

BLOCK PRINTING

Skill Manual

GRADE : VII



CENTRAL BOARD OF SECONDARY EDUCATION

Committed to Equity and Excellence in Education

Address: Shiksha Kendra, 2, Community Centre, Preet Vihar, Delhi- 110092

ACKNOWLEDGEMENTS

ADVISORY BOARD

Smt. Nidhi Chibber (IAS)

Chairperson, Central Board of Secondary Education, Delhi

Dr. Biswajit Saha, Director

(Skill Education), Central Board of Secondary Education, Delhi

Dr. Joseph Emmanuel, Director

(Academics), Central Board of Secondary Education, Delhi

Coordinator & Curator

Shri. R.P. Singh, Joint Secretary

(Skill Education), Central Board of Secondary Education, Delhi

Smt. Niti Shankar Sharma, Deputy Secretary

(Skill Education), Central Board of Secondary Education, Delhi

Shri. Sandeep Sethi, Coordinator

Princess Diya Kumari Foundation

Content Development Committee

Ms. Kamal Rathore (Principal)

Tagore International School, Jaipur

Mrs. Anjali Sharma (TGT)

Mrs. Rajkumari Chaudhary (PGT)

Mr. Sunny Kumawat

Layout and Design

Mr. Kishan Lal Khatik (PGT Visual Art)

Mr. Om Prakash Bhati (TGT Visual Art)

FOREWORD

NEP 2020

IMPORTANCE OF SKILL EDUCATION

The national educational policy 2020 propagates experiential and skill-based learning.

It also recognizes the importance of soft skills such as communication, team work, problem solving, decision making, analytical thinking, resiliency, etc. as imperative life skills.

NEP 2020 has broken the shackles of subject choices being limited to the traditional domains of Science, Commerce and Humanities and allows to cross sectional course selection and gives students the opportunity to enhance their core skills. The inclusion of vocational training is also being supported strongly.

This skill education manual is also a series in this endeavour.

[illegible]

INDEX

Unit 1 : Introduction of weaving & Wood Block printing

- Topics ✦ Meaning and history (silk route & trade with eastern countries)
- ✦ Raw materials and tools in block printing
 - ✦ Use of looms and its types (Handloom/Charkha)

Unit 2 : Block Printing

- Topics ✦ Introduction and history (Block Printing)
- ✦ Block Printing in India, Rajasthan and Jaipur.
 - ✦ Carving of blocks
 - ✦ Types of block printing (Wood cut printing, rubber stamps)

Unit 3 : Printing - Merging Rajasthan's Block Printing with fashion

- Topics ✦ Yarn to fabric
- ✦ Natural and artificial threads (silk, cotton, nylon, jute etc.)
 - ✦ Spinning & ginning

Unit 4 : Evolution and Innovation of Block Printing

- Topics ✦ Traditional to Modern Era (Printing & dyes)
- ✦ Type of printing (Ikat, Sanganeri, Bagru, Kalamkari etc.)
 - ✦ Type of blocks (Wooden, Rubber, Stencils)

Unit 5 : Mills to Market

- ✦ Problems & strength of Block Printing.
- ✦ Recognize the growth of craftsmen & artisans during different eras

UNIT 1

INTRODUCTION OF WEAVING

Learning Objectives:-

- 1.To enable the learners to understand the history of Block Printing.
- 2.To comprehend the process of using block with inked impression.
- 3.To learn and understand the textile terminology.

Learning Outcomes:-

- 1.Learners will be able to understand the basic requirements for Block Printing.
- 2.Learners will develop an interest and respect for the legacy of Block Printing.
- 3.Learners will understand the interrelationship in textile business and to get an overview of textile industries in India.
4. Art Integration learning - Creative fine motor skills

UNIT 2

BLOCK PRINTING

Learning Objectives:-

1. Learners will explore and identify textile weaving.
2. Learners will understand the types of blocks and how wearers are use it in printing.
3. Learners will appreciate the efforts put in the craftsmen.

Learning Outcomes:- At the end of the chapter -

1. Learners will be able to study key steps used in the process of weaving.
2. Will closely see the journey of evaluation of Block Printing.
3. Will enhance the creative skills among them and to explore many new ones to add the rich varied heritage to block printing.

UNIT 3

Merging Rajasthan's Block Printing with fashion

Learning Objectives:-

- 1.To identify and explore specific block printing, textiles, designs and process, and the contribution of Rajasthan.
- 2.To compare and contrast the different components of Block Printing.
- 3.To understand the process of weaving in textile culture.

Learning Outcomes:-

- 1.Learners will gain information on the techniques of Block Printing.
- 2.Learners will be acquainted with different steps involved in Block Printing.
- 3.This unit make the learner enable to know the journey from fibre to fabric.

UNIT 4

EVOLUTION AND INNOVATION OF BLOCK PRINTING

Learning Objectives:-

1. Learners will understand basic components and weaving patterns.
2. Learners will be familiar to various forms of evolution and innovation.

Learning Outcomes:-

- 1.Learners will now be able to identify weaving patterns.
- 2.Learners will be able to understand the process of printing and dyeing in textiles.
- 3.Learners will realise the importance of local art and traditional patterns as well as a habit to be inculcated to respect and appreciate the cultural heritable of printing techniques.

UNIT 5

MILLS TO MARKET

Learning Objectives:-

- 1.Learners will study about the problems of craftsmen.
- 2.Learners will understand the need of demand and supply of the printed fabric in market.

Learning Outcomes:-

- 1.To develop respect towards dignity of labour.
- 2.To preserve the legacy by blending modern techniques with traditional ones.
- 3.Learners will be knowing the challenges faced by the craftsman's in block printing.

UNIT 1: INTRODUCTION OF WEAVING

MEANING AND HISTORY

(Silk route & trade with eastern countries)

In the international commerce of the pre-industrial era, spices and textiles were the principal commodities. India in particular was known for the quality of its textiles, and for centuries was involved in a brisk trade with Far and Southeast Asia. European companies worked their way into this commercial nexus in the early sixteenth century. The Portuguese were the first to arrive, having discovered a sea route from Europe to the East that allowed them to avoid the heavy taxes on goods sent overland through the Middle East.

The British East India Company received its charter in 1600 and the Dutch East India Company was founded two years later. These agencies bought textiles in India for silver and gold, exchanged them for spices grown in the Malay Islands, and sold the spices in Europe and Asia. Soon Indian textiles were exported directly to Europe, where they became highly fashionable.

The popularity of Indian textiles is evidenced in the number of words that have made their way into English: calico, pajama, gingham, dungaree, chintz, and khaki. The luxury textiles coveted for centuries are now collected in museums, where they are often grouped and studied on the basis of their patterns of production.

TYPES OF WEAVING & Block Carving

What are some of the most common weaves?

