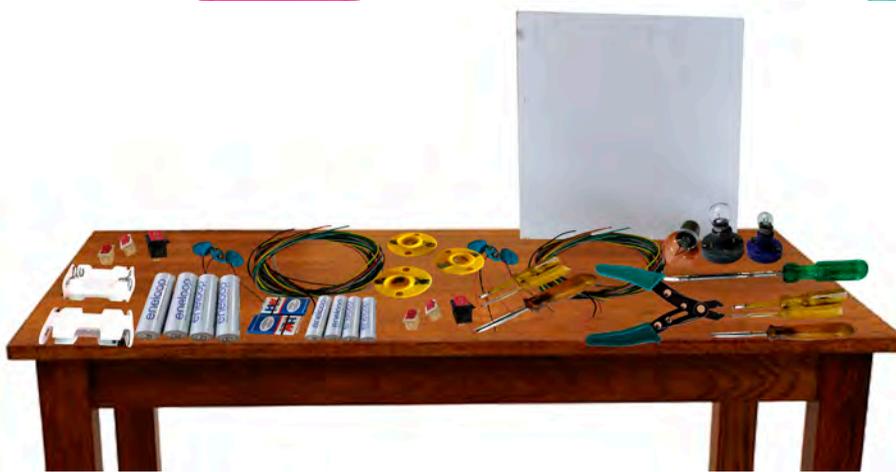
ELECTRICAL & ELECTRONICS



The day when we will know exactly what 'electricity' is, will chronicle an event probably greater, more important than any other recorded in the history of the human race. The time will come when the comfort, the very existence, perhaps, of man will depend upon that wonderful agent.

- Nikola Tesla





Were you able to glow the bulb?

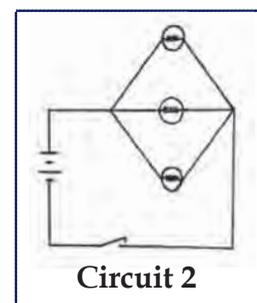
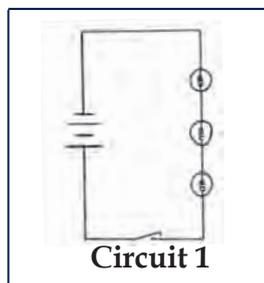
Draw the diagram of the prepared circuit.

Standardized symbols are used when drawing electrical circuits. Some of them are given below.

Tools	Picture	Symbols
Cell		
Battery		
Bulb		
Switch		

Examine and find out!

The two types of circuits prepared by Anu and her friends are given below. Which one among these did you prepare?



Prepare both models and find out their characteristics.



In the two circuits

- What change can be seen in the intensity of light?
- What happens when a bulb is removed? Why?

In the first picture, the circuit is built in a series pattern. When one of the bulbs is removed, the circuit is interrupted, and current doesn't flow, so the other bulbs do not glow.

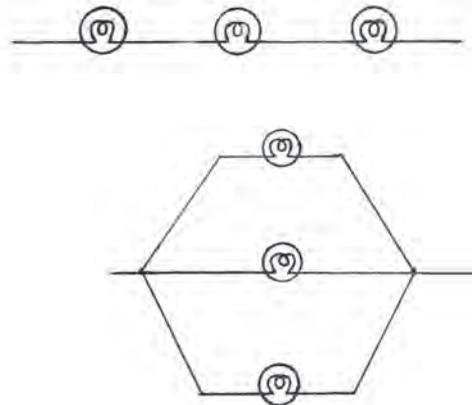
In the second figure, the circuit is prepared in parallel pattern. When one of the bulbs is removed, the current is not interrupted, so the other light bulbs glow.

Which of these methods is preferable? Can you explain?

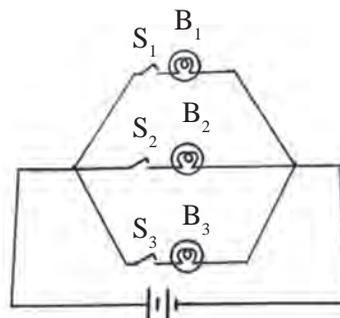
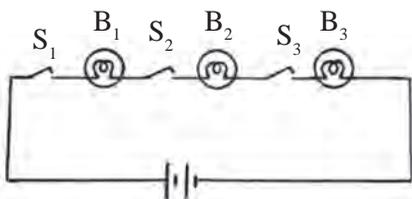
Series and parallel

In series connection, components are connected end to end.

