

Section A

1. The document name :science_7th_fibre to Fabric_Mona_walia_maninder_kaur_gmsssmian
_editted_by_Mitreshi_gupta_ggssspanjgrinkalan

2. Introduction:

Name of the school	Govt. Model Sr. Secondary School, Mian (Mansa)
Name of the teachers	Mona Walia and Maninder Kaur
Class	7 th
Subject	Science
Name of the chapter	Fibre to fabric
No. of periods required to teach the chapter	Twelve
Edited by	Mitreshi Gupta GGSSS,Panjgrainkalan (Distt.Faridkot)

B1 B. Objectives / Expected learning outcomes

(The expected learning outcomes have been tabulated under four sub heads in the subsequent pages)

B1a Advantages:

- 1 basic understanding of the different animal fiber.
- 2testing for the originality of the fiber.
- 3understanding the process of dying a cloth.
- 4development of the scientific temperament while choosing a fabric
- 5development of the emotive aptitude towards the animals.
- 6enhancing creativity
- 7making right choice when laundering a fiber.

B1b Disadvantages

- 1unawareness about the originality of the fabric amidst the bundle of option available in the market.
- 2monetary loss.
- 3unawareness about the career options.

B1c Usefulness in daily life

- Basic understanding of different types of fabrics
- How woollen clothes protect us from cold ?
- Understanding of different types of wool
- Why selective breeding is done in animals?
- Knowledge of the fact that wool is obtained not only from Sheep but from other animals too like yak, alpaca, llama, goat etc
- Why and how sheep is reared?
- Why wool is of different types and textures?
- Knowledge of spread of anthrax disease from sheep
- Rearing of silkworms can be practised as an occupation
- To stop cruelty against animals

B1d Career options

1 establish small scale industry like dari making ,sweater making etc.

2 job option in cloth industry

3 sheep farming

4 sericulture

5 cloth merchant or shop owner

6 dress designing

7 dying industry

8 fashion designing

9 advance study in clothing textile and material culture.

B2 Concepts : Write up in this sub section consists of listing of various concepts which are going to be covered in this chapter

1 Usefulness of the fibers

2 categories of the fiber.

3 Key animal fiber.

4 processing of the animal fiber like wool and silk.

5 process of dying

6 peace silk or ahimsa silk

7 testing for the originality of the fiber

B3 Life Skills The following life skills can be inculcated through the teaching of this chapter in the class

1 scientific aptitude(ann.GE7a)

2 enhancing observation skills(sub sec.E1)

3 choosing vocation(sec.B1)

4 creative aptitude(subsec.E10)

5 team spirit(subsec.E3)

6 enrichment of emotional quotient(assessment tools)

7 public speaking(subsec E9)

8 building vocabulary(sub secB4)

9 research aptitude(subsec.E2)

10 ICT skill (sub sec.)

B4 Vocabulary

S.No.	Word in English	Meaning in Punjabi	Pronunciation in English	Transliteration in Punjabi
1	Fleece			
2	Coarse			
3	Selective			
4	Breeding			
5	Weave			
6	Grazing			
7	Shearing			
8	Oil Cakes			
9	Rearing			
10	Scouring			
11	Grease			
12	Sorting			
13	Sericulture			
14	Caterpillar			
15	Mulberry			
16	Texture			
17	Synthetic			
18	Artificial			
19	Lustrous			
20	Twigs			
21	Cocoon			
22	Processing			
23	Reeling			
24	Silkworm			
25	Silk moth			

SECTION C_Building bridges

Students will be asked certain questions like:

PK testing will be done by incorporating activity mentioned in annexure GEI

Q1 what is a fabric?

Q2 what is it made of?

Q3from where do we get these fibres?

Q4how are these fibres arranged to make the fabric?

Q5 the process of arranging fibres to make a fabric is called?

Q6Classify the following fabrics as natural or synthetic:

Nylon, Wool, Cotton, Silk, Polyester, Jute

Q7 By which process is wool converted into sweater?

Section D. Period Wise breakup of each chapter This chapter on fabric to fibre may require 12 periods. The tentative break up of each chapter in various periods is as follows:


Period	What to be covered
1.	Introduction of the chapter by some activity, previous knowledge testing , talking to the students regarding different types of animal fibres i.e. wool and silk.
2.	Introduction of Wool, animals that yield wool (pictures will be shown)
3	Rearing and breeding of sheep will be covered.
4	Processing fibres to wool : All steps to be covered like Shearing, Scouring, Sorting, picking burrs, dyeing of fibres, straightening of fibres, combing, rolling of yarn.
5	Rearing of silkworms(Sericulture),discussion of life cycle of silk moth
6	Processing of silk
7	In Science lab (Practical)
8	In Edusat lab
9	Presentation by students
10	Presentation by students
11	Recapitulation of all topics and discussion of NCERT Question Answers
12	Assessment of the students

Section E. Micro planning of the periods or minute to minute breakup of periods(The subsequent pages have the minute to minute detail of each period)

Sub Section E.1 Minute to minute break up of period 1st (Duration:40 min)