1. Plain Weave. Plain weave is the simplest weave.
2. Basket Weave. A basket weave fabric is an alternative form of the plain weave.
3. Twill Weave. Twill weave is among the most commonly used weaves in textile processing.
4. Satin Weave.
5. Leno Weave.

USE OF LOOMS

What is the use of looms?

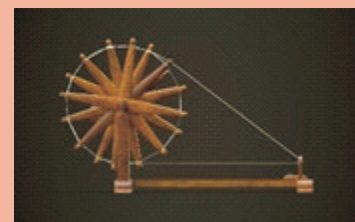
A loom is a device used **to weave cloth and tapestry**. The basic purpose of any loom is to hold the warp threads under tension to facilitate the interweaving of the weft threads.



HANDLOOM “CHARKHA”

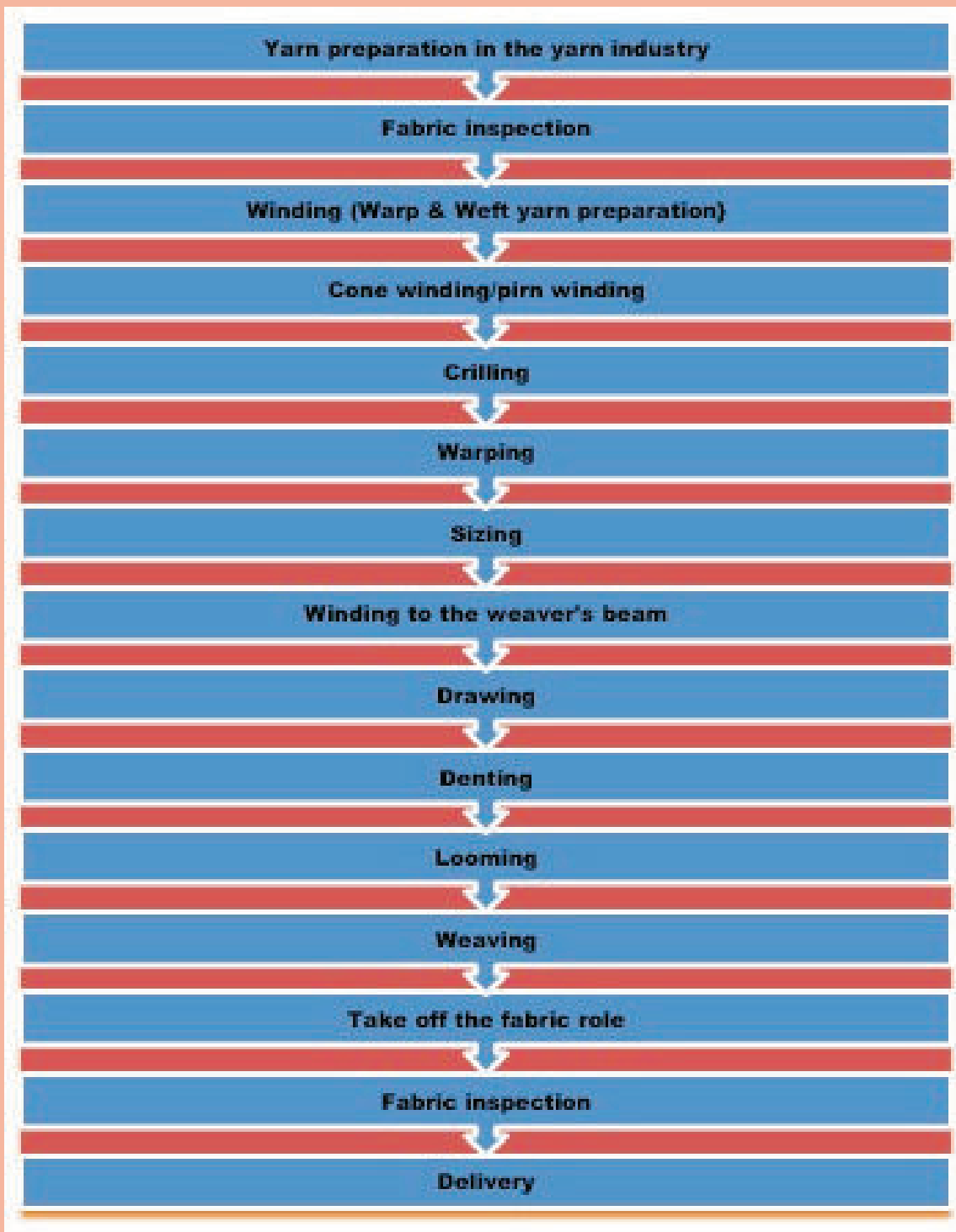
A handloom is a simple machine used for **weaving**.

It is operated wholly or partly by hand or foot power and charkha is one of its popular example.



Charkha is a handmade device which is used for spinning yarn. Looms are the devices used to weave. They are what hold the longitudinal warp threads in place as the weaver weaves the filling or weft threads through them. The weaver can choose different colours to create specific patterns. They can also change the method of this weave to create different textures or patterns.

PROCESS OF WEAVING



1. Yarn preparation: Yarn collects from the spinning industry. But it needs to prepare a suitable count and package.

2. Winding: Winding requires for preparing suitable yarn package. We know that in the weaving process two sets of yarn is used. Warp and Weft yarn. Warp yarn wind into a cone package. But weft yarn wind into prin package for conventional loom and cone package for a modern loom.

3. Warping: Warping is intended to prepare the beam of the weaver to be installed on the weaving machine.

4. Sizing: Sizing is the implementation of the adhesive protective layer before weaving in the warp threads. Warp yarns can resist the complex stresses they are subjected to in the weaving machine.

5. Weaver Beam Preparation: For long runs of gray fabrics, beam warping is used. As intermediate stage warper beams are produced that can contain up to 1,000 - 1100 ends. Then 6-12 warper beam threads are merged at the slashing stage and wound on a weaver beam (loom beam).

6. Drawing: Drawing is done to pull the threads of the warp through the heald wire's eye.

7. Denting: Denting signifies drawing the warp thread through the dent as reed plan requires, and this more reliably specifies the fabric width and ends per inches.

8. Looming: At the start of the new warp, the tail end of the warp from the exhausted weaver beam is attached. it is called tying-in. Therefore, the drawing mechanism may be excluded if each end of the new beam is attached to its consequent end on the old beam. All knots are pulled through the drop wires, heddles, and reeds after the tying-in process. The loom is ready for use now.

9. Weaving: Finally Weaving is started and others process will be followed for delivery.

PATTERN

What is pattern/designs?

A pattern is **the repeated or regular way in which something happens or is done. ...**

A pattern is an arrangement of lines or shapes, especially a design in which the same shape is repeated at regular intervals over a surface.