In parallel connection, all components are connected in a manner where all nodes are shared in a common terminal.



Below is the arrangement with separate switches connected to each bulbs given in the above picture.



Prepare these two circuits and complete the activities given below.



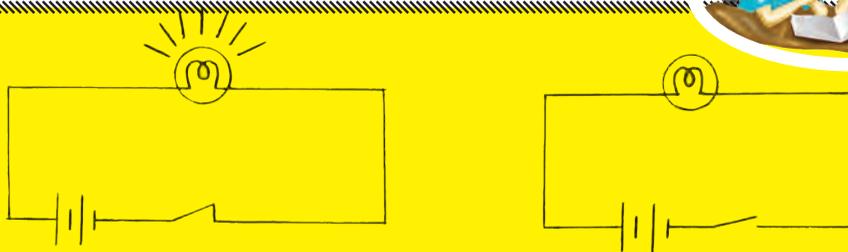


Activity time

Activity	Which bulb glows in series connection?	Which bulb glows in parallel connection?
When switch S1 is turned on		
When switch S2 is turned on		
When switch S3 is turned on		

Analyze the table given above and answer the following questions.

- In which type of circuit does the bulb glow when the switches are turned on one by one?
- In which type of circuit the bulb does not glow when the switches are turned on one by one?
- What could be the reason?
- In which circuit can the bulbs be controlled separately?
- Write down the best method you could use to make all the bulbs glow?



Closed Circuit: Closed circuit is a circuit in which current flows smoothly without any interruption. The flow of current is completed through this.

Open Circuit: An open circuit is an electric circuit where the path has been broken or 'opened' at some point, preventing current from flowing. An open circuit is also known as an incomplete circuit.





Craft is the re-creation of the extra ordinary and wonderful ones from the ordinary.





Activity Time

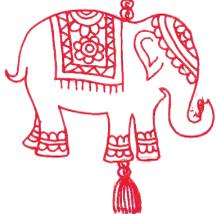
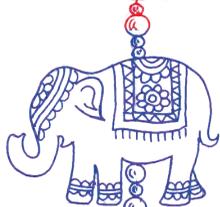
Let's learn how to make a wall hanger.

Materials needed

Cardboard, Woolen thread, Fabric paint, Beads, Sequence, Mirror, Glue, 3D liner, Beautiful stones, other decorative items, needle, thread, scissors and scale.

Method of preparation

Cut out a 15 cm square from the cardboard. If the cardboard is thin, it is better to cut two squares and glue them together. Colour it with white fabric paint. Once the paint dries out draw designs using a pencil. Trace the design if needed.



Paint the picture with suitable colours. Outline the picture using 3D liner. Embellish the design using decorative items using pearls, mirrors and sequences.

Tassels can be prepared by wrapping woollen thread on a 3 ½ inch cardboard. Wall hangers can be made beautiful by tying the tassels to it.

Attach a hook made out of the woollen thread to the wall hanger. The beautiful wall hanger is now ready to be hung.





Moving Ahead

Cut out pictures of animals, birds, flowers etc. from the cardboard as shown in the picture. Colour them and decorate them with beads to make beautiful wall hangers.

The pictures of different wall hangers are given below.



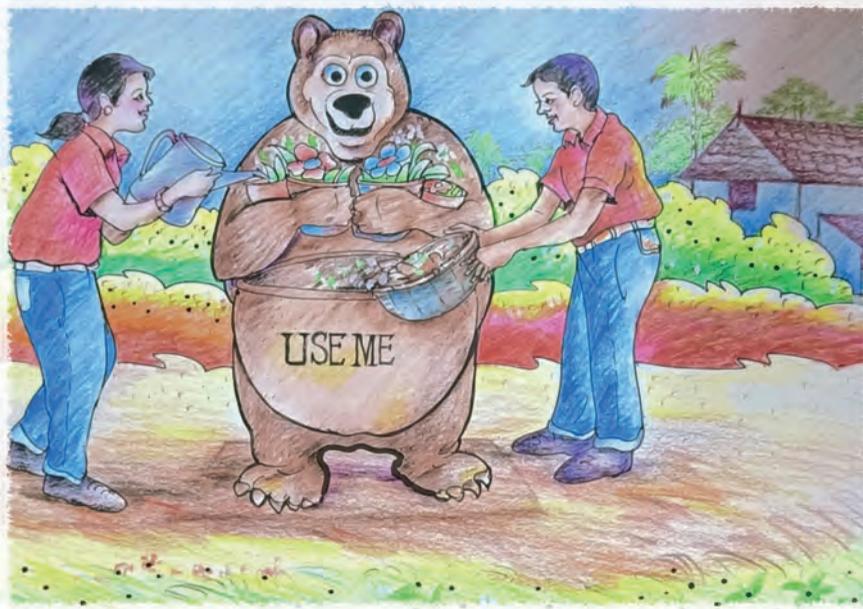
Try to make different decorative items using the materials that are available.



