



# EDUKala



 **dheerya**  
foundation



# Science

## 6th Grade



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# DIFFERENT TYPES OF FIBRES

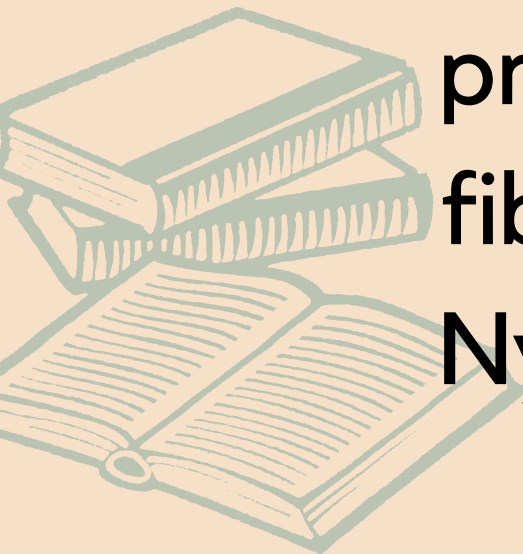
A fibre is a thread which is strong and flexible enough to make clothes. The fibres are of two types:







# DIFFERENT TYPES OF FIBRES

1. Natural Fibres: the fibres which are obtained from natural sources like plants and animals are called natural fibres. For Example: Cotton and jute (obtained from plants), Wool and silk (obtained from animals).

2. Synthetic Fibres: fibres are also made from chemical substances which are not obtained from natural sources. The fibres which are prepared from chemical substances in industry are called synthetic fibres, also known as artificial or manufactured fibres. For example: Nylon, polyester and acrylic.



# DIFFERENT TYPES OF FIBRES

Cotton Fibre	Jute Fibre
<div><div><div>1. It comes from cotton plants which are grown in the field by the farmers.</div><div>2. They usually grow in places having black soil and a warm climate.</div><div>3. After maturing, the Cotton balls burst open seeds covered with white, soft cotton fibre.</div><div>4. Cotton is picked up from the plants in the fields usually by hand.</div><div>5. The cotton fibres are then separated from the seeds. The process of separating cotton fibres from the seeds is called ginning</div></div><div></div></div>	<div><div><div>1. It is obtained from the stem of the jute plant.</div><div>2. It is cultivated during the rainy season.</div><div>3. The jute plant is normally harvested when it is at flowering stage.</div><div>4. The stems of the harvested plants are immersed in water for a few days.</div><div>5. The stems rot and fibres are separated by hand.</div></div><div><div><div><div>Jute plants</div></div><div><div>Harvested plants immersed in water</div></div><div><div>Rotten stems are made into jute fibre</div></div></div></div></div>



# OBJECTIVES



- Students are able to differentiate between natural and synthetic fibres
- Students understand where cotton and jute come from





# PRE-REQUISITES

- Fabrics of different materials- cotton, wool, silk, synthetic
- Candle with matchstick
- Cotton wool
- Popcorn kernels (unpopped)
- Comb
- Printout of worksheet on ginning





# PRE-ASSESSMENT



1. How would you describe fibres?
  - An artificial chemical substance
  - Substances your body can not digest
  - A thin thread from a natural or synthetic substance
  - An important component of human digestion







# PRE-ASSESSMENT



2. Which natural fibre can be found in the fields?

- Wool
- Silk
- Cotton

3. Which natural fibre comes from an insect?

- Cotton
- Wool
- Silk



# LEVEL-1 & 2

## ACTIVITY:

Test to check the type of fabric (to be demonstrated by the teacher).

Take a small piece of fabric to be tested. Hold one end of the fabric with a pair of tongs and bring the other end of fabric over the flame of the burner.

- 1) If the piece of fabric burns vigorously giving a smell of burning paper, then it is cotton fabric.
- 2) If the piece of fabric burns giving a smell of burning hair, then it is a woollen fabric.



# LEVEL-1 & 2

## ACTIVITY:

3) If the piece of fabric burns giving the smell of charred meat, then it is a Silk fabric.

4) If the piece of fabric burns slowly giving the smell of burning plastic, then it is synthetic fabric.

Students will judge the material on the basis of smell. Allow all students to share their experience.



# LEVEL-1 & 2

## ACTIVITY:

Have you ever made wicks for oil lamps? What do you use for making these wicks? This cotton wool is also used for filling mattresses, quilts or pillows.

- Give some cotton wool to each student, or ask them to share in pairs.
- Ask them to pull it apart and look at its edges.
- What do you observe? (allow students to answer)
- The small, thin strands that you see are made up of cotton fibres

Where do you think this cotton wool comes from? (encourage student participation)



# LEVEL-1 & 2

## EXPLAIN CONTENT: (FROM INTRODUCTION)

- Let us practice ginning in class.
- Give each pair of students a cotton ball (with popcorn kernels as seeds)
- They separate the seeds from cotton by hand or by using a comb- known as ginning
- Mention- nowadays, machines may be used for this purpose