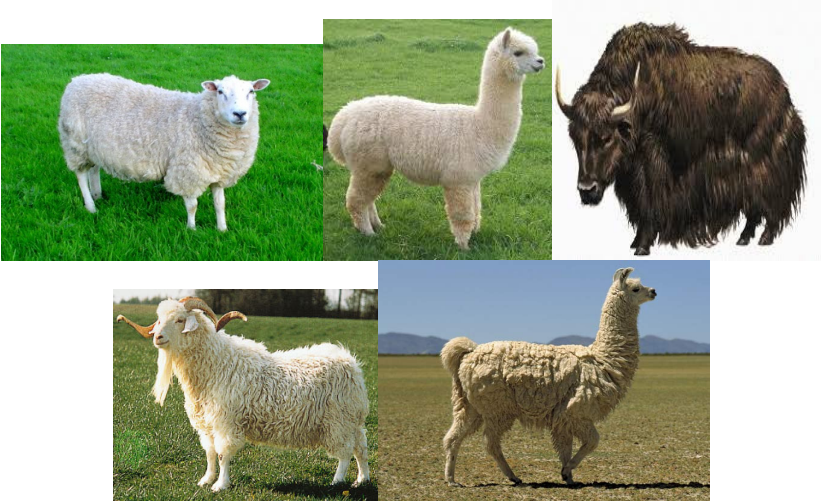
Entry behaviour of teacher	10 min	<p>Previous knowledge questions will be asked by the teacher.</p> <ul style="list-style-type: none"> ✓ PK testing will be done by incorporating activity mentioned in annexure GE1 .Perform activity “lets unwind fabric” where students recognise different fabric samples. For details refer to <u>annexure GE1</u> ✓ After distribution of the fabric the teacher will ask the following questions from the students to deduce the topic she wishes to explain and also for recapitulation. <p>Q1 what is a fabric? Q2 what is it made of? Q3from where do we get these fibres? Q4how are these fibres arranged to make the fabric? Q5 the process of arranging fibres to make a fabric is called? Q6 Classify the following fabrics as animal, plant or synthetic: Nylon, Wool, Cotton, Silk, Polyester, Jute Q7 By which process is wool converted into sweater? <u>Students will give the answers somewhat like:</u> Ans1) Cloth made from fibres Ans 2 it is made of fibre Ans3 from plants , animals or even synthesized . Ans 4)criss cross Ans 5) weaving Ans6) students will answer accordingly. Ans7)Knitting Teacher will welcome all the responses of the students without discouraging them. The teacher will now explain the kind of fabric material distributed in the class. thus brings students to the official introduction of the topic</p>
Introduction to topic	5min	<ul style="list-style-type: none"> • Teacher will start the topic by introducing plant and animal fibres and then specifically come to animal fibres as the chapter deals with wool and silk. • Teacher will explain that fibres can be categorised in two classes based upon its origin: natural and synthetic • Natural fibre is further classified into plant and animal fibre and write it on the board Fibres-----Plant -----Animal She will also provide examples of each fibre common animal fibre are wool and silk
Careers options	5min	Teacher will now explain the career opportunities one can find associated with

		<p>this topic i.e. establishing small scale industry like dari making ,sweater making etc., job option in cloth industry, sheep farming, sericulture ,cloth merchant or shop owner, dress designing, dying industry, fashion designing, BSc in Clothing, Textile and Material culture etc</p>
Exploring and writing	15 min	Teacher will ask students to make a list of various material substances made from animal or plant fibre like cotton, silk ,jute, wool fibres used in day to day life in their note book.
Home Assignment	5 min	<ul style="list-style-type: none"> • Teacher will assign the task of Making of scrap book: Students will be guided to collect different types of fabric pieces and paste it in a scrap book(7 days time will be given) • Students can be asked to make small piece of fabric using wool yarn and paste it in the scrap book

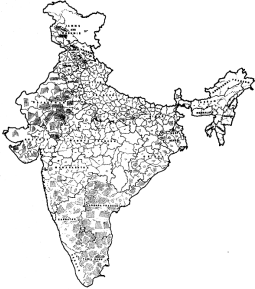
Annexure Name	GEI
Name of the activity	"Let's unwind Fabric" by Showing different fabrics to the students
Specify the topic and its convergence (inter discipline)	Students are able to recognize different types of fabrics and fibres'.
Type of the activity(individual activity/ group activity / home activity etc.)	Students will be distributed different fabrics in the row. They will touch it and observe it and thus identify different fibres.
Material required for the activity	2'*2' pieces of Fabrics of cotton, jute, silk and wool.
Any specific preparations required in the class room for performing the activity	-----
Details of the activity and detailed instructions to carry it out	<p>Teacher will pass on the different fabrics to the students.</p> 

sub Section E.2 Minute to minute break up of period 2nd (Duration:40 min)

CONCEPT	TIME	INDICATIVE/GUIDING SCRIPT
Entry behavior of teacher,discussion about the home assignment	5 min	<p>Teacher will ask the student to show the progress they have made in the home assignment allotted.</p> <p>Recapitulation of the previous day topics will be done by asking a few questions:</p> <p>Q1 What material was used to make the dress/suit your mother was wearing yesterday? what kind of fabric is it?</p> <p>Q2 what kind of fabric was used to clean the floor at your home? what kind of fabric is it?</p> <p>Q3 to which category the following fibre belong: silk and wool? Etc.</p> <p>Teacher can frame a large no. Of ques. To ask the familiarity of the classification of the fabric.</p>
Introduction of topic including an activity	10 Min	<p>Teacher will show flashcards to the students of animals yielding wool.(Annexure GE2) and ask the following questions</p> <p>Q1 What useful product do you get from these animals?</p> <p>Q2 Is there any other animal that provide us wool?</p> <p>Q3In which region are sheep reared?</p> <p>Q4what is the role of hair or fur for an animal?</p> <p>Ans1.wool</p> <p>Ans2.wool is obtained from different types of animals like sheep,rabbit,goat and yak .</p> <p>Ans3.Jammu and Kashmir, Himachal Pradesh, Uttaranchal, Arunachal Pradesh, Sikkim, Punjab, Rajasthan, Gujarat etc.</p> <p>Ans4.students will answer accordingly</p> <p>All the answers will be welcomed by the teacher</p>
Topic discussion	20 min	<ul style="list-style-type: none"> Based upon the answers given by the students the teacher will start the topic :WOOL AND ITS REARING. She will explain the topic like- Wool is obtained from different types of animals like sheep , goat and yak how fabrics of wool trap air and protect us from cold Explanation of the terms like fleece ,fur, yarn Discussion of the two types of hair on the sheep: 1)the coarse beard hair 2)the fine soft under hair Discussion of how fabrics of wool trap air and protect us from cold
Home Assignment	5 min	<p>Teacher will guide students to mark the different regions on the map of India and world where the animals that provide wool are reared. Also write the names of the breed associated with that region.</p>