Key Takeaways

Gains			
I can make beautiful wall hangers.			
I can make different decorative items using different materials.			





No matter how small the beginning is, we can start the work to change this world for a better tomorrow !

- Nelson Mandela





Waste into Resource



In this picture you can see various sources of organic waste.

Which of our needs are associated with their formation? What are the organic wastes produced in your home every day?



We had discussed in the earlier classes how organic waste turns into garbage. How can we turn organic waste into a resource instead?



Activity Time

Learn from nature

Have you noticed garbage piles? These piles are the habitat of different small creatures. Let us stir a pile with a stick carefully. What small creatures do you see and which all were you able to identify?

- Snail
-
-

Discuss your observations in the class. Garbage is their food.

What conditions are required for proper digestion of this food?

- Air
-
-

They breakdown larger materials into smaller ones. Mold and bacteria help to decompose these into even smaller components. Let's see how this occurs.

➤ Bacteria Detection

Materials required :

One or two leaves that have started decaying, water, glass rod, microscope.

Add one or two decayed leaves into the water in the beaker and mix well with a glass rod. Using the glass rod place a drop of hydrated water on a microscope slide. Observe the slide through the microscope and record what you see.





What is the food of decomposing bacteria?

What conditions do they need to digest food?

Bacteria feed on the debris decomposed by micro organisms. Bacteria digest food in the presence of oxygen. Hence they are called aerobic bacteria. There are anaerobic bacteria as well. They live and act in the soil or inside septic tanks and biogas chambers. Bacteria, actinomycetes, fungus, protozoa etc are the micro organisms found in a compost pile.



Bacteria are the smallest of micro organisms and there are billions of bacteria in the compost mixture. Decomposition of organic matter is a chemical reaction releasing heat. Each type of bacteria operates at a specific temperature. Depending on the variety of food there may be diversity in the bacteria that act on them. Another group of micro organisms that are found in the compost mixture are mold or fungus. Molds are fast growing and can decompose hard materials.



➤ Mold Detection

Materials required

Spoiled tomatoes, onions, bananas, oranges, ripe jackfruit, damp peanuts, corn, rotting wood on which mushrooms are growing.

Keep them in a safe place and in contact with atmospheric air. Using a hand lens observe and record the changes that happen every day on the activity diary. While observing, it is mandatory to use mask and gloves.

Discuss the details observed.



Sl. no	Materials observed	Colour of the mold	Other details
1	Tomato		
2	Onion		
3	Banana		
4	Orange		
5	Jackfruit		
6	Peanut		
7	Corn		
8	Rotten piece of wood		



- How many kinds of molds could you see?
- In the presence of oxygen, molds decompose food from organic waste to compost.

➤ **Organic waste to organic manure**



Let's look at how we can transform the organic waste we create into a resource. Biodegradation is a natural process taking place in soil. It can be set up under controlled conditions by which the organic waste can be converted into organic manure or compost.

Shall we make a Compost Production model?

Materials required

1. Suitable containers for depositing organic waste, (clay pots, concrete rings, pipes, grow bags can be considered). There should be holes on the sides and bottom of the container for proper air circulation and drainage.
2. Inoculum (Any of the manufactured micro organism materials such as cow dung powder or dung water, pseudomonas).
3. Materials to absorb excess moisture such as straw, dry leaves in powdered form etc.
4. In case of vermicompost, the required amount of earthworms should be collected.
5. Suitable container to collect the drained water.