Butta



Bell



Mundra

Myths behind the block printing-

BIOGRAPHY OF ST. KABIR

Though there is no clear evidence to lead you to the fact that when this Great Hindi Saint was born in, yet there are some facts and contemporary readings that take Historians to say that Kabir Das was born in the year 1440. It is said that Kabir was born Lahartara village of Varanasi to a poor Brahmin widow and she left him with the fear of stigmatization by the society at a secluded place. Then a Muslim weaver couple (Julaha), named Niru and Nima brought the abandoned boy at home as they did not have any child of their own. Thus, Kabir was born to a Hindu and brought up by a Muslim family. Kabir was trained to weaving his traditional way to livelihood and he did it forever. Kabir balanced his livelihood and spiritual learning. Later, when he grew older he went to St. Ramananda for knowledge as the poor weavers did not have any resource

of their own to send him to any educational institution. Thanks to old Indian Educational System of Ashrama where no fee was charged from poor and every one was given a fair chance to learn. Besides it was also ensured by the teacher that no type of bias should exist at Ashrama. The great teacher Ramananda or say St. Ramananda taught his disciple all he could and trained him to be a spiritual being. Kabir had a great respect for his Guru as he says himself:

Guru Govind dou khade kake lahu pay

Balihari guru apne govind diyo batay

Unlike educational system of modern era at that time education was focused on learning not much writing and copying. But it does not mean that writing was not institutionalized. So Kabir Das got knowledge but he himself was not able to write throughout his life. As he says himself;

“Masi Kagad chuyo nahi, kalam gahi nahi hath.”

Nationalist moment and Textile - Mahatma Gandhi and Charkha

Mahatma Gandhi popularized the use of Charkha as a part of the Independence movement, and he encouraged the people of India to wear clothes made from the homespun yarn.

Mahatma Gandhi disapproved of the imported cloth which was made in Britain.

"A "spinning wheel" is a fiber spinning thread or yarn device. Prior to the Industrial Revolution, it was central to the cotton textile industry. From ancient times the spinning wheel has its significance. Mahatma Gandhi started spinning and initiated the Swadeshi movement to encourage the Indians to spin their own clothes. From the Spinning Wheel, the cloth is woven; it is known as Khaddar or Khadi, which means coarse cloth.

The charkha became the symbol of freedom and self-sufficiency. It is also used in the first Indian flag etched in the middle, and then it was replaced by Ashok Chakra. Through this, the Indian spinning industry was started, and it evolved through the years and reached the economic zenith.

Weaving is the craft of lacing fibers together to make fabric or cloth. Weaving often involves using a loom to hold the thread or yarn, although it can also be done by hand.

The demand for Indian Cotton textile and the Indian textile Industry grew due to the Swadeshi Movement. Gandhi initiated the textile industry, and it takes a profound change in the path of progress.

Indian textile and pattern designs are world-wide famous since ages. Many literary forms are the evidence of it. Silk route The silk route was a network active from the second century BCE until the mid 15th century. Spanning over 6,400 km. it played a central role in facilitating economic, cultural, political and religious interactions between the East and West.

**EZRA POUND: GREAT LITERATURE IS SIMPLY LANGUAGE CHARGED
WITH MEANING TO THE UTMOST POSSIBLE DEGREE.**

Silk Route

*Me, a passionate Indian merchant
With twinkle in my eyes,
Treading on the half-erased foot-prints
On the sands of Time
On my romantic adventure,
To meet you my love.*

*You, the elusive Persian princess,
A marvelously pied butterfly
With unique patterns of deep colours
Imprinted on your fluttering wings,
Hopping on and hopping off
On the fragile flowers of the oasis.*

*I have for you
Gifts of gold, pearl, diamond, rubies
And other precious Indian gem stones
Stacked on a camel-back.
I have silk and honey
And exclusive red roses kept hidden
In my poetic heart all for you.*

*I travel and travel relentlessly
On strange paths to meet you,
My princess of the oasis,
Where date-laden palm trees,
Chirping of the birds,*

*The colour and scent of desert vegetation
And the rhythm of the camel-bells
Ring a welcome tune
In a memorable bonanza.*

-R.K. Das

The poem reminds us India's legacy of textile
in excellence and its significance.

**Activities Recommended: Prepare a file containing varied fabrics along
with their details.**

Bibliography

<https://www.indanruminations.com>

<https://www.investopedia.com>

<https://www.theglobalinstitute.in/indian-trade-hist.....>

<https://www.byjus.com> (History of trade & commerce in India)

Worksheet 1

I. Choose the right option:

1. Portuguese were the first to arrive having discovered

_____ from Europe to the Middle East for training.

- (a) Sea Route
- (b) Land Route
- (c) Air Route

2. A _____ is a device used to weave cloth and tapestry.

- (a) Charkha
- (b) Spinning Jenny
- (c) Loom

3. _____ is an alternative from of the plain weave.

- (a) Twill Weave
- (b) Basket Weave
- (c) Plain Weave

4. A _____ machine operated wholly or partly by hand or foot power.

- (a) Handloom
- (b) Charkha
- (c) (a) and (b) both

5. The _____ process in which two sets of yarn is used.

- (a) Winding
- (b) Warping
- (c) Looming

II. Answer the following:

1. Which route is famous as silk route in Ancient India ?

2. Mention the goods which were exchanged through the silk route?

3. How many sets of yarn are used in weaving?

4. Write down the types or classification of knitting?

5. What do you know about looms? How many types of looms used by the Indian weavers ?

Enrichment Activity

On a piece of cloth or paper, try and draw a design of your choice with blue pen and colour it accordingly ? How easy or difficult you find it?

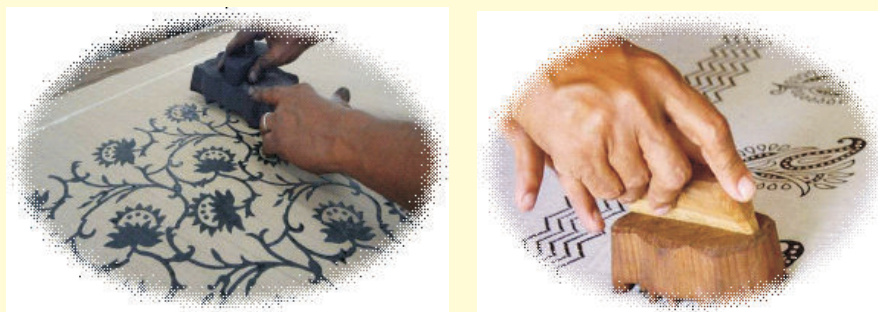
UNIT 2: BLOCK PRINTING

INTRODUCTION AND HISTORY

WHAT IS BLOCK PRINTING?