Annexure Name	GE2
Name of the activity	Showing flashcards
Specify the topic and its convergence (inter discipline)	Flashcards of different animals that yield wool will be shown
Type of the activity(individual activity/ group activity / home activity etc.)	Demo by the teacher
Material required for the activity	Pictures of different animals
Any specific preparations required in the class room for performing the activity	-----
Details of the activity and detailed instructions to carry it out	<p>Teacher will show the pictures to students.</p> 


Sub Section E.3 Minute to minute break up of period 3rd (Duration:40 min)

<u>CONCEPT</u>	<u>TIME</u>	<u>INDICATIVE/GUIDING SCRIPT</u>
<p>Discussion of Home Assignment given previous day by displaying the chart of India showing sheep grazing areas and breeds of sheep of that region</p>	<p>10 min</p>	<p>Teacher will revise all the areas where sheep is grazed like Jammu and Kashmir, Himachal Pradesh, Uttaranchal, Arunachal Pradesh, Sikkim, Punjab, Rajasthan, Gujarat etc</p> 
<p>Activity associated</p>	<p>15 min</p>	<p>Teacher will now divide student in 5-6 group and provide them with hair lock (1per gp.)each gp. Will record the texture, colour, shine, thickness etc. The recordings will be conveyed to the students by the representator of the gp. In front of the class.</p>
<p>Rearing of sheep</p>	<p>10 min</p>	<ul style="list-style-type: none"> • Teacher will officially discuss the topic “TEXTURE OF HAIR:FEED AND BREED” • Teacher will explain about the effect of feed and breed on the quality of fur/hair, thus coming to the topic Rearing i.e. tending and caring of the sheep • Discussion of herbivorous animals like sheep, goat, yak etc. • Students will be told about different types of feed like pulses, corn, jowar, oil cakes etc necessary for healthy hair growth in an animal.
<p>Breeding of sheep</p>		<ul style="list-style-type: none"> • Meaning of breeding i.e. How the number of the animal is increased and role of breeding in the enhancing the quality of fibre. • Selective breeding will be explained to the students i.e. the desired characters of the animals are selected to produce one animal which has desired characters, thus sheep having fine quality fur can be cross bred to get daughter fine quality breed.
<p>Home Assignment</p>	<p>5 min</p>	<p>“Dolly: The Sheep” What’s so special about Dolly. Make a report on this topic.</p>

Sub Section E.4 Minute to minute break up of period 4th(Duration:40 min)

<u>CONCEPT</u>	<u>TIME</u>	<u>INDICATIVE/GUIDING SCRIPT</u>
Entry behaviour of teacher	5 min	Recapitulation of the previous day topic.
<u>PROCESSING FIBRES INTO WOOL:</u> Shearing	3 min	<ul style="list-style-type: none"> • The teacher will play the video related to the processing of wool fibre. • The process of removal of the fleece along with thin layer of skin is called shearing. • Different types of machines are used by barbers for shaving.
Scouring	9 min	<ul style="list-style-type: none"> • The sheared skin with hair is thoroughly washed in tanks to remove dirt, grease and dust etc. • Teacher will perform activity in the class. Any fibre will be taken and some quantity of oil, dust etc will be added. • Then washing of the same will be shown.(Annexure GE5_A)
Removing burrs	3 min	<ul style="list-style-type: none"> • Burrs are picked from hair, fibres again scoured and dried.
Dyeing of fibres	5 min	<ul style="list-style-type: none"> • Different colours are given to fleece of sheep • Students will be given knowledge about the natural and artificial dyes. <p>(Dyeing experiment will be performed in period 7 though brief intro will be given here)</p>
Making yarn from fibres	5 min	<ul style="list-style-type: none"> • The fibres are straightened , combed and rolled into yarn.
Pictures of all processes	5 min	<ul style="list-style-type: none"> • All the related pictures will be shown (Annexure GE5_B)
Home Assignment	5 min	Make a flow chart of processing fibres to wool

Annexure Name	GE4_A
Name of the activity	Activity to show scouring
Specify the topic and its convergence (inter discipline)	Activity will clarify the students regarding the scouring process i.e washing of the sheared hair.
Type of the activity(individual activity/ group activity / home activity etc.)	Demo by the teacher
Material required for the activity	Beakers, fibres of any type, stirrer, oil, soil, detergent of any type, water.
Any specific preparations required in the class room for performing the activity	All the apparatus and material should be present in the classroom beforehand.
Details of the activity and detailed instructions to carry it out	Teacher will take the fibres in the beaker. Some quantity of oil and soil will be added to make the fibres dirty. Water will be added to the beaker followed by the detergent. It is stirred with stirrer. The fibres will be allowed to remain dipped in the detergent for some time. Subsequent washings with clear water in other beakers will clarify the students regarding the process of scouring.