Maintenance

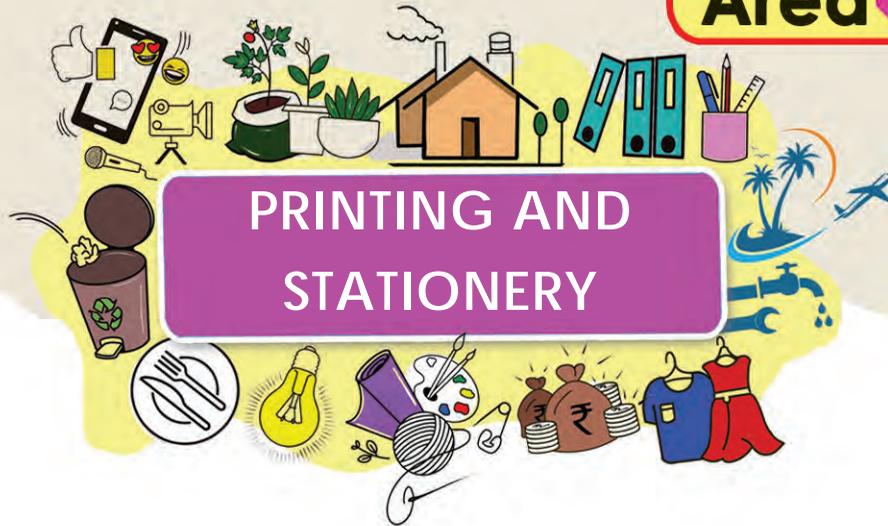
Stir the organic matter daily. If moisture control is required, moisture absorbents should be used. Daily changes in temperature, volume, structure, texture and color of the material may be observed and recorded. Continue the observation for one month. Within 30 to 45 days, the deposited organic matter will have turned into organic manure.

No	Daily record	Day									
		1	2	3	4	5	6	7	8	9	10
1	Temperature (measure using thermometer)										
2	Change in the structure of the material										
3	Change in the texture and colour										
4	Change in the volume										
5	Change in smell										
6	Any other										

If vermicompost is to be prepared, the following points need to be taken care of.

Prepare the container as mentioned above and deposit the organic waste and allow it to decompose for 15 days and then deposit required earthworms in it. Usually *eudrilus eugeniae*, *eisenia fetida* are the types of earthworms used. Only when you notice an increase in the number of earthworms should you add more compost. Keep it covered with a wet sack. Ants and rats should be kept at bay. The organic waste thus deposited will turn into vermicompost within 30 days. Create a composting system that suits your home.





A Scaffold to Sit Upright





Ounce

An ounce (oz) of liquid is equal to 30 milli liters and an ounce of solid is 28.35 grams.

Strawboard

A Strawboard is a board made from unbleached straw pulp. It can be used for making various boxes, egg trays, ceiling works etc. Strawboard is available in the market in 8, 16, 24 and 32 ounces.

Let's take a look at the materials needed to make a writing board using strawboard.

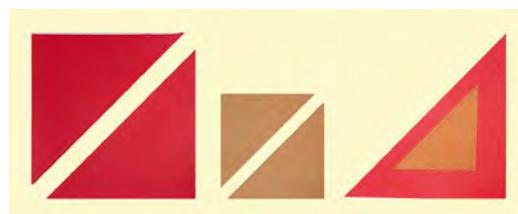
- Strawboard (64 ounce)
- Strawboard (8 ounce)
- Gum, calico, fancy paper, paper cutter, scale, pencil

Methods of making a writing board

1. The writing board is made of 64 ounce straw board. If this is not available 64 ounce can be made by cutting a 32 ounce straw board in half length wise, and gluing them together.



2. Cut out two square pieces of 10 centimetre length from an 8 ounce strawboard and two square pieces of 20 centimetres length from calico.
3. Cut the four squares diagonally from angle to angle to form a right triangle. Glue the four right triangles of 8 ounce strawboard with calico cut in the same shape. Don't forget to glue the slope (hypogon) of the triangle to the slope of the calico.





Beware of little expenses.
A small leak will sink a great ship.

- Benjamin Franklin





Another day, Amal came to class with a Saudi Riyal Coin. His friends looked at it curiously.

They commented “It is the size of our one rupee coin.”

His friends were surprised when Amal said, “Its worth our twenty two rupees”.



Barter system

Before inventing the method of buying things using money, people used to exchange goods. The purpose at that time was only to fulfil the needs of each occasion by exchanging one good for another. This system was known as barter system. It was one of the oldest and simplest trading methods.

Have you ever exchanged your own things or toys with your friends? On those occasions, you gave away a thing you had and bought another in exchange for it, didn't you?

There can often be a difference in the value of goods when such transactions are made. There may be conflicting needs. Due to this, many transactions may be blocked and at least some people may get disappointed. The concept of money was formed as a solution to this problem.



The game can be started by the player assigned by the treasurer. Each player takes their turn in rolling the dice and moving the buttons on the board according to the number they got from the dice. Then the player takes the card on the top from the shuffled challenge cards and carries out the transaction suggested on it by paying the required amount to the treasurer. Transactions like buying or selling goods, paying bills, making bank deposits, etc. are recorded on the challenge cards.