Block printing is the process of printing patterns by means of engraved wooden blocks. It is the earliest, simplest, and slowest of all methods of textile. It is a printing technique of pressing and stamping fabric with carved wooden blocks filled with color. It is an ancient art of transforming designs from a chiseled wooden block on to a fabric or paper by dipping it in dye and colors.

Block printing is making use of a carved piece of wood or any other type of wooden block to imprint an image on fabric or paper. In the early days of printing, it was used to print entire books. Today the process of block printing is popularly associated with making designs on fabrics by printing on them, with the help of a block made for that purpose. Believed to have its origin in China, block printing has been in use around the world now, for quite some time.



Hand Block Printing

Sourced by: www.thedesignart.com

WHY IS BLOCK PRINTING POPULAR?

Block printing or hand block printing is popular on account of a number of contributing factors. India has always been revered for its richness, variety and quality of its handloom industry. The world looks up to India for its rich weaves, unique textiles and legendary prints. One of the shining examples of Indian handloom industry is Indian Block Printing.

- It has simplicity and ease of execution.
- There is the sharpness, accuracy and fine detailing of prints made on the fabrics.
- The huge possibilities of match and mix of different block designs in various colors on the same fabric as in large canvas fabrics like the saree and salwar

kameez is stupendous. A large number of wooden blocks are always kept in readiness for use based on the intended patterns and designs.

- A point on the block serves as a guide for the repeat impression, so that the whole effect is continuous and not disjoint.
- The extensive choice of colors makes the designs vibrant and fresh-feel.



- Block prints and brush prints having been tried out successfully on fabrics like **cotton, silk, sico** and others
- Creating a new block with a new design is fairly quick and easy.
- Most common motifs that are use in block printing are trees, animals, fruits and geometrical designs.

BLOCK PRINTING IN INDIA AND RAJASTHAN

Block Printing is an ancient craft form of Rajasthan that is being practiced since time immemorial. Rajasthan is well-known for the art of block printing that is hugely practiced there even till date. “The oldest record of Indian block print cotton fragments were excavated at various sites in Egypt, at Fustat near Cairo,” says Anuradha Kumra, chief of products (apparels), Fabindia. “The recorded history of block printed fabrics dates back to the Indus Valley civilization, around 3500 to 1300 BC. From the Harappan period onwards, the export of textiles, especially cotton, is confirmed. During the Mohenjo-daro site excavation, needles, spindles, and cotton fibers dyed with Madder (a red dye or pigment obtained from the root of the madder plant) were excavated. This proves that Harappan artists were familiar with Mordants (dye fixatives),” she explains. The famous centers in Rajasthan are the cities of Jaipur, Bagru, Sanganer, Pali and Barmer, and the state is known for its colourful prints of gods, goddesses, humans, animals and birds. While Bagru is renowned for its Syahi Begar and Dabu prints (that come in yellow and black and are done using the resist printing technique), Sanganer is famous for its Calico prints (recognized by their dual colour prints done repeatedly in diagonal rows) and Doo Rookhi prints (that come on both side of the fabric). Barmer is known for its prints of red chilies and trees featuring a blue-black outline, while Sikar and Shekhawat prints feature motifs of horses, camels, peacocks and lions.

CARVING OF BLOCKS

Carving block is traditionally used as a printmaking tool to cut images that can be reproduced a number of times.

The block maker is a valuable ally and accessory to a block printer. The work involves good carving skills, a sensibility for design and an understanding of how the block would be used. The quality of wood, the finest of cutting, carving skills and the depth of the pattern are all important in creating a long-lasting printing block. The block maker uses simple tools to cut and carve the fine wooden blocks that are used in printing. His chief tool is a hand drill that involves a bow and a variety of chisels.

Teak, being strong and resistant to distortion on exposure to water, is the wood of choice for making blocks.



Sourced by: www.wabisabiproject.com

TYPES OF BLOCKS

The main tools of the printer are wooden blocks which are available in different shapes and size as per the design and requirement. The block makers mainly make two types of blocks :

1. Wooden Block
2. Metal Block

1. Wooden Block:

These blocks are usually made on teak or seesham wood. Artisans make sure that the wood is seasoned and then carve the motifs on it. The design are first printed on paper and stuck on the block of wood. Artisan, then start carving the wood with steel chisels, of different widths and cutting surface. The motifs are carved on the base while the top has a handle. These handles are either carved out from the same wood or by a low cost wood attached to the surface with the help of nails. Each block has two or more cylindrical holes drilled into the block for free air passage and also to allow release of excess color. Blocks made are of rectangular, square, oval, semi-circular, circular etc. shape. Once the block is made it is soaked in oil for 10-15 days to soften the grains. The life of these block are approximately 600-800 meter of printing. The outline blocks are called as rekh and the filler blocks are called as datta.



Sourced by: www.woodenblock.com

2. Metal Block:

For making intricate patterns and getting high level of clarity in prints metal blocks are used. These blocks are made by engraving thin sheets of evenly cut metal strips into the wooden blocks. The metal strips are beaten to make them thin and then strips are cut of even length. The design is drawn on the wooden block and the metal strips are pressed onto the design by gentle hammering. Filling of the designs is done from center to outside. Once made the blocks are checked to see the strips are of the same height from the wooden base. Metal blocks are costly, time consuming but long lasting.



Sourced by: www.metalprintingblock.com

RUBBER STAMP

Rubber stamping, also called stamping, is a craft in which some type of ink made of dye or pigment is applied to an image or pattern that has been carved, molded, laser engraved or vulcanized, onto a sheet of rubber. The rubber is often mounted onto a more stable object such as a wood, brick or an acrylic block. Temporary stamps with simple designs can be carved from a potato. The ink-coated rubber stamp is pressed onto any type of medium such that the colored image is transferred to the medium. The medium is generally some type of fabric or paper. Other media used are wood, metal, glass, plastic, and rock. High-volume batik uses liquid wax instead of ink on a metal stamp.



Sourced by: www.designcart.com

DYE PRINTED FABRIC WITH RUBBER STAMPS

STENCILS PRINTING

In Stencil Printing, colour is applied to fabric by brushing or spraying open spaces of a pattern cut-out from a flat sheet of metal or water proof material/sheets.

MAKING OF STENCIL: A water proof sheet of plastic or laminate or cartridge paper or metal is taken. Required design is drawn on selected sheet.



Sourced by: www.sewguide.com

Activities Recommended: Block Making (Carving on Eraser)

Bibliography

<https://www.iknockfashion.com/history-of-weavers>

<https://www.vedantu.com>

<https://theculturetrip.com>

Worksheet 2

I. Choose the right option:

1. What materials are almost all printing blocks made up of?

- (a) Stone
- (b) Ceramic
- (c) Wood

2. The bleaching of cotton is done to remove _____.

- (a) Oil and Waxes
- (b) Natural Colouring Mattes
- (c) Cellulose

3. The length of lea of yarn is _____ yards.

- (a) 100
- (b) 120
- (c) 36

4. _____ printing is a resist style printing.

