

8

How Things are Made

Chapter Notes:

1. Where does Paper come from?

- **Source:** Most paper we use (drawing books, newspapers, napkins, chart paper) is made from trees.
- **The Process:** Wood from trees is processed to create paper. Because trees are used, it is important to use paper wisely to save our forests.

2. Recycled Paper

- Paper made from old, used paper rather than fresh wood from trees.
- Recycled paper often feels **rougher** than the smooth paper in your drawing books.
- **Benefits:** Recycling paper helps save trees, reduces water usage, and saves energy.

3. How to Make Paper Pulp (Handmade Paper)

- You can make your own paper at home using these steps:
 - **Tear:** Take old newspapers and tear them into small pieces.
 - **Soak:** Put the pieces in a bucket of water and add some fenugreek (methi) seeds (these help as a binding material). Leave it overnight.
 - **Mash:** The next day, mash the soaked paper into a thick paste.
 - **Spread:** Spread the wet paste onto a flat surface or a wire mesh.
 - **Dry:** Press out the extra water and let it dry in the sun to create a new sheet of paper.

4. Natural Dyes

- Instead of using chemicals, we can use nature to color our handmade paper:
 - Yellow: Turmeric (Haldi)
 - Pink/Red: Beetroot
 - Orange: Henna (Mehendi)
 - Green: Spinach (Palak)

5. The 5Rs of Waste Management

- To protect our environment and reduce pollution, we follow the 5Rs:
 - Refuse – Say no to wasteful things
 - (Example: plastic cups)
 - Reduce – Use less
 - (Example: use both sides of paper)
 - Reuse – Use again
 - (Example: reuse old bags)
 - Repurpose – Use in a new way
 - (Example: bottle as flower vase)
 - Recycle – Make new things from old
 - (Example: paper from newspapers)

6. Creative Uses of Paper

- We can make many things from paper:
 - Greeting cards
 - Paper bags
 - Masks
 - Decorations
 - Toys

New Terms

Term	Meaning
• Material	- The substance from which things are made (like wood, metal, paper).
• Pulp	- A soft, wet mixture made from crushed paper or wood used to make paper.
• Recycle	- To make new things from old or used materials.
• Recycled Paper	- Paper made from used paper like newspapers.
• Natural Dyes	- Colours made from natural sources like plants (turmeric, beetroot).
• Artificial Dyes	- Colours made using chemicals.
• Resource	- Things we get from nature and use (like trees, water).
• Environment	- Everything around us like air, water, plants, and animals.
• Waste	- Things that are no longer useful and are thrown away.
• Repurpose	- Using old things in a new and different way.
• Binding Material	- A substance that helps things stick together (like methi in paper making).
• Absorb	- To soak up liquid (like tissue paper absorbs water).

Activity 1 (Page 119)

Make Recycled Paper

- 1. Collect materials: Old newspapers. some fenugreek seeds (metlu) and water**
- 2. Prepare the paper pulp: Tear the newspapers into small pieces and soak them in water. Put a small quantity of fenugreek seeds in the water and leave it overnight. The fenugreek seeds are used as a binding material.**
- 3. Using a grinder, blend or mash the soaked paper and fenugreek seeds, to create a wet mixture. Soaked paper can also be mashed using hands or any other available tool.**
- 4. Roll out: Spread the paste on a flat base and roll it out into thin sheets.**
- 5. Leave the rolled sheets of paper to dry. Your recycled paper is ready.**

Ans.

- Collect materials- Take old newspapers, fenugreek (methi) seeds, and water.
- Prepare paper pulp -Tear the newspapers into small pieces and soak them in water. Add a small amount of methi seeds and leave it overnight. (Methi seeds act as a binding material.)
- Make the mixture - Mash or grind the soaked paper and seeds to form a soft, wet paste.
- Roll out the paste - Spread the paste on a flat surface and make thin sheets.
- Dry the paper - Leave the sheets to dry.

Recycled paper is ready to use!



Colour and design the paper you have made.







Activity 2 (Page 120)

Natural Colour Experiment Cut the recycled paper into pieces of same size. Colour them using natural ingredients mentioned in the table below.

You can use any other natural ingredients as well. Make sure that the quantity of ingredients used is the same for colouring each piece of paper. Write down your observations in the table below.

Natural ingredient used	Paste a sample of your paper here	Colour and brightness (dull/bright)
Turmeric		Yellow, dull
Spinach		
Beetroot		
Henna		

Ans.

Natural Ingredient Used	Paste Sample	Colour and Brightness
• Turmeric		- Yellow, dull
• Spinach		- Green, dull
• Beetroot		- Pink/Red, bright
• Henna		- Brown, dull

One Point Learning

Activity 3 (Page 121)

Make a greeting card, a paper mask or any such item made of recycled paper.

Ans.



Gift tags



Card



Mask

Discuss (Page 122)**Q 1. Do you think that we waste paper?****Ans.** Yes, we often waste paper by using it carelessly, throwing it away after little use, and not using both sides.**Q 2. How can we reduce wastage of paper?****Ans.** We can reduce wastage of paper by:






- Using both sides of paper
- Reusing old notebooks and papers
- Recycling paper
- Avoiding unnecessary printing
- Using paper only when needed

Activity 4 (Page 123)**Different Type of Paper and their uses.**

Observe the different types of paper that we use in our daily life, such as writing paper, newspaper, art paper, cardboard and tissue paper. Paste small pieces of different types of paper in the space given below and write their uses.

Types of paper	Uses
Paste here	
Paste here	
Paste here	
Paste here	
Paste here	

Ans.

Types of Paper	Uses
 Writing paper	<ul style="list-style-type: none"> - Used for writing in notebooks and books
 Newspaper	<ul style="list-style-type: none"> - Used for reading news and making paper crafts
 Art paper	<ul style="list-style-type: none"> - Used for drawing, painting, and craft work
 Cardboard	<ul style="list-style-type: none"> - Used for making boxes and packaging items
 Tissue paper	<ul style="list-style-type: none"> - Used for cleaning and wiping

Activity 5 (Page 125)

Discuss the following situations with your classmates and write down which of the 5Rs it belongs to:

Example	5Rs of Waste Management
A family brings their own cloth bags to the grocery store instead of using plastic ones.	Reuse
Maya does not use a plastic straw to drink coconut water.	
Rohan uses blank pages of his old notebooks to avoid wastage of paper.	
Sara gives her old books to younger students for their use.	
Kabir paints an old bottle to use as a flower vase.	
Priya cuts old clothes to make a fun bag for carrying her books.	
A shopkeeper turns old newspapers into paper envelopes.	

Ans.

Situation	5R Category
• Maya does not use a plastic straw to drink coconut water.	- Refuse
• Rohan uses blank pages of his old notebooks.	- Reduce
• Sara gives her old books to younger students.	- Reuse
• Kabir paints an old bottle to use as a flower vase.	- Reuse
• Priya cuts old clothes to make a bag.	- Recycle
• A shopkeeper makes paper envelopes from old newspapers.	- Recycle

