Background information

People have been using wool for thousands of years to make clothing and textiles, furnishings and insulation. Australia produces 90% of the world’s fine apparel wool.

Wool is a natural fibre produced by sheep. As wool grows out from the sheep’s skin, it forms groups of wavy fibres called staples. This natural crimp (wave) gives wool its elasticity (springiness). Wool feels soft and slightly greasy before it is washed or processed. The natural oil in wool (lanolin) coats each fibre. Wool can keep things cool and it can keep things warm. Wool is soft, strong, lightweight, stain-repellent and fire resistant.

The natural properties of wool make it an ideal fibre for a wide range of everyday uses. Depending on the length and fibre diameter (fineness) of a wool fleece, it can be processed through either the woollen or worsted processing system.

Woollen-spun woven fabrics are generally thick and heavy. They are ideal for warm winter jackets and coats. These fabrics are generally wind-proof and can repel light rain, so are good to wear when playing outside in winter.

Knitted fabrics made from woollen-spun yarn are generally heavier and bulkier than worsted-spun knitted fabrics. They make great soft, warm jumpers, scarves, beanies, socks and cardigans.

Worsted processing produces fine yarns, which can be woven to produce smooth, light-weight fabrics. These fabrics are used for clothes such as business suits, trousers and skirts.

Worsted-spun woven fabrics are ideal to wear in warm weather or inside, where they keep you cool and comfortable.

Fine worsted-spun yarns produce super-soft knitted fabrics that feel great next to your skin. These fabrics are incredibly versatile — they are used for baby clothes, underwear, t-shirts and sportswear, leggings, dresses and other lightweight knitwear.

Worsted-spun knitted fabrics are ideal for wearing every day — they are great for travelling as they are soft, cool, comfortable, light-weight an don’t need ironing.

More background information on the properties of wool can be found in the LEARN ABOUT WOOL online resource library.

Class science journal

During this unit of work you are encouraged to record student observations and the results of investigations in a class science journal.

A class science journal is used for a number of purposes.

• to record student ideas including prior knowledge, observations and statements of learning
• to model scientific text types, such as labelled diagrams, lists, drawings, simple tables and graphs, mind maps and other appropriate graphic organisers
• to list activities for group work or free-choice activities
• to record the class’ learning journey, including photos and printed worksheets
• to showcase to others the learning that has been undertaken during the unit.

A class science journal can be easily made from large pieces of art or painting paper stapled on one side. Ideally it should be the size of a commercial ‘big book’ used for shared reading. Alternately, you could create a digital version.

Ensure writing is large and easy to read, so all students can see the words from where they sit.

Students also can have their own journal to record their observations and ideas. A scrapbook makes an ideal student science journal.

Source: Education Services Australia (2013)

Classroom preparation and resources

In early childhood, children learn best through play-based activities — they learn by exploring and investigating. This unit of work has been developed to be used in conjunction with the freely-available online LEARN ABOUT WOOL resource library, which contains a range of relevant factsheets, images, articles and engaging short videos.

A hardcopy version of the LEARN ABOUT WOOL kit is freely available by emailing teacherskit@wool.com and contains samples of wool from the raw fibre through various stages of processing to yarn and fabric samples. These samples are integral to the tactile explorations outlined in this unit of work.
Throughout this unit of work you could:

- display the [Sam the Lamb poster](#) and [LEARN ABOUT WOOL Wool processing](#) posters, showing the journey from farm to fashion.
- display the [LEARN ABOUT WOOL](#) kit fibre, yarn and fabric samples in a basket.
- allow students to explore the [LEARN ABOUT WOOL](#) primary factsheets and The Workboot Series — Story of Wool book (Kondinin Group).
- Read with students a range of stories about sheep, some examples include: 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.
- encourage students to use vocabulary associated with wool production found in the resources.

### Additional resources

In addition to the samples provided in the LEARN ABOUT WOOL kit, collect and display a basket of wool clothes and furnishings alongside samples of wool fabric and yarn.

Try to ensure a representative sample of items from each type of processing system (read the [Different types of wool fabrics](#) factsheet for some ideas).

To complement your classroom display and enhance this lesson, you may like to ask students to bring in one or two of their favourite items of clothing or furnishings/bedlinen. Make sure all students’ items are clearly labeled.

The activities in this unit of work require a range of equipment. Each lesson plan will identify the particular items required to successfully carry out the lesson.

### Unit snapshot

<table>
<thead>
<tr>
<th>Lesson</th>
<th>At a glance</th>
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| Lesson 1: What is wool? | • To provide a hands-on shared experience about what different materials feel like.  
• To explore what students already know about wool, where it comes from and how it is used in everyday products.  
• To draw out questions students may have about wool. |
| Lesson 2. Wool — taking a closer look | • To allow students to investigate the observable features of the wool fibre in more detail.  
• To discuss how these features make wool a useful fibre for everyday products. |
| Lesson 3. Does wool burn? | • To allow students to observe and compare the flammability of a range of common fabrics and draw conclusions about the suitability of these fabrics for a range of everyday uses. |
| Lesson 4. Is wool stain resistant? | • To allow students to investigate the capacity of wool and cotton to resist stains and draw conclusions about the suitability of these textiles for a range of everyday uses. |
| Lesson 5. How do the properties of wool influence its end use? | • To allow students to reflect on their observations regarding the properties of wool and draw conclusions about the suitability of wool for a range of everyday uses and activities. |