- (a) Batik
- (b) Screen
- (c) Roller

5. Indigo belongs to _____ class of dyes.

- (a) Sulphur
- (b) Basic
- (c) Vat

II. Answer the following:

1. How does block printing relates to textile?

2. How many types of block printing are there?

3. What is the process of block printing?

4. Why block printing done on fabric is popular?

5. Which colours are used for Block Printing?

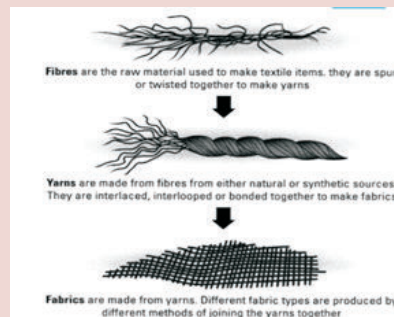
UNIT 3: FABRIC TO FASHION

Merging Block Printing with Fashion

YARN TO FABRIC

By the process of spinning, fibers from a mass of cotton (or wool, silk etc) are drawn out and twisted. This brings the tiny fibers together to form a long and twisted thread called yarn.

Raw materials like cotton, wool, rayon, silk are transformed into yarns and threads by spinning. After the raw materials have been transformed into yarns, the next step is to join these yarn threads to form the fabric. This is done by the process of weaving.



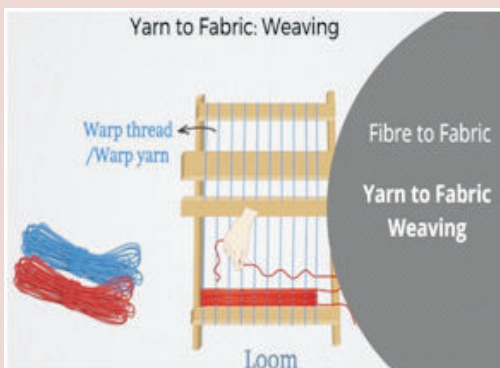
www.classnotes.org.in

What is fabric?

Merriam Webster defines as, 'a substance that resembles cloth'.

“A malleable substance formed usually by weaving, felting or knitting natural or synthetic fibers and filaments.”

How are fabrics created from yarns?

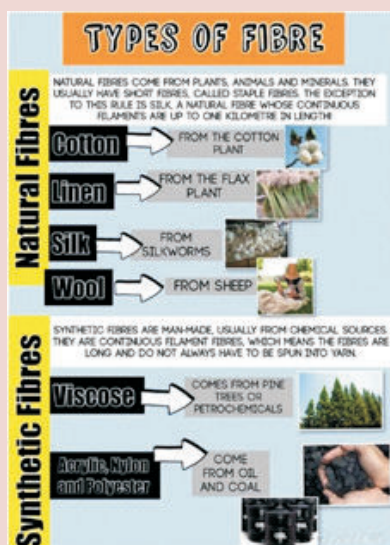


www.learnfatafat.com

The first step in the creation of a fabric is the production of yarn. You need to decide what material you want to use for your fabric. If it is cotton, you need to use cotton fibres to spun cotton yarns. Raw materials like cotton, wool, rayon, silk are transformed into yarns and threads by spinning. After the raw materials have been transformed into yarns, the next step is to join these yarn threads to form the fabric. This is done by the process of weaving. Weaving is carried out on a loom, where two sets of yarns are used to weave a fabric.

The next and final step is processing. After weaving, the woven material is moved for its final transformation where it is cleaned off its impurities like seed particles etc. and various chemicals are removed, and the color is added.

Bagru in Rajasthan is a synonymous with block printing.



www.i.pinning.com

TYPES OF FIBERS

Natural Fiber: Fibers obtained from natural sources like plants and animals are called natural fibres.

Examples: Cotton, Silk, Wool, Jute and Hemp.

Artificial or man-made Fiber: Fibers which are manufactured in laboratories and are not directly obtained from any living source are called artificial fibers.

Examples: Rayon, Nylon, Polyester, Acrylic and Aramid.

JOURNEY FROM FIBER TO FABRIC

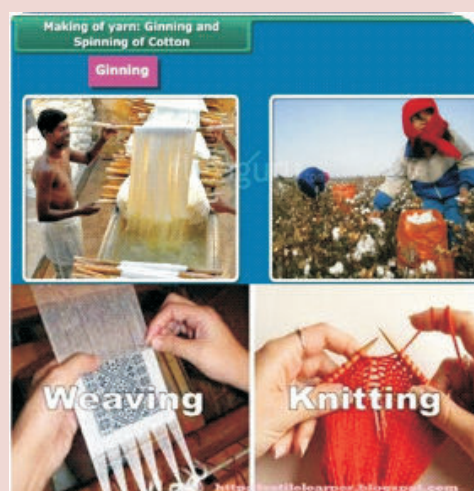
GINNING, SPINNING, WEAVING AND KNITTING

- 1) **Ginning:-** The process of removing fiber from seeds such as cotton from cotton bolls.
- 2) **Spinning:-** The process of making the raw material into yarn.
- 3) **Weaving:-** The process of arranging two sets of yarn together to make fabric is called weaving.
- 4) **Knitting:-** The process in which a single yarn is used to make fabric is called knitting

PROCESS OF WEAVING

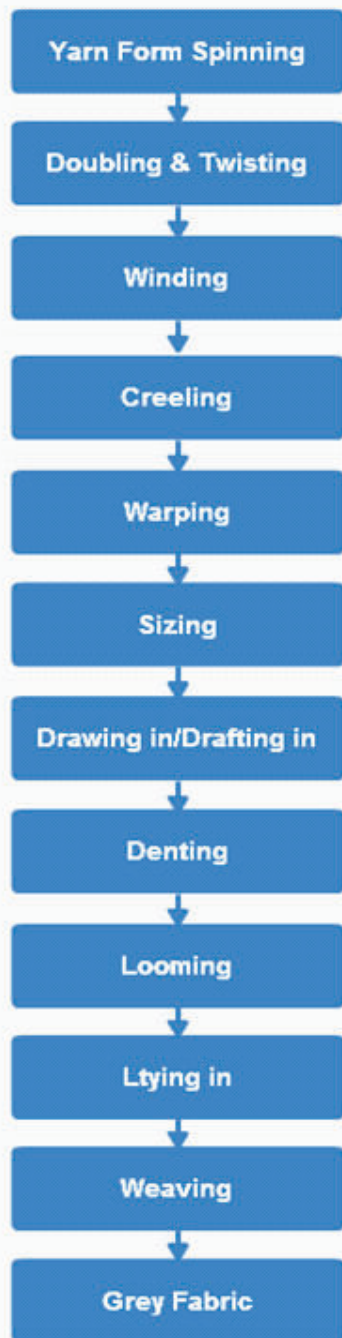
The weaving process consists of several phases, such as: spinning, doubling & twisting, winding, creeling, warping, sizing, drawing-in/drafting-in, denting, looming, ltying-in, weaving and grey fabric. When the weft yarn crosses the warp yarns a fabric is created, a synthesis of the quality of the raw materials, the creativity of the design and the structure and the experience the weaver matter here.