Annexure Name	GE4_B
Name of the activity	Showing pictures
Specify the topic and its convergence (inter discipline)	Pictures of steps of different processes in which fibres are converted into wool
Type of the activity	Demo by the teacher
Material required for the activity	Pictures of different processes
Any specific preparations required in the class room for performing the activity	Flashcards should be ready to be shown to the students.
Details of the activity and detailed instructions to carry it out	Teacher will show the pictures to students. She will also show a video of full procedure: https://www.youtube.com/watch?v=uEYsmzophTA&spfreload=10
SHEARING	

SCOURING



REMOVING BURRS



DYEING




MAKING YARN



Sub Section E.5 Minute to minute break up of period 5th (Duration:40 min)


<u>CONCEPT</u>	<u>TIME</u>	<u>INDICATIVE/GUIDING SCRIPT</u>
Entry behavior of teacher	5 min	Brief recapitulation of the previous day topics.
Introduction to Sericulture	10 min	<ul style="list-style-type: none"> • Teacher will tell the students that rearing of silkworms for silk is called sericulture. • Students will be asked if they have seen silk moth. <p><u>TLM:Specimen of life cycle of silk moth will be shown to the students</u></p> <p>Students will come turn by turn while discussion is going on and observe the specimen.</p>
Life History of Silk Moth	20 min	<p><u>TLM: Mulberry leaves</u></p> <ul style="list-style-type: none"> • Mulberry leaves will be distributed to the students. • Then, teacher will explain to the students that eggs are laid by silk moth on the mulberry leaves. The larvae that hatch from the eggs are called caterpillars or silkworms. • Next, comes the structure called pupa. • Caterpillar secretes fibre of protein which hardens on exposure and becomes silk fibre. The caterpillar turns into pupa. • The covering is called cocoon. • A video related to rearing of silk is shown by the teacher;for that follow the link https://www.youtube.com/watch?v=-wbmEjTvszI
Home Assignment	5 min	Draw life cycle of silk moth

Annexure Name	GES_A
Name of the activity	Showing specimen of life cycle of silk moth
Specify the topic and its convergence (inter discipline)	Students will be able to recognize silk moth.
Type of the activity(individual activity/ group activity / home activity etc.)	Students will observe the specimen individually.
Material required for the activity	Specimen from Bio Lab
Any specific preparations required in the class room for preforming the activity	Specimen should be present in the classroom when the period starts.
Details of the activity and detailed instructions to carry it out	Students will come and observe the specimen turn by turn or in groups of 2 or 3 as per the guidance and convenience of the teacher.
Specimen describing activity	<p>The diagram illustrates the life cycle of a silkworm in a circular flow. At the top, 'ADULT' moths are shown mating. An arrow points to 'EGG', where a female moth is laying eggs. Another arrow points to 'LARVA', showing a tiny black caterpillar hatching and eating mulberry leaves. A third arrow points to 'PUPA', where the caterpillar spins a cocoon. A final arrow points back to 'ADULT', where a moth is shown emerging from a cocoon. The central text reads 'SILKWORM LIFE CYCLE'.</p>

Annexure Name	GES_B
Name of the activity	Showing mulberry leaves
Specify the topic and its convergence (inter discipline)	-----
Type of the activity(individual activity/ group activity / home activity etc.)	Students will observe and come to know about mulberry leaves
Material required for the activity	Mulberry leaves
Any specific preparations required in the class room for performing the activity	Some of the leaves will be kept ready by the teacher in the beginning of the period itself.
Details of the activity and detailed instructions to carry it out	Students will be provided the leaves in rows and they will pass it on to other students after making their observations.
Picture describing activity	

Sub Section E.6 Minute to minute break up of period 6th (Duration:40 min)

CONCEPT	TIME	INDICATIVE/GUIDING SCRIPT
Entry behavior of teacher	5 min	Recapitulation of the previous day topics.
<u>From cocoon to silk</u> Rearing silkworms	10 min	Students will be told about the storage of eggs on piece of cloth or paper. They are further told about silkworm farmers. Further step requires warming of eggs and hatching of caterpillar or larvae. Larvae are then fed on mulberry leaves <u>TLM:PICTURE OF LARVAE FEEDING ON MULBERRY LEAVES WILL BE SHOWN.</u> After 25-30 days, larvae start to spin cocoons. Inside the cocoon, silk moth development takes place.
Processing silk	15 min	Cocoons are kept under sun or boiled or exposed to steam. Silk fibres separate out. The process of taking out threads from cocoon for use as silk is called reeling the silk. <u>TLM:PICTURES OF PROCESSING THE SILK AND RELATED PICTURES WILL BE SHOWN</u>
Weaving of silk	5 min	Silk fibres are spun into silk threads which are woven to make silk cloth. <u>TLM:PICTURE WILL BE SHOWN</u>
Home Assignment	5 min	Taking two chart paper or waste cloth strips of different colours, make a criss cross pattern of weaving. Students are encouraged to do the same using long cloth strips (preparation of mat).

Annexure Name	GEB	
Name of the activity	Showing pictures related to making of silk	
Specify the topic and its convergence (inter discipline)	-----	
Type of the activity(individual activity/ group activity / home activity etc.)	Students' concepts will be clarified from the pictures	
Material required for the activity	Related pictures	
Any specific preparations required in the class room for performing the activity	Flashcards should be ready with the teacher.	
Details of the activity and detailed instructions to carry it out	Teacher will show the related pictures to the students to clarify different concepts.	
Pictures describing activity		

Sub Section E.7 Minute to minute break up of period 7th (Duration:40 min)


(IN SCIENCE LAB)


CONCEPT	TIME	INDICATIVE/GUIDING SCRIPT
BURNING EXPERIMENT	10 MIN	<ul style="list-style-type: none">• Students will be asked to burn woollen thread, pure silk thread and synthetic silk thread.• Observations are made by the students. students are asked to record the observations in their notebooks• Students are told to observe that silk thread burns slowly and curls away from flame. It leaves dark bead which can be easily crushed.• Woollen thread burns slowly. It gives smell of burning hair.• Artificial thread burns without flame, melts .may fare up, does not leave any bead.
FABRIC DYEING EXPERIMENT	30 MIN	<ul style="list-style-type: none">• Students will be guided to dye wool and silk with natural dyes like indigo and ripe beets.• Teacher will explain how the natural dyes are made• Teacher will further elaborate the students how dyeing of thread is to be done.

