



MAINE MUSEUM OF
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Mystery Fabric

Teacher's Guide and Worksheets

Mystery Fabric

Grades 1-4

Time: 1 - 50-60 min. class periods

Learning Objectives:

- Students will become familiar with various methods of making cloth
- Students will be able to tell the difference between cotton and wool
- Students will become familiar with the difference between weaving and knitting

Materials Needed

1. Copies of “Mystery Fabric” handout
2. A selection of 5-7 clothing fabric items that are either knit or woven and made from cotton or wool. Some examples include a wool sweater, a knit scarf, etc. Labels on fabric tell you what it is made of. See student handout for close up images of the difference between knit and woven fabric. It is recommended that you remove the labels inside clothing before beginning this assignment so that students can not check them for the answers.
3. Pencils
4. Recommended but not necessary: small student magnifying glasses for closely looking at the fabric and samples of raw cotton and wool.

Pre-reading/Preparation

While it is recommended that students be familiar with the Design and Textile portions of our website it is not necessary for the completion of this lesson.

Set Up

Each student should have the following:

1. “Mystery Fabric” worksheet
2. Pencil
3. Small magnifying glasses
4. Clip board

*This lesson works well as a station activity. Have each item set up at different locations around the room. Students can bring their packets to each station with a clipboard and pencil and magnifying glasses can remain at each station or students may carry with them.

Instruction, Teacher Modeling, Guided Practice

1. Hand out copies of “Mystery Fabric” worksheet.
2. Together read the introductory pages on cotton/wool and weaving/knitting.
3. Show the samples of fabric teacher has provided.
4. Explain that students will be looking at each item closely and they must think like a detective to answer the questions for each item. Encourage students to feel each material and to look closely at how it is constructed.
5. Divide students into groups work progress through the stations

Independent Work

1. Allow 4-5 minutes at each station.
2. Students should answer each question for each item working together to figure out the answers.

Closing/Extension Activities

When students have rotated through all of the stations, review their findings together as a group and reveal the correct answers for each.

For an extension activity, have students do a scavenger hunt at home to find items made of cotton and wool (using the items manufacturing label) and try to determine if they are knit or woven,

Name:

Mystery Fabric

People choose what they wear for lots of different reasons. Clothing is a way to express who you are. Where you are from or how you were raised can shape your clothing choices. Sometimes it's just about what works. Athletes wear performance gear, construction workers wear safety equipment, someone in a hot climate picks breathable fabrics. Sometimes comfort is the most important—loose fits, stretchy fabrics, or easy-to-wear styles. The way clothes make someone feel can be a huge factor. Power suits, cozy hoodies, a favorite band tee—these can affect confidence or mood.

Do you have a favorite item of clothing? Maybe a favorite sweatshirt or pair of jeans? Why is it your favorite? Do you know how it was made or what material it is made of?

For this activity you will need to think like a detective. Your assignment will be to investigate each item of clothing and determine if it is made from either cotton or wool and if it is either woven or knit.

Your mystery fabrics can be made from cotton or wool. What's the difference?

Cotton

- Cotton is a fluffy fiber that grows in a ball, or protective case, around the seeds of cotton plants
- Can be dyed many different colors
- Often softer, less warm than wool
- Easy to wash and maintain. Most cotton items can go in the washing machine.

Common uses: T-shirts, jeans, underwear, bedsheets, summer clothing.

Wool

- Comes from the fleece (hair) of animals, most commonly sheep (but also alpacas, goats, etc.).
- Can be dyed many different colors
- Usually warmer and sometimes scratchier than cotton
- More resilient than cotton but needs careful handling.

Common uses: Sweaters, coats, scarves, suits, winter gear.

Look closely at the two pictures below. Can tell the difference between the cotton and the wool just by looking at the pictures? How do they look the same? How do they look different?

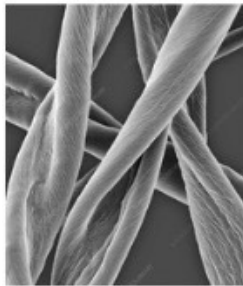


Cotton

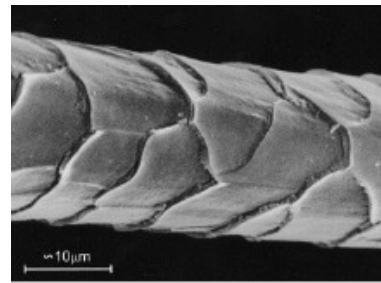


Wool

Look even more closely. Here are cotton and wool fibers under a microscope. Can you spot the differences now?



Cotton



Wool

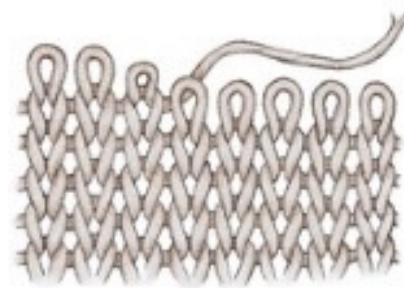
Your mystery fabrics can be either woven or knit.
What's the difference?

Woven material is made out of two separate groups of yarn (warp and weft). Woven fabric is firm, structured, less stretchy than knit fabric.



Woven

Knit material is made out of a series of loops that are connected. Knit fabric is stretchy, soft, and more comfortable to wear.



Knit

Time to put your skills to work. At each station you will find a mystery fabric. With your team investigate each item. Use the magnifying glasses to help you look even closer.
Answer the questions below for each item.

Mystery Fabric #1

What does it feel like? _____
Is it thick or thin? _____
Do you think it would keep you warm? _____
What does it look like under the magnifying glass?

I think this fabric is made of: **cotton** **wool**

I think it is: **knit** **woven**

Mystery Fabric #2

What does it feel like? _____
Is it thick or thin? _____
Do you think it would keep you warm? _____
What does it look like under the magnifying glass?

I think this fabric is made of: **cotton** **wool**

I think it is: **knit** **woven**

Mystery Fabric #3

What does it feel like? _____
Is it thick or thin? _____
Do you think it would keep you warm? _____
What does it look like under the magnifying glass?

I think this fabric is made of: **cotton** **wool**

I think it is: **knit** **woven**

Mystery Fabric #4

What does it feel like? _____

Is it thick or thin? _____

Do you think it would keep you warm? _____

What does it look like under the magnifying glass?

I think this fabric is made of: **cotton** **wool**

I think it is: **knit** **woven**

Mystery Fabric #5

What does it feel like? _____

Is it thick or thin? _____

Do you think it would keep you warm? _____

What does it look like under the magnifying glass?

I think this fabric is made of: **cotton** **wool**

I think it is: **knit** **woven**

Mystery Fabric #6

What does it feel like? _____

Is it thick or thin? _____

Do you think it would keep you warm? _____

What does it look like under the magnifying glass?

I think this fabric is made of: **cotton** **wool**

I think it is: **knit** **woven**