This process is shown in the following chart:



www.i.pinning.com

Flow Chart of Weaving



KEY TERMS:

1. Winding is the process of transferring yarn or thread from one type of package to another to type of package.
2. Sizing is the method of adapting material size on yarn. It is mainly used to twist yarn to attach the fiber together.
3. Warping is the process of using lengthwise yarns that are seized to form a frame or loom.
4. The denting plan indicates how each of yarn is pinched through a *dent* in the reed.

Activities Recommended: A case study of hand block printing in Jaipur

Bibliography

<https://thefamouspeople.com>
<https://www.embibe.com>
<https://en.m.wikipedia.org>

Worksheet 3

I) Choose the right option :

Q1) Which one of the following is a synthetic fibre?

- (a) Nylon
- (b) Rayon
- (c) Polyester
- (d) All of these

Q2) Separation of fibres of cotton from its seeds is known as ____.

- (a) weaving
- (b) ginning
- (c) spinning
- (d) knitting

Q3) Weaving of fabric is done in ____.

- (a) handlooms
- (b) power looms
- (c) takli
- (d) both a and b

Q4) Which of the following three process are involved in converting fibre into fabric?

- (a) yarn ---fibre---fabric
- (b) fibre ----yarn--- fabric
- (c) both a and b
- (d) none of the above

Q5) Which of the following states are known for the largest cotton producing crops?

- (a) Punjab
- (b) Rajasthan
- (c) Gujrat
- (d) all of the above

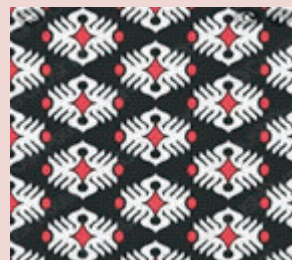
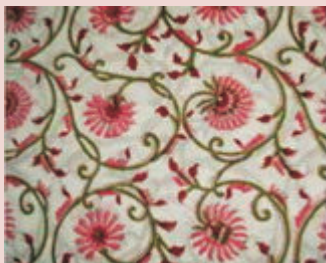
II) Answer the following in brief:

Q6) What is sericulture?

Q7) Define spinning.

Q8) What is fabric?

Q9) Identify the prints and specify its origin state.



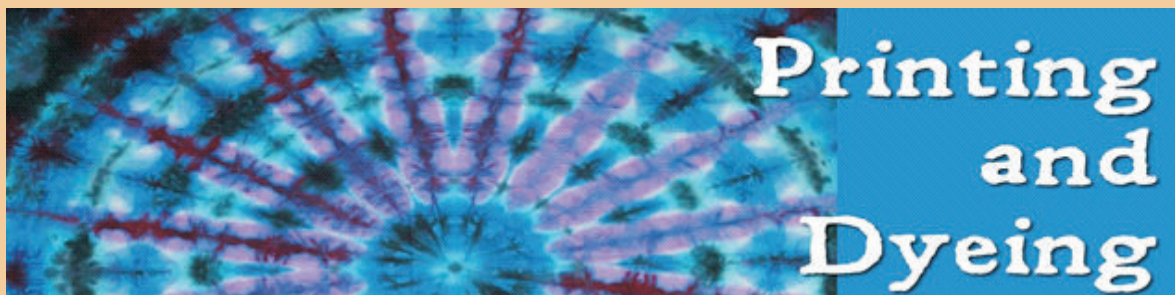
Q10) Classify the following fibres into natural and man-made:



- (a) cotton
- (b) nylon
- (c) jute
- (d) wool
- (e) Rayon
- (f) polyester

1. Visit a handloom or power loom unit and observe the weaving or knitting of fabric.
2. Do you know that Sufi saint and poet Kabir, was a weaver ? find out about his life and teaching?

UNIT 4: EVOLUTION AND INNOVATION OF BLOCK PRINTING



Dyeing and printing are processes employed in the conversion of raw textile fibers into finished goods that add much to the appearance of textile fabrics. Dyeing is the application of dyes or pigments on textile materials such as fibers, yarns, and fabrics with the goal of achieving color with desired color fastness. Dyeing is normally done in a special solution containing dyes and particular chemical material. Dyeing and printing are different applications; in printing, color is applied to a localized area with desired patterns. In dyeing, it is applied to the entire textile.

The primary source of dye, historically, has been nature, with the dyes being extracted from animals or plants. Since the mid-19th century, however, humans have produced artificial dyes to achieve a broader range of colors and to render the dyes more stable to washing and general use.

KINDS OF DYES

ORGANIC AND CHEMICAL DYES

In general, organic dyes are a mixture of carbon-containing organic substances with pigments, which can be inorganic (or) organic substances. Organic colorants are made of carbon atoms and carbon-based molecules. Most organic colors are soluble dyes. If an organic soluble dye is to be used as a pigment, it must be made into particle form.

Some examples of natural dyes:

Here there are examples of few important natural dyes which are widely used in the dyeing of textile materials:

1. Jack fruits
2. Turmeric
3. Onion
4. Hina
5. Indigo

Chemical or Synthetic dyes are manufactured from organic molecules. Before synthetic dyes were discovered in 1856, dyestuffs were manufactured from natural products such as flowers, roots, vegetables, insects, minerals, wood, and mollusks. Batches of natural dye were never exactly alike in hue and intensity, whereas synthetic dyestuffs can be manufactured consistently. The use of computers and computer color matching (CCM) produces color that is identical from batch to batch.

Why are chemical dyes used?

Dye, substance used to impart colour to textiles, paper, leather, and other materials such that the colouring is not readily altered by washing, heat, light, or other factors to which the material is likely to be exposed.

TYPES OF BLOCK PRINTING

IKAT PRINT

What exactly is ikat? Ikat (pronounced: Ecot) is a method for coloring fabric in patterns by resist dyeing. The pattern is not applied to the surface of a finished fabric, nor is it woven into the fabric structurally. Instead, parts of the yarns for the warp and/or weft are protected with a resist before dyeing.

This technique is the most ancient way of dyeing the fabric. It is called resist dyeing and is majorly used on cotton and silk fabric.