Hint1: divide the students in 4-5 different groups.

Hint2:provide the material to the students required for doing the experiment.

Hint3:let the students record their finding in the Performa given in assessment tool for period7.

Annexure Name	GE7_A
Name of the activity	BURNING EXPERIMENT
Specify the topic and its convergence (inter discipline)	Students will burn the threads to know the properties of the fibres.
Type of the activity(individual activity/ group activity / home activity etc.)	Group Activity
Material required for the activity	Woollen threads, silk threads, artificial silk threads, spirit lamp. Forceps, match stick
Any specific preparations required in the class room for performing the activity	-----
Details of the activity and detailed instructions to carry it out	Students will hold the threads with forceps under the guidance of teacher and make the necessary observations.
Pictures describing activity	

Annexure Name	GE7_B
Name of the activity	DYEING EXPERIMENT
Specify the topic and its convergence (inter discipline)	Students will understand dyeing of the fabrics
Type of the activity(individual activity/ group activity / home activity etc.)	Group Activity
Material required for the activity	White wool, White silken thread, indigo or ripe beet , beakers, spirit lamp, stirrer, filter papers.
Any specific preparations required in the class room for 23performing the activity	Dye will be prepared by boiling ripe beets in water and then filtering it by the teacher beforehand.
Details of the activity and detailed instructions to carry it out	<ul style="list-style-type: none"> • Students will be shown by the teacher how dye was prepared but they will use the dye already provided to them. • Threads are dipped separately in the beakers and group leaders will be asked to note the time and take out threads after 3 hours. Then the students can discuss the observations and note in their record book.
Picture describing the activity	

Sub Section E.8 Minute to minute break up of period 8th (Duration:40 min

(IN EDUSAT LAB)

CONCEPT	TIME	INDICATIVE/GUIDING SCRIPT
CHAPTER AT A GLANCE SCOURING OF FIBRES TO MAKE WOOL	APPROX 25 MIN	https://www.youtube.com/watch?v=D5gJDH5324Y(full chapter) https://www.youtube.com/watch?v=9JwvfXn-e_s
PROCESSING FIBRES INTO WOOL		https://www.youtube.com/watch?v=uEYsmzophTA&spfreload=10 (processing wool) https://www.youtube.com/watch?v=n2fqGlmXIF0
LIFE CYCLE OF SILK MOTH		https://www.youtube.com/watch?v=J8A2sn4Uzfo https://www.youtube.com/watch?v=-wBmEjTvszl(processing silk)
COCOON TO SILK		www.youtube.com/watch?v=-wBmEjTvszl
DISCUSSION ON VIDEOS OBSERVED	10 MIN	Teacher will discuss with the students regarding the knowledge they have gained after seeing the videos.
		Students will be given knowledge regarding Animal Cruelty Act Knowledge of stopping the boiling of cocoons to kill Larvae
		Ahimsa Silk, also known as Peace Silk, is processed from cocoons without killing the pupae inside
Distribution of topics for presentation	5 min	Teacher will allot the topics to the students for the presentation in the next period on this topic.

Sub Section E.9 Minute to minute break up of period 9th (Duration:40 min)

Presentation by 1st group	5 min each (2speaker)=10min	<u>Topics to be covered:</u> <ul style="list-style-type: none"> • Fibres and types • Animal fibres
Presentation by 2nd group	10 min	<u>Topics to be covered:</u> <ul style="list-style-type: none"> • Better care Better Wool • Processing fibres to wool
Presentation by 3rd group	10 min	<u>Topics to be covered:</u> <ul style="list-style-type: none"> • Processing cocoon to silk • Life cycle of silk moth
Presentation by 4th group	10 min	<u>Topics to be covered:</u> <ul style="list-style-type: none"> • Is killing of unborn Silk moth necessary • Animal cruelty act

Hint1:Students will be divided in 8 groups of 3 students each.

Hint2:The presentation will be given by the students other than the group leader.

Hint3:The task of group leader will be to provide information and helping the ward to perform during the task.

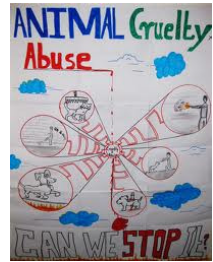
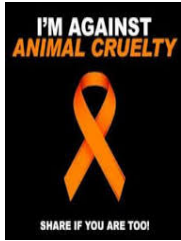
Sub Section E.10 Minute to minute break up of period 10th (Duration:40 min)

Group activity	40min	Teacher will divide the class in 8-10 groups ,(now with different partners)and Organise a poster making ,slogan writing ,story writing (If I am a sheep or a silk moth),quote writing competition regarding the topics discussed in the chapter.
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HINTS:

Regarding Animal Cruelty Quotes

Posters can be made



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Sub Section E.11 Minute to minute break up of period 11th (Duration:40 min)

Discussion of NCERT Q/Ans	40 min	<ul style="list-style-type: none"> Teacher will discuss the Q/Ans from NCERT Textbook and encourage them to answer in their own words according to their understanding.
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Sub Section E.12 Minute to minute break up of period 12th (Duration:40 min)

Assessment tools will be used by teacher	40 min	Assessment can be done by the teacher by adopting tools from Section H
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SECTION F:
(THE CONTENT)

