Pre-lesson preparation, materials and equipment

The LEARN ABOUT WOOL online resource library, combined with the suggested resources listed below will give you ample background information to carry out this lesson and answer a range of questions posed by students. The Woolmark Learning Centre Wool Appreciation Course Module 7 Wool knits will provide you with more detail on the knitting process.

Useful resources:

LEARN ABOUT WOOL factsheet

- Different types of wool fabrics

Videos

- Finger knitting lesson no.1 Knitting with one finger
- Recycled craft: how to make a French knitting machine
- Extreme knitting Little Dandelion

Materials and equipment

- LEARN ABOUT WOOL kit fibre, yarn and fabric samples
- Sufficient yarn samples for class
- Scissors
- Cardboard rolls
- Masking tape
- Wooden popsicle sticks (4 per student)

Lesson objective

To allow students to manipulate wool using a simple knitting technique and to record the process through which they produced their wool product.

Students will have the opportunity to:

- explore the process of knitting
- discuss their observations as a whole class to identify similarities and differences in their investigations
- share their work with others.

Lesson focus

The focus of this lesson is to allow students to explore the ways wool can be physically changed by knitting and the implications for its end use.

Setting the context

Knitting is the process where the yarn is formed into a loop, by a needle, through which another loop of yarn is threaded. As this is repeated, row by row, the loops are locked together. Each row is known as a course. This is known as 'weft knitting' because the yarn is being fed from the side of the fabric, rather like a weft yarn in weaving. Knitting is a fabric-forming technology that has been used for thousands of years. It can be used to create fabrics, which are then cut to create garments, or to create garments directly.

Knitting can be carried out with simple technology (i.e. hand knitting needles or fingers) or sophisticated computer-controlled knitting machines. The different machines use hooked needles, which can be arranged in a circle or in a straight line. The loops can be formed one by one or in batches, depending on the machine type.

Woollen-spun knitted fabrics are generally heavier and bulkier than worsted-spun knitted fabrics. They make great soft, warm jumpers, scarves, beanies, socks and cardigans. Worsted-spun knitted fabrics are ideal for wearing everyday — they are soft and comfortable and great for travelling as they are soft, cool, comfortable, lightweight and don't need ironing.

For many years, yarn was processed domestically by hand and made into clothes through the processes of hand knitting. In this lesson, students will be encouraged to learn to knit using a French knitting machine, which they will make.

Introduction

Reflect on the techniques for changing the shape of wool, as covered in the previous lessons. Ask students to recall each of the processes used to create yarn (spinning) and non-woven fabric (felt). Ask if they can explain the features of each of these products and how they differ from the raw wool.

Introduce the lesson by asking students if they know how to knit. Are any students wearing knitted garments? Encourage them to take a close look at the fabric of these garments. Revisit the LEARN ABOUT WOOL kit samples and highlight differences between the knitted fabrics. Can they describe what they look like and how they think they were made? How are they similar/different to both the garments worn by students and each other?

Explain that in this lesson they are going to investigate a method of changing wool yarn into fabric by knitting. Students will have the opportunity to create their own knitted article by making a simple knitting machine for the purpose, using the instructional video to guide them through the process.

Body of lesson

1. Show students the instructional video Recycled craft: how to make a French knitting machine
2. Distribute a cardboard roll, about 2 metres of yarn and four popsicle sticks to each student and show them the video again.
3. Allow students sufficient time to make their own knitting machine using the materials provided. Encourage students to assist one another with the construction of their knitting machines.
4. When all students have completed constructing the knitting machine, take them through the procedure of getting started with the yarn on the machine by attaching the yarn and beginning the process of looping the yarn around the popsicle sticks, as shown in the video. Ensure all students are comfortable with the process.
5. Allow students time to master the knitting technique to produce a length of knitting. Encourage students who have grasped the technique quickly to assist those who are taking a little longer.
6. Regroup as a class and discuss the outcomes of this activity. How is this knitting result similar to knitted fabric samples (worsted-spun fine-knit rib and woollen-spun plain-knit) in the LEARN ABOUT WOOL kit? How is it different? What are the similarities and differences

between knitting commercially and knitting using their own knitting machine? Encourage them to look closely at the yarn used to knit the kit samples. How is this different to the yarn they spun themselves? Look at the *Different types of wool fabrics* factsheet. Can they identify what sort of fabrics are knitted? Comments and observations can be recorded in the class science journal under the heading *Knitted products.*

7. Display student's creations in the classroom.

Conclusion

Encourage students to identify some of the features and properties of knitted wool products (e.g. warm, bulky, soft, cosy, fuzzy, smooth) and how these influences the way we use wool in a range of everyday products. Discuss how can we change wool's shape and form when undergoing a variety of processes such as knitting. Allow students time to reflect on their learning and understanding of the properties of processed wool and how these can be incorporated into the clothes they wear.

Extension activity

Students can prepare a visual representation (road map) of the process of turning wool from a Merino sheep to a pair of woollen socks, identifying each of the key stages of the process 'from sheep to socks', starting with a sheep in the paddock.

Alternately, a community member, skilled in woollen crafts such as knitting can be invited into the classroom to share their work. Students may also like to try finger knitting using the following instructional video Finger knitting lesson no.1 Knitting with one finger as a guide. An example of over-sized handknitting can be seen in Extreme knitting Little Dandelion.

Links to the Australian Curriculum:

- Everyday materials can be physically changed in a variety of ways (ACSSU018)
- Science involves observing, asking questions about, and describing changes in, objects and events (ACSHE021)
- Participate in guided investigations to explore and answer questions (ACSIS025)
- Represent and communicate observations and ideas in a variety of ways (ACSIS029)
- Use materials, components, tools, equipment and techniques to safely make designed solutions (ACTDEP007)
- Explore the characteristics and properties of materials and components that are used to produce designed solutions (ACTDEK004)
- Use and experiment with different materials, techniques, technologies and processes to make artworks (ACAVAM107)