Unlike other tie and dye techniques, in Ikat, the yarns are first tied together and then dyed as many times as required to get the desired pattern on them. When a final fabric is ready, you see apparent blurriness on them; it is a salient characteristic of Ikat fabric. The blurriness is the result of the difficulty a weaver's faces while weaving the yarns together to make a cloth. Indeed, Ikat is an elaborate dying process. It is not a print on fabric, nor a fabric weaved out of different colored or complexed yarn, but, it is formed by dyeing warp and weft before weaving it. The finer the Ikat fabric is the less blurriness is. Such fabrics come expensive because of intensive craftsmanship and time required.



www.ikatblockprint.com

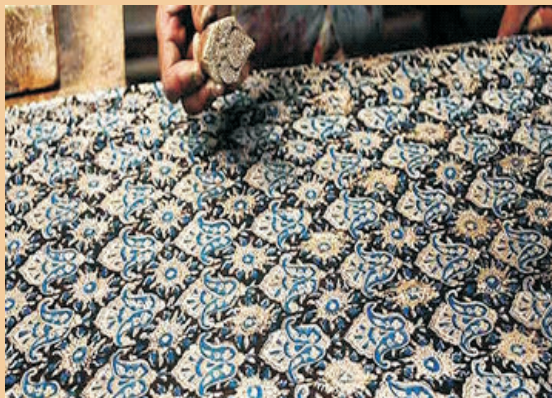
SANGANERI PRINT

Sanganeri is a hand-block printing technique originating from Sanganer, a village in the southern part of Jaipur, Rajasthan. This form of textile printing is almost 5 centuries old and till date holds a prominent place in the world of weavers and craftsmen. Sanganer block prints are primarily done on an off-white or pure white background with the use of wooden blocks or screen printers. You will find vibrant floral patterns and geometric designs imprinted on the fabrics. One of the most noticeable characteristics of Sanganer prints is their intricate detailing. Fine lines and intricate detailing are specialties of the Sanganeri style." Dyeing of Sanganeri Printed Cloth is by use of natural colors (vegetable colors) as such, the finished cloth often emits very pleasant odour. Sanganer is famous for its Calico printed bed covers, quilts and saris.



Sourced by : www.bagrublockprinting.com

BAGRU PRINT



Sourced by : www.bagrublockprinting.com

Bagru a small town situated 32 kms south-west of Jaipur, capital city of Rajasthan, is famous for its traditional hand block printed fabrics. A unique craft in block printing, Bagru has its own distinct character and historically it was once produced exclusively for royalty and offerings in temples. This traditional art despite the passage of time has retained its original character and is less influenced

by the popular market and advent of the cheaper power loom products. Bagru Print is a form of hand block printing done by natural colours followed by the Chippa's (involved in fabric printing tradition for over 100 years) in Bagru, India. ... The Prints of Bagru, unlike other prints, involve a different kind of printing. The unique method for printing employs wooden block in it. Bagru is most famous for its typical wooden hand block prints. These prints of Bagru are widely acclaimed, and known as "Bagru prints". The unique method for printing employs wooden block in it.

KALAMKARI PRINT

Kalamkari print is created by weavers of Andhra Pradesh in India. Kalamkari is a type of hand-painted or block-printed cotton textile produced in Isfahan, Iran, and in the Indian state of Andhra Pradesh. The Srikalahasti style of Kalamkari, where the "kalam" or pen is used for freehand drawing of the subject and filling in the colors, is entirely hand worked. Kalamkari is a type of hand-painted or block-printed cotton textile, produced in Indian states of Andhra Pradesh and Telangana. Kalamkari literally translates into "pen craft"; with 'kalam' meaning pen and 'kari' meaning art. It is among the most beautiful traditional Indian art forms and involves block printing or hand printing, typically done on pieces of cotton fabrics. The unique feature of the Kalamkari art is that it makes use of only natural colours or vegetable dyes.



Sourced by : www.kalamkari.print.com

BANDHANI



Sourced by : www.bandhani.com

Bandhani is a type of tie-dye textile decorated by plucking the cloth with the fingernails into many tiny bindings that form a figurative design. The term bandhani is derived from the Sanskrit verbal root bandh ("to bind, to tie"). Today most Bandhani making centers are situated in Gujarat, Rajasthan, Sindh, Punjab region and in Tamil Nadu where it's known as Sungudi. Earliest evidence of Bandhani dates back to Indus Valley Civilization

where dyeing was done as early as 4000 B.C. The earliest example of the most pervasive type of Bandhani dots can be seen in the 6th century paintings depicting the life of Buddha found on the wall of Cave 1 at Ajanta. Bandhani is also known as Bandhej, Bandhni, Piliya, and Chungidi in Tamil and regional dialects. Other tying techniques include Mothra, Ekdali and Shikari depending on the manner in which the cloth is tied. The final products are known with various names including Khombi, Ghhat Chola, Patori and Chandrokhani.

The art of Bandhana is a highly skilled process. The technique involves dyeing a fabric which is tied tightly with a thread at several points, thus producing a variety of patterns like Chandrakala, Bavan Baug, Shikari etcetera; depending on the manner in which the cloth is tied. The main colour used in Bandhana are yellow, red, blue, green and black.

The main colours used in Bandhana are natural. As Bandhani is a tie and dye process, dying is done by hand and hence best colours and combinations are possible in Bandhanis.

The Bandhani work has been exclusively carried out by the Khatri community of Kutchh and Saurashtra. A meter length of cloth can have thousands of tiny knots known as 'Bheendi' in the local language ('Gujarati').

AJRAKH PRINT

Ajrak or Ajrakh is a unique block printed textile. It displays special traditional designs and patterns. ... Generally, Ajrak is printed on both sides by resist printing method. The printing is done by hand using hand carved wooden blocks.

Ajrak print is performed within a grid.

Ajrak or Ajrakh is a unique block printed textile. It displays special traditional designs and patterns.

Ajrak follows a detailed block printing technique of decorating fabrics. Generally, Ajrak is printed on both sides by resist printing method. The printing is done by hand using hand carved wooden blocks.

Ajrak print is performed within a grid. Repetitive pattern creates a web-like design. Along with the web, border designs are also incorporated on the fabric.



Sourced by : www.typesorajrak.com

It is a long process and involves several stages of printing and washing the fabric again and again using natural dyes and moderants. Ajrak print is a modern mode in block printing. It is made with natural dyes. The entire process includes vegetable and mineral dyes. Ajrak print is an eco-friendly and sustainable craft that exists in harmony with nature. It generally consists of geometrical and floral designs.

BATIK

What is a batik print?

Batik is a technique of wax-resist dyeing applied to the whole cloth.

This technique originated from the island of Java, Indonesia.

Batik is made either by drawing dots and lines of the resist with a spouted tool called a canting, or by printing the resist with a copper stamp called a cap.

Batiks: Print and its uses-

Batiks are a type of fabric often used in quilting. They are made by a "resist" process where the designer uses wax to prevent dye from penetrating some areas of the cloth, leaving those areas un-dyed.