Pg. 24 to pg 31,chapter 3 of NCERT book Class 7th

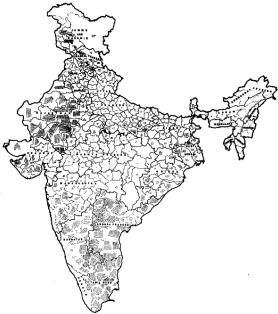
Interesting and useful online resources:



https://www.youtube.com/watch?v=9JwvfXn-e_s
https://www.youtube.com/watch?v=n2fg6lmXIF0
https://www.youtube.com/watch?v=J8A2sn4Uzfo
www.youtube.com/watch?v=-wbmEjTvszI

Some extra information:

- **Ahimsa silk or peace silk**
- **Animal Cruelty Act**
- **Dyeing of fabrics with natural dyes**

Section G. Possible Activities

Name of the concept/ skill / outcome	Name of the possible activities	Reference of the annexure where the details of the activity have been given in the already specified format or reference to the web address
Student will develop skills of research for a particular topic.	On the map of India ,marking different different sheep grazing areas	(subsec.E2) 
Creative skills	Making scrap book of different fabrics	creative aptitude(subsec.E10)
Observation and analytic skills	<u>While doing burning expt.</u> Students will note down various observations like – Q1)What is the smell? Q2) How it burns?	enhancing observation skills(sub sec.E1)
Experimental skills	Students will dye the threads and develop the desired skills.	Annex_GE_7B

	Students will develop ability to test originality of the fabric	Annex_GE_7A
Learning by doing	<ul style="list-style-type: none"> • Sticking pictures of animals which yield wool • To collect samples of tassar silk, mooga silk, kosa silk etc. and make a file 	Subsec_E1
Creative art	Collage work using different fibres or fabrics.	Sub sec.E10
Debate and public speaking	Animal Cruelty Act Is it fair to rear sheep for wool?	Sub sec E9
Slogan Writing	To stop Animal Cruelty	 subsec.E10
Poster making	To enhance creative skills	
Learning by doing	Life stages of silkworm are kept in jumbled form and the students arrange them in proper sequence.	<u>This activity can be included during the recapitulation of the chapter</u> <u>Sub sec E11</u>
Learning by	Students can be taken to any	<u>Sub sec E12</u>

exploration	textile mill to show different steps in making of the textile.	
Enhancing communication skills	Declamations, debates and presentations can be performed	<u>Sub sec E9</u>
ICT skills	Students are provided with internet links and are supposed to follow them to gain extra in hand knowledge.	<u>Sub sec.E8</u>

Section H. MODEL ASSESSMENT TOOL FOR THE STUDENTS

Worksheet for Assessment for content of period I

Q1) Two types of fibres are: _____ and _____

Q2) Two animal fibres are: _____ and _____

Q3) _____ keeps us warm in winters.

Q4 Wool is obtained from _____ of sheep.

Q5) Woollen fibres are _____ to form sweaters.

Q6 Which of these do not provide us wool:

- a) rabbit b)goat c)yak d)cat

Q7 Which of these country has the maximum number of sheep:

- a)Australia b)India c)China d)New Zealand

Q8 Radhika saw some unprivileged kids near her house in winter holidays .She decided to donate some of her spare clothes to them

a)What kind of clothes should she donate?

b)From where do we get the wool?

Worksheet for Assessment for content of period 2

Identify the animal and write its name .





Q2 What is the role of fur or hair on ones body?

Q3 match the following breeds of sheep to the place where they are reared:

Column A

column B

1

2

3

4

Q4 which breed of sheep do you see in your locality?

Worksheet for Assessment for content of period 3

Q1) What type of feed is given to sheep?

Ans _____

Q2) What is selective breeding ?

Ans: _____

Q3) What kind of animal is the sheep:

A. carnivorous b. omnivorous c. Herbivorous d. parasite

Ans: _____ Q4) What are hazards associated with any type of work called?

Ans4) _____

Q5) Baa Baa like his black sheep a lot. What kind of feed should he provide to the sheep to keep her hair shiny and healthy?

Q6) Mary's lamb is scientifically and genetically designed superior breed. What should I do to get a superior breed of sheep like it for myself?

Worksheet for Assessment for content of period 4

Q1) MAKE A FLOWCHART OF ALL THE STEPS INVOLVED IN PROCESSING FIBRES INTO WOOL

Q2) Rearrange the following steps in processing fibre into wool:

Making yarn, removing burr, shearing, dyeing, scouring

Q3) What is scouring? How is it done?

Q4) What are the different kinds of dye used for dyeing the cloth?

Q5) Which of these dyes is more ecofriendly?

Q6) The process of removal of fleece from sheep skin is called: a. removing burr b. dyeing c. shearing d. scouring

Q7) What is a yarn? How is it made?

Worksheet for Assessment for content of period 5

Q1) Draw a well-labelled diagram of silk moth.

Q2) What is sericulture?

Q3) Dhruv wants to start a silk manufacturing unit and wants to rear the silk moth himself. What kind of trees should he grow to get his silkworm fed?

Q4) From which stage of the life cycle of silkworm do we get the silk thread?

a.eggs b.caterpillar c.pupa d.silkmoth

Worksheet for Assessment for content of period 6

Write a note on your own in 30 -40 words relating to the picture



Q1 . Is this process compulsory for getting the silk?

Q2. Write a note on how to stop this kind of activity. What important steps need to be taken?

Worksheet for Assessment for content of period 7 and 8

Lab sheets to be made and record to be maintained by the students.

Lab Sheet (Sample)

BURNING EXPERIMENT

Name _____

Material required _____

OBSERVATIONS

Fibre used	What happens when it burns

Conclusion: _____

(These type of lab sheets can be used for formative assessment)

Q1Mita wants to buy pure silk suit.What can she do to establish the originality of the silk she wishes to buy?

Q2What happens when you burn a woollen thread?