If the player does not have the money to complete the transaction on the challenge card, he must return his button/object to its previous position on the board. The next player should then be given a turn to play.



The following transactions can be recorded on the challenge card :

- Buy a pen by paying ₹5.
- Change ₹10 into lower denominations.
- Give ₹2 to the Treasurer as donation.
- Buy candy for ₹1.
- Buy vegetables for ₹10.
- Buy a stamp from school for ₹5.
- Give ₹10 as contribution for school youth festival.
- Buy a chocolate worth ₹10 at 10% discount.
- Buy a toy worth ₹20 MRP at half price (50% discount).
- Hand over ₹10 to the treasurer as savings.



Different countries have different currencies in use.

Countries	Currencies
India	Rupee
Pakistan	Rupee
China	Yuan
America (USA)	Dollar
Dubai (UAE)	Dirham

How many different currencies are you familiar with?

Did you know that the value of the currency is different in each country?

Have you noticed that their value changes day by day?

For example, observe the table prepared with the foreign exchange rates of some currencies as on October 10, 2023, in terms of Indian Rupees:

Sl. no.	Country	Currency	Exchange rate	Current exchange rate
1	Bahrain	Dinar	218.97	
2	England	Pound	100.47	
3	America (USA)	Dollar	82.73	
4	Saudi Arabia	Riyal	22.01	
5	China	Yuan	11.86	
6	Russia	Ruble	1.28	
7	Bangladesh	Taka	0.79	
8	Japan	Yen	0.61	
9	Pakistan	Rupee	0.37	
10	Sri Lanka	Rupee	0.22	

From the above table, find the countries with the lowest and highest exchange rates against the Indian Rupee.

(There are frequent changes in the foreign exchange rates. The prevailing foreign exchange rate is available to us from the internet or the newspapers.)

Collect the current exchange rates and compare it with the exchange rate of different currencies given in the above table.

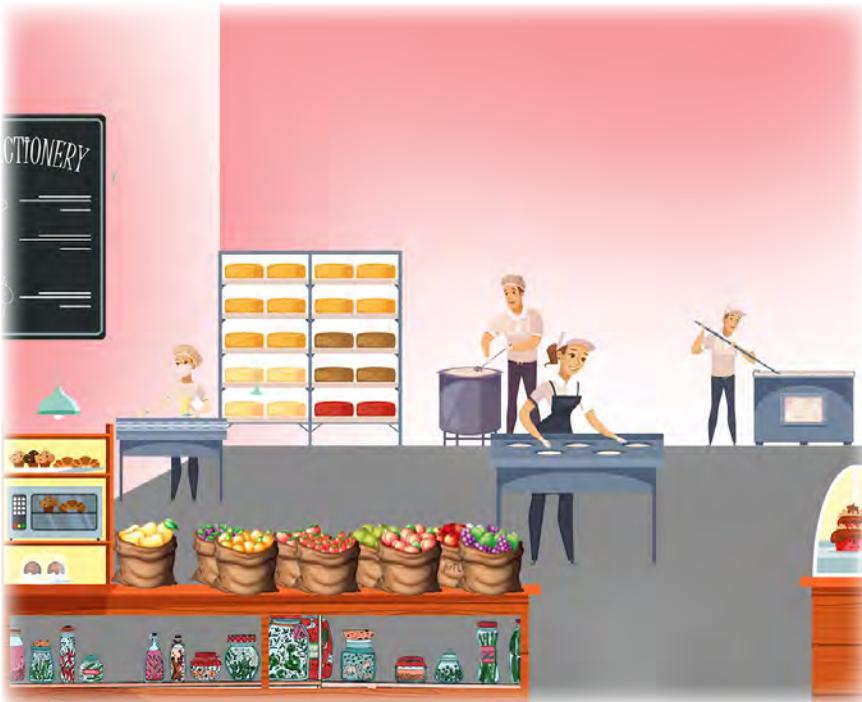




Key Takeaways

Gains			
I am clear about the need and importance of financial transaction.			
I am able to make financial transactions using currency.			
I can understand the value of foreign currencies in terms of Indian Rupees.			





It's what you eat that matters
and not how much you eat





Tiny Greens Huge Gains



“Preparation and an exhibition of raw food items” was the topic for the seventh-grade students’ food festival held at school. Adil came with fruit salad that was prepared at home. Opening the container, he noticed that the colour of the apple pieces had changed.