The process can be repeated many times to create complex designs, using many colors.



Sourced by : www.shutterstock.com

Activities Recommended: Designing Cushion Cover & Table Mat with Mehndi Blocks, Potatoes, Ladyfingers & Thumbs

Bibliography

<https://www.housebeautiful.com>

<https://www.lushfabjaipur.com>

<https://www.learninsta.com>

Worksheet 4

I. Choose the right option:

1. Which is the newest block print techniques?
 - a) stamping
 - b) pressing
 - c) rubbing
 - d) squeezing
2. The process when dye is applied in specific pattern or fabric is called _____.
 - a) double printing
 - b) another printing
 - c) dying
 - d) printing
3. The famous road route used for exchange of luxury textiles between East and West _____.
 - a) GT Road
 - b) Silk Road
 - c) Persia Road
 - d) None of these
4. What is the percentage contributed by the textile sector to the country's export?
 - a) 47%
 - b) 67%
 - c) 87%
 - d) 40%
5. What is one of the most significant difference between block printing and other techniques like weaving to create designs in a fabric?
 - a) Block printing is applied to a complete fabric .
 - b) Block printing can be used to create multi-colored design.
 - c) Block printing allows background and decorative colors to differ.
 - d) Block printing allows for the creation of simple designs.

II) Answer the following questions in brief:

6. How are multiple colours added to the fabric using block printing?

7. What are the sources of dye?

8. What are the three stages of printing process?

9. Mention the different types of block printing?

10. What is batik printing? From where this printing is originated?

Activity

Find out and research the story behind Rajasthani block print -the ethnic printing clusters- Sanganer, Bagru and Barmer

UNIT 5: MILLS TO MARKET

INTRODUCTION

All the block printing techniques and tie and dye too, paints that are practiced in Indian boast of the rich culture and heritage of the country. Creativity, craftsmanship and a whole lot of efforts go into keeping these printing techniques alive and trending around the globe. Different designs and techniques contribute to the popular saying of “unity in diversity”. The variety of different colours coupled with intricate designs is a rich source of culture that has been handed down and delicately preserved in the country. Block Printers deserve all the patronage and love that they can get.

SWOT ANALYSIS OF BLOCK PRINTING INDUSTRY IN INDIA

Strength:

- i. Traditional printing technique.
- ii. Explorations in the designs are always done according to the need.
- iii. Practiced in many clusters all over India.
- iv. The traditional block printing craft has flourished over the past three decades, with increasing demand from both export and domestic markets
- v. A large mass of people are involved in this business.
- vi. India is one of the largest manufacturers and exporters of block printed fabric in the world. Block printing craftsmen use wooden or metal blocks to create beautiful designs.
- vii. Block Printing on Textiles has a very small carbon footprint. The printing and coloring process is labor intensive and uses no electricity.
- viii. The process uses vegetable dyes which are chemical free. ix. The material used for block printing is usually handloom or khadi, using no power

Weakness:

- i. Time consuming process.
- ii. Require human skill and labor.

Opportunities:

- i. One of the oldest known printing technique.
- ii. Many Indian designers are working on block printing.
- iii. It is cheap and easy to start a block printing unit.
- iv. India is having a very large no. of block printing units.
- V. In recent times the export of block printed garments have seen a steep increase as its demand has increased especially in western countries because of its durability and distinctive patterns and designs.

Threats:

- i. Block printing faces an increasing threat from the mushrooming of screen- printing units that are selling their products - often, designs copied from block prints - as genuine block printed products.
- ii. Modern techniques of fabric printing are cheaper and less time consuming, so they are also gaining popularity affecting the market of block printing.

CHALLENGES BEFORE THE INDIAN BLOCK PRINTING CLUSTERS

1. Challenges of the craft communities have certain commonalities across the country which also applies to the craft sector of Kutch. These are the disadvantages of the informal sector that is totally dependent on its own resources and initiatives.
2. Each craft sector has its specific challenges and issues, while the challenges of credit, technology, markets, infrastructure, R&D, competition from industrial products affect crafts across the board.
3. The market for block printed textiles is increasingly demanding and competitive. Market driven challenges have resulted in decreasing returns on Kutch block printed products. The block print industry faces tough competition from the screen print and mass-produced textile industries.
4. The predominant challenge facing block print artisans is depleting ground water resources that result from intense water use during printing. Kutch's block printing sector draws up to 25 lakh litres of water a day during peak season. However, Kutch is an arid region with a history of devastating droughts. The lack of available ground water presents a significant challenge. It is important that artisans gain access technologies that they can implement to harvest, conserve, treat, and recycle water used for printing.
5. Artisans also lack access to sources of water. The majority of printers must rent wadis, farms with water access, and bear the resulting expenses, transportation challenges, and pollution. The industry's move from natural to chemical dyes has further exacerbated pollution and water management challenges.
6. Artisans must access technologies that they can implement to harvest, conserve, treat, and recycle water

CONCLUSION

With an increased interest in slow fashion and traditional techniques, block print artisans and cooperatives have begun to benefit from bringing ancient crafts into the modern age. Block printing holds a special space within the textile industry because of its deep storytelling origins as well as the expertise required. Mainstream fashion brands can attempt to copy block printing all they want but nothing will ever come close to the textiles designed by families who have practiced the craft for generations.

The obvious snag in a plan to combine ancient traditions with a fast-paced world is the need to scale, and scale quickly. For some block print artisans, in order to meet demands, patterns must be simplified and natural dyes are sometimes substituted for synthetic ones. While these types of partnerships still provide beautifully printed fabric and thriving block print artisan communities, the role of small or artisan-led businesses remains vital to properly preserving the art form. When brands are willing and able to give their artisan partners time to create the generational designs, the finished products are truly breathtaking

Activities Recommended: Poem Recitation in praise of Indian Handloom, Exhibition of artefacts and products prepared by the students during the academic year.

Bibliography

<https://www.homesciencejournal.com>

<https://www.ripublication.com>

<https://www.edurev.in>

Worksheet 5

Answer the following questions:

1. Enumerate the threats of block printing?

2. What are the challenges before the Indian Block Printing?

3. Why do we need to conserve our traditional ways of block printing?

4. The economy of our country is dependent on textile .Discuss.

5. How can we say that the block printing is one of our cultural heritage?

6. Textile printing can be a source of self employment. Justify

7. Write a short note on Sanganeri Textile?

8. Is Block Printing eco friendly. Justify

9. What are the advantages of Block Printing?

- 10.What is the difference between block printing and stencil printing?

Activity

Find out the problems of the handloom weavers in Rajasthan in a survey through Questionnaire.



CENTRAL BOARD OF SECONDARY EDUCATION

Committed to Equity and Excellence in Education

Address: Shiksha Kendra, 2, Community Centre, Preet Vihar, Delhi- 110092