Q3 suggest a few natural dyes used to color the clothes?

Q4Gautam wants to start a dyeing shop .explain him the procedure he should follow to dye a cloth.

DECLAMATION ON content and context of the chapter by the students CAN BE DONE

CBSE book Questions: Class-7th Science Fibre to Fabric



CBSE_ NCERT Class-7th Science Chapter: Fibre to

Fabric

Match the following:

1. Scouring--> Cleaning sheared skin

2. Mulberry leaves->Food of silkworm

3. Yak -> Wool yielding animal

4. Cocoon -> Yields silk fibers.

Why a cotton garment cannot keep us as warm in winter?

Cotton clothes are thin and do not have spaces in which air can be trapped. thus Cotton clothes do not prevents heat coming out of our body.

What is a fibre?

A fibre is a long strong thread, which is obtained from natural sources or man made sources.

Fibres are classified into two types on the basis of their sources. Plant fibres and animal fibres and synthetic fibres.

The fibres, which are obtained from plants and animals are called natural fibres e.g., jute and wool.

Animal fibres are obtained from animals, e.g., silk and wool.

Those fibres which are made by the human -beings are known as Man-made or Synthetic Fibres, e.g., Rayon.

Explain the process of making yarn from fiber ?

The process of making yarn from fiber is called spinning. In this process, fibers from a mass of cotton wool are drawn out and twisted. this brings the fibers together to form a Yarn.

Why sheep have a thick coat of hair?

Thick coat of hair trap a lot of air. Air is a poor conductor of heat, So, hair keeps sheep warm

What are the different sources of wool?

The fleece of sheep is not the only source of wool. Angora wool is obtained from angora goats. The fur (hair) on the body of camels is also used as wool like Llama and Alpaca.

Name the some Indian breed of sheep

1. Lohi 2. Rampur bushair 3. Nali 4. Bakharwal 5. Marwari 6. Patanwadi

Which parts of the black sheep have wool?

The hairy skin called fleece have wool in black sheep.

What is meant by the white fleece of the lamb?

White fleece means the hairy skin which is white in colour.

What is wool?

The soft, curly fibres obtained from the fleece of sheep, goat and yak etc., are known as wool.

What is selective breeding?

Certain breeds of sheep have thick coat of hair on their body which yields good quality wool in large quantities. As these sheep are "selectively bred" with one parent being a sheep of good breed.

The process of selecting parents for obtaining special characters in their offspring is known as selective breeding.

Name the protein which is the chief component of wool fibres.

Keratin is the chief component of wool fibres

What is shearing? How it is done?

The process of removing the fleece of the sheep along with a thin layer of skin is from its body is called shearing. It is done by using shearing machine

Which animal material is used to weave fine, soft shawls called Pashmina shawls?

The under fur of Kashmiri goat is used to weave fine, soft shawls called Pashmina shawls.

Why shearing of wool done only in summer?

Usually shearing of wool is done only in summer as sheep do not survive without their protective coat of hair in winter.

Why wool yielding animals have a thick coat of hair?

A thick coat of hair helps in trapping lot of air. As, air is a poor conductor of heat, it keeps these animals warm.

Does shearing hurt the sheep?

Shearing does not hurt the sheep because the uppermost layer of the skin is dead. Also, the hair of sheep grows again just as our hair does.

What is scouring?

The sheared skin with hair is thoroughly washed in tanks to remove grease, dust and dirt. This is known as scouring.

How we get wool fibres from sheep?

The processing of fibres into wool involves the following steps:

Step I: Shearing: - At first hair are removed using shearing machine

Step II: scouring : - Hair is washed in tanks to remove grease, dust and dirt. This process is called scouring.

Step III: After scouring, sorting of hair is done on the basis of different textures

Step IV: The small fluffy fibres, called burrs, are picked out from the hair

Step V: The fibres then dyed in various colours, according to choice

Step VI: The coloured fibres are straightened, combed and rolled into yarn

What are the main hazards of wool industry?

Workers in wool industry get infected by a bacterium, anthrax, which causes a fatal blood disease called sorter's disease

What is sericulture?

The rearing of silkworms for obtaining silk is called sericulture

Discuss the process of obtaining silk?

For obtaining silk, moths are reared and their cocoons are collected to get silk threads.

The cocoons are boiled to separate out silk fibres from cocoon.

Threads obtain from the cocoon spun into silk threads, which are woven into silk cloth by weavers.

The process of taking out threads from the cocoon for use as silk is called reeling the silk

Why caterpillars should not be collected with bare hands?

Caterpillars should not be collected with bare hands because skin of caterpillars may cause allergy.

Why caterpillars need to shed their skin when they grow bigger?

The caterpillars eat their own shed skin during their growing stage and have no other food option. So they need to shed their skin when they grow bigger enter the next stage of its life history called pupa.

Why does silk have different varieties?

Silk-producing moth eats up different kinds of leaves, which accounts for the different varieties of silk. Thus, tassar silk, mooga silk, kosa silk, etc., are obtained from cocoons spun by different types of moths.

Fill in the blanks-

- (i) -- China --is the largest producer of silk.
- (ii) Silk is a – poor ---conductor of heat.
- (iii) – Suint ---is a dried perspiration found in raw wool.
- (iv) A-- yar--is a long continuous thread.

Choose the True statements

- (a) Yarn is made of fibers
- (b) Spinning is a process of making fibers
- (c) Jute is the outer covering of coconut.
- (d) The process of removing seed from cotton called ginning
- (e) Weaving yarn makes a piece of fabric
- (f) Silk fiber is obtained from the stem of a plant
- (g) Polyester is a natural fiber
- (h) The fleece are combed to remove Burrs
- (i) Muga is the strongest variety of Wool or Silk

- (a) Yarn is made of fibers.(True)
- (d) The process of removing seed from cotton called ginning.(True)
- (e) Weaving yarn makes a piece of fabric.(True)
- (h) The fleece are combed to remove Burrs.(True)
- (i) Muga is the strongest variety of Silk

Define: weaving, ginning, spinning

The process of arranging two sets of yarns together to make a fabric is called weaving.