# LEVEL-1 & 2

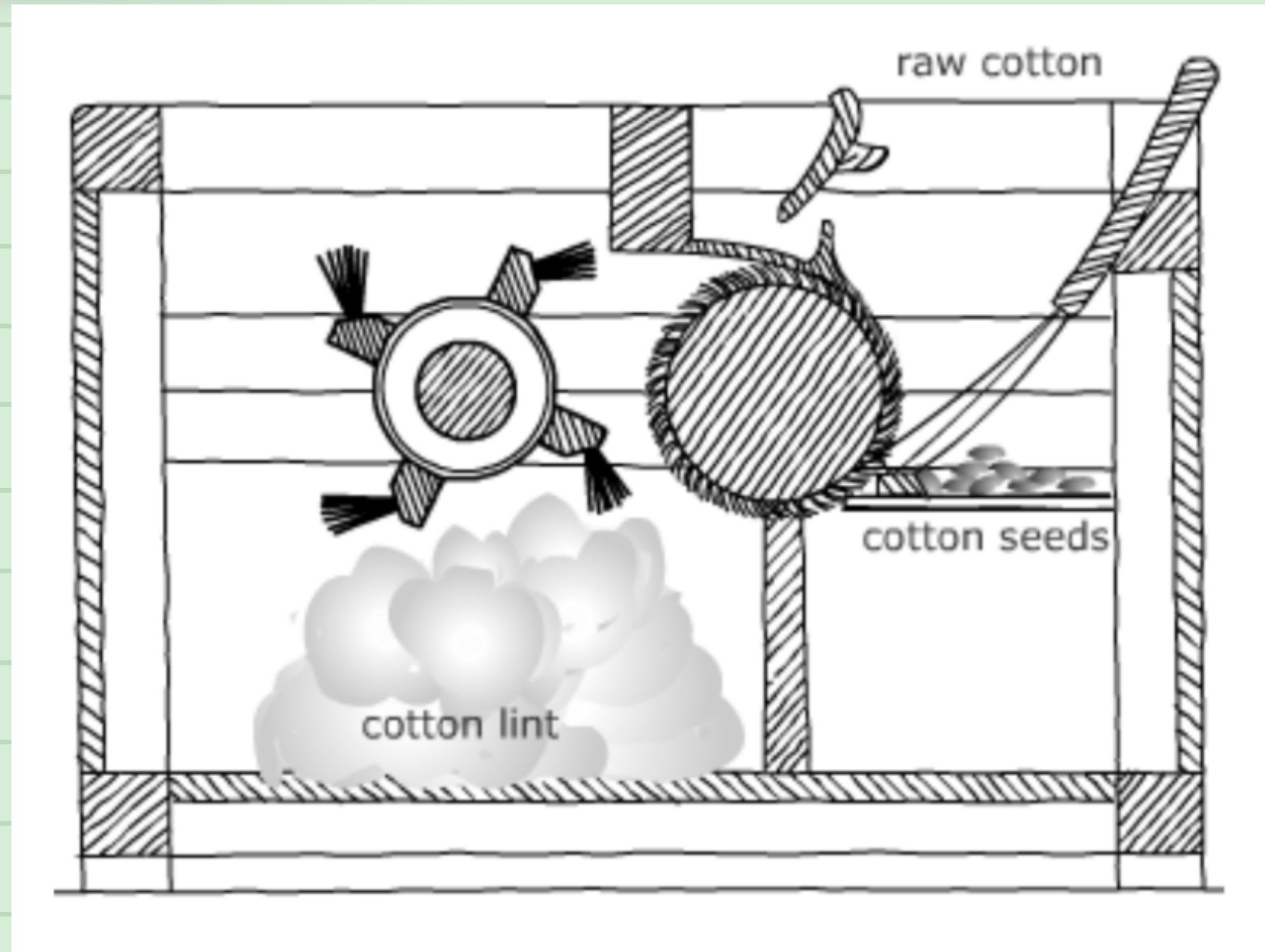
## ACTIVITY:

- Students are given a worksheet (shared below)
- This worksheet shows a diagram of the ginning process
- They need to paste their cotton balls with seeds (popcorn kernels) in the raw cotton section
- Fresh cotton in the cotton lint section
- And the seeds separated in the 'cotton seeds' section
- This activity will help them in understanding the process of ginning well





# LEVEL-1 & 2



# POST ASSESSMENT

## A. Choose the correct option:

1. Cotton is usually picked by hand. Fibres are then separated from the seeds by combing. This process is called \_\_\_\_\_ of cotton

- a) Matching
- b) Ginning ✓
- c) Weaving
- d) Spinning

2. Jute fibre is obtained from the \_\_\_\_\_ of the jute plant.

- a) Stem ✓
- b) Flower
- c) fruit
- d) Seed



# POST ASSESSMENT

## A. Choose the correct option:

3. Which of the following is not a natural fabric?

- a) Silk
- b) Nylon ✓
- c) Cotton
- d) Wool

4. Paheli wants to present her friend a gift made of plant-fibre. Which out of the following will she select?

- a) Jute bag ✓
- b) Woollen shawl
- c) Silk saree
- d) Nylon scarf



# POST ASSESSMENT

## A. Choose the correct option:

5. Beera is a farmer. His field has black soil and the climate is warm. Which fibre yielding plant should he grow in his field?

- a) Jute
- b) Cotton ✓
- c) Coconut
- d) Wool



# POST ASSESSMENT

**B. State whether the following statements are true or false. If false, correct them.**

1. Silk is a plant fibre (False, silk is an animal fibre)
2. Jute is obtained from the leaves of a plant. (False, jute is obtained from the stem of a plant)
3. Cotton yarn on burning gives an odour similar to that of a burning paper. (True)



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