

Pre-lesson preparation, materials and equipment

The LEARN ABOUT WOOL factsheets and videos listed below provide ample background information to carry out this lesson and answer a range of questions posed by students.

A range of additional resources is available in the LEARN ABOUT WOOL online resource library.

Useful resources:

LEARN ABOUT WOOL factsheets

- [What is wool?](#)
- [How wool grows](#)
- [Inside a wool fibre](#)
- [Properties of wool](#)
- [Wool — the natural fibre](#)
- [Different types of wool fabrics](#)

Video

- [Sam the Lamb — What is wool?](#)

Useful links

- [Enviro-stories library](#)
- [Bitesize UK | Design and technology fibres](#)

Useful books

- *The Story of Wool book* (Kondinin Group)
- *It's time to sleep you crazy sheep*, Alison Ritchie
- *One sneaky sheep, (A touch-and-feel fluffy tale)*
- *Pete the Sheep*, Jackie French and Bruce Whatley
- *Click go the shears, illustrated by Charlotte Lance*

Materials and equipment

- AWI LEARN ABOUT WOOL kit fabric and fibre samples
- A range of objects made from various materials (e.g. wood, metal, polystyrene, plastic, glass, rubber, cotton, wool, lycra)
- Cardboard boxes to hold objects so students cannot see the objects while they feel them.
- A range of clothing and furnishings made from wool, cotton and other fibres (socks, blankets, jumpers, t-shirts, pyjamas, sportswear, baby clothes etc). Try to include a range of wool items ranging from worsted-spun woven and knitted (e.g. T-shirts and tailored pants or skirts) through to woollen-spun woven and knitted fabrics (e.g. heavy winter coats and jumpers — see the [Different types of wool fabrics](#) factsheet for ideas).
- Class science journal
- Student worksheet — *Properties of materials*

Lesson objective:

- To capture students' interest and introduce them to the language used to describe the properties of everyday materials.
- To explore what students know about the origins of everyday fabrics they are familiar with.
- To introduce students to the concepts of 'natural' and 'synthetic' fibres.
- To draw out questions from students about where wool comes from and what it is used for.

Students will have the opportunity to:

- explore and make observations about a range of materials
- discuss the different uses for fabric/textiles (e.g. clothing, bedding and furnishings) and investigate the sources of the textiles used in a range of everyday products (e.g. animals, plants and petrochemicals).
- explore the difference between natural and synthetic fibres
- identify the source of wool.

Setting the context

Many students will have little knowledge about, or experience with, the origin of the textiles (fabrics) used in everyday items of clothing and furnishing. They may not understand the difference between 'natural fibres' and 'synthetic fibres' or appreciate the different properties of a wide range of fibres. This lesson will allow students to explore a range of textiles and fibres and their observable properties (such as texture, strength, elasticity).

Lesson focus

The focus of this lesson is to spark students' interest, stimulate their curiosity, raise questions for inquiry and gain an understanding of their existing beliefs about the textiles and fibres they come into contact with every day. These existing ideas can then be taken account of in future lessons.

Introduction

Divide students into small groups and encourage them to explore the range of objects in the 'touch and feel' boxes (where the items are hidden from view and the students can only feel the contents of the box). Ask students to share their observations as they explore the items.

Encourage them to describe the way the items feel.

When each group has had the opportunity to feel the items, ask students to return to their seats and share their observations. Write their descriptions in a class science journal. Ask students if they can guess what the items are and how they are drawing their conclusions.

Body of lesson

1. Explain to students that different objects are made from different materials, which have different 'properties'. Write the word 'properties' in the class science journal. Explain that the word properties can be used to describe 'the way an object looks, feels, smells, tastes or behaves in certain situations'.
2. Allow students to complete the worksheet *Properties of materials*. Ask students why they think each of the items in the worksheet has been made using these materials. Guide the discussion with questions, such as:
 - "What would happen if the jumper was made of paper instead of wool?"
 - "Why do you think bottles are made of glass or plastic and not paper?"
 - "What would it feel like wearing thongs made of wood or metal?"
 - "What would happen if coins were made of chocolate instead of metal?"

Conclusion

Explain to students that during this unit of work you are going to investigate the properties of one of Australia's most important fibres — wool — and how these properties influence the way we use wool in a range of everyday products.

Ask students if they know where wool comes from and if necessary, explain that wool comes from sheep (you could read to students the information on the LEARN ABOUT WOOL factsheet [What is wool?](#) and [How wool grows](#), in particular students may be interested in the Did you know? facts about wool on each factsheet).

Ask students if they can guess which items in the 'touch and feel' boxes were made from wool. Identify the wool items in the collection of objects the students have been exploring and review their descriptions of these items, asking when they might wear or use these items and why.

Extension activity

Explain to students that wool is a 'natural' fibre. Ask students to guess what that might mean and write their predictions in the class journal under the heading **Natural fibres**. Using the factsheet [Wool the natural fibre](#), as a reference, explain to students that the clothes they wear each day can be grouped into 'natural' and 'synthetic' fibres. Talk about other 'natural' fibres, such as cotton and silk and 'synthetic fibres' such as polyester and lycra using samples from the earlier investigation as examples.

You might like to allow students to explore some of the stories on the [Envirostories website](#) — Our Farmers Our Future, such as [Fluffy's getting shorn](#) and [My life on a sheep farm](#) — or share stories such as, *It's time to sleep you crazy sheep* by Alison Ritchie, *One sneaky sheep*, (*A touch-and-feel fluffy tale*), *Pete the Sheep*, by Jackie French and Bruce Whatley or *Click go the shears* illustrated by Charlotte Lance.

Links to the Australian curriculum:

- Objects are made of materials that have observable properties ([ACSSU003](#))
- Science involves exploring and observing the world using the senses ([ACSHE013](#))
- Respond to questions about familiar objects and events ([AC SIS014](#))
- Explore and make observations by using the senses ([AC SIS011](#))