The process of making yarn from fibres is called spinning.

cotton Fibres are separated from the seeds by combing this process is called ginning

Sub section H1: Assessment tool to assess students on objectives mention in subsection B1

- Q1. Rohit wants to join NIFT, and he found this chapter quite useful for the basic knowledge of fibre and fabric. Name the two animal fibres discussed in the chapter.
- Q2. Rupinder wants to dye a silk dupatta at home. Suggest her the procedure to do so.
- Q3. Reet, the cloth merchant believe in providing the best fabric to her customers, she wants to know the way to check the originality of the fabric, suggest her a way to do so.(burning test)
- Q4. I bought a Pashmina shawl. It was a magnificent piece of art. I want to know the origin of this piece of fabric.

Sub section H2: Assessment tool to assess students on objectives mention in subsection B2

- Q1. Why is cotton not suitable for winter?
- Q2. What is a fibre obtained from animals made of?
- Q3. How many types of hair do a sheep has? Which of these is used for making the fibre?
- Q4. Why is selective breeding done?
- Q5 Lohi, a high quality wool yielding breed is found in which region of India:
 - a. Jammu and Kashmir
 - b. Gujarat
 - c. Rajasthan
 - d. UP
- Q6. Which of the following disease is associated with rearing of sheep profession?
 - a. malaria
 - b. Plague
 - c. Dengue
 - d. Anthrax
- Q7. What is the similarity between a wool and a silk fibre?
 - a. texture
 - b. Burning odour
 - c. Thickness
 - d. Colour
- Q8. How much is the life span of a caterpillar of a silk worm:
 - a. 10-15days
 - b. 15-20days
 - c. 20-25days
 - d. 25-30days

Q9. Write T for true and F for false statement:

1. A larva of silk is also known as caterpillar.
2. The origin of silk is supposed to be in India.
3. Scouring is washing wool to get clean fibre.
4. Cocoon is burnt to get the silk fibre.
5. Caterpillar feed on mulberry leaves.

Q10. What is the botanical name of a Mulberry plant? (Morass Alba)

Sub section H3: Assessment tool to assess students on objectives mention in subsection B3

Q1. Gautam is very much disappointed to know the procedure by which silk is obtained from cocoon. Suggest him a possible way to get silk without making any harm to the silkworm.

Q2. The teacher told students about an animal 'vicuna', from which you can obtain wool. Where is it found and what quality of fibre does it yield?

Q3. The life cycle of insects like butterfly, housefly and spider are different from that of silkworm. Explain how?

Q4. Dhriti wants to raise her voice against animal cruelty, which legal act allow her to do so?

Q5. Reema wants to take good care of her woollens, for that she wants to use the same quality detergent or soap that people working in this industry uses while scouring or washing the raw wool fibre. Help her find the kind of washing material used for washing the raw wool.

Q6. While peeling off the peas I saw a worm, it reminded me of a stage of life cycle of silk moth. Which one is it?

Q7. What is the meaning of the following terms?

Rearing, scouring, reeling.

Q8. Name any other insect cultured to get a useful product for us. What is the product? What is rearing of that insect called?(honey bee, honey, apiculture)

Sub section H4: Assessment tool to assess students on objectives mention in subsection B4

Q1. The rearing of silk worm for silk is called:

- a. Pisciculture
- b. Horticulture
- c. Sericulture
- d. Apiculture

Q2. The man made fibre using chemicals is also known as:

- a. Syntheticfibre
- b. Natural fibre
- c. Animal fibre
- d. Plant fibre

Q3. The given picture shows feed of silk worm; name it



Q4. Name the fibre shown:



Q5. What kind of wool is obtained from the specie of sheep shown, also explain the quality of wool :



Q6 Name and explain the process shown the picture:



Q7 Fill in the blanks:

1. The process of removing the fleece of the sheep along with a thin layer of skin is from its body is called-----
(scouring)
2. After scouring,-----of hair is done on the basic of different textures.(sorting)
3. Workers in wool industry get infected by a bacterium,-----.(anthrax)
4. For obtaining silk, moths are reared and their ----- are collected to get silk threads.(cocoon)
5. The process of taking out threads from the cocoon for use as silk is called -----the silk.(reeling)
6. -----of wool is done only in summer season as the sheep could not survive in winter without the hairs.(shearing)

SECTION I

Teacher assessment tool

1. Was the content adequate to provide complete knowledge of the topic. _____
2. Was the information for career option in your day to day life included all the possibilities available ,if not suggest other also. _____
3. Can this information enough in making a choice for your career. If not place suggestion _____
4. Are you now able to explain the process and procedures taught, confidently, in front of your peers. _____
5. Was the teacher resourceful in providing the information related to the topics discussed in the chapter. _____
6. Were the videos /ppt. Presentations shown clarified the concept completely. _____
7. Is the vocabulary suggested for the chapter adequate. _____
8. Is the lesson plan relate the topic taught to the previous class successfully? . _____
9. Does the assessment tool cover all the aspects of teaching successfully? give suggestions. _____
10. How was the teaching methodology? Was it inductive or deductive. Was it useful in bringing out the best of a child?

11. Was the teaching methodology child based? Do you expect the environment of the class during teaching of the topics related to the chapter congenial. _____

Assess the teacher according to the following point chart:

8-11outstanding 6-7encouraging 4-5needs improvement 1-3work hard