Why do fruits change their colour when cut?

Have you noticed similar colour changes in other fruits?

How can we prevent the fruits from changing colour?



Adding micro green leaves is one of the effective ways to make salads nutritious.



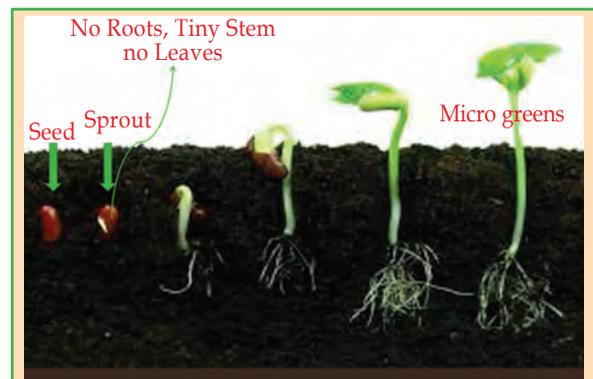
Micro greens

Micro greens are baby plants that are 7 to 14 days old and up to 10 centimeters tall. They can be harvested and consumed when the first two leaves have emerged after the cotyledons (seed leaves). Micro greens are a rich source of vitamins, proteins, minerals, and antioxidants. It is recommended to consume 20 to 25 grams of micro greens per day without cooking. Some commonly used micro green seeds include mustard, basil, carrot, beetroot, sunflower, variety of lettuce, and millets.

Let's grow micro greens

Materials needed :

- A flat plate/pan with holes
- Seeds
- Cocopeat



CONSTITUTION OF INDIA

Part IV A

FUNDAMENTAL DUTIES OF CITIZENS

ARTICLE 51 A

Fundamental Duties- It shall be the duty of every citizen of India:

- (a) to abide by the Constitution and respect its ideals and institutions, the National Flag and the National Anthem;
- (b) to cherish and follow the noble ideals which inspired our national struggle for freedom;
- (c) to uphold and protect the sovereignty, unity and integrity of India;
- (d) to defend the country and render national service when called upon to do so;
- (e) to promote harmony and the spirit of common brotherhood amongst all the people of India transcending religious, linguistic and regional or sectional diversities; to renounce practices derogatory to the dignity of women;
- (f) to value and preserve the rich heritage of our composite culture;
- (g) to protect and improve the natural environment including forests, lakes, rivers, wild life and to have compassion for living creatures;
- (h) to develop the scientific temper, humanism and the spirit of inquiry and reform;
- (i) to safeguard public property and to abjure violence;
- (j) to strive towards excellence in all spheres of individual and collective activity so that the nation constantly rises to higher levels of endeavour and achievements;
- (k) who is a parent or guardian to provide opportunities for education to his child or, as the case may be, ward between age of six and fourteen years.

CHILDREN'S RIGHTS

Dear Children,

*Wouldn't you like to know about your rights? Awareness about your rights will inspire and motivate you to ensure your protection and participation, thereby making social justice a reality. You may know that a commission for child rights is functioning in our state called the **Kerala State Commission for Protection of Child Rights**.*

Let's see what your rights are:

- Right to freedom of speech and expression.
- Right to life and liberty.
- Right to maximum survival and development.
- Right to be respected and accepted regardless of caste, creed and colour.
- Right to protection and care against physical, mental and sexual abuse.
- Right to participation.
- Protection from child labour and hazardous work.
- Protection against child marriage.
- Right to know one's culture and live accordingly.
- Protection against neglect.
- Right to free and compulsory education.
- Right to learn, rest and leisure.
- Right to parental and societal care, and protection.

Major Responsibilities

- Protect school and public facilities.
- Observe punctuality in learning and activities of the school.
- Accept and respect school authorities, teachers, parents and fellow students.
- Readiness to accept and respect others regardless of caste, creed or colour.

Contact Address:



Kerala State Commission for Protection of Child Rights

'Sree Ganesh', T. C. 14/2036, Vanross Junction

Kerala University P. O., Thiruvananthapuram - 34, Phone : 0471 - 2326603

Email: childrights.cpcr@kerala.gov.in, rte.cpcr@kerala.gov.in

Website : www.kescpcr.kerala.gov.in

Child Helpline - 1098, Crime Stopper - 1090, Nirbhaya - 1800 425 1400

Kerala Police Helpline - 0471 - 3243000/44000/45000

Online R. T. E Monitoring : www.nireekshana.org.in