



Science



Literacy

FLOCKSHIP BRACELETS

Grade Level

2-6

Length of Lesson

30 minutes

Objective

By the end of this lesson, students will understand the process of raising sheep for wool, as well as the necessary steps to making fiber products from wool.

Materials

- Yarn (preferred) or pipe cleaners
- Scissors
- Pony beads
- [Letter beads](#) (with a minimum 3.5mm hole to thread onto yarn)

Standards

Common Core

CCSS.ELA-Literacy:
RL.3.2-3; RI.4.4-5;
SL.5.1

NGSS

3-LS2-1, 3-LS4-3

Lesson Summary

In this lesson, students will make a “flockship bracelet” with various colored beads which represent different steps of raising sheep and harvesting their wool. They will string a word onto their bracelet that describes a classmate and then trade it with them.

Suggested Sequence of Events:

1. Set Up: Obtain the necessary materials. If using yarn, you may also want to pre-cut pieces of yarn into the appropriate length for bracelets for your students. *Optional: separate the colored pony beads so each student receives a kit with only the beads they need.*
2. Read [If You Want to Knit Some Mittens](#) by Laura Purdie Salas to capture student interest about raising sheep for wool.
3. Read through the [IAITC Sheep Farm Bites](#) to learn more about sheep production in Illinois.
4. Complete the activity following the procedures:
 - Hand out materials to each student. Each student will need eight different-colored pony beads as well as access to letter beads.
 - Explain to students that they will be creating “flockship bracelets” with beads that represent steps in the process of raising sheep for wool and harvesting and preparing the wool.
 - Have students thread the pony beads onto their bracelet in the order they appear on the Flockship Bracelet Bead Representation sheet (next page). Explain what each bead means one by one as students thread them on.
 - Place students in pairs. Using the letter beads, have each student add a (kind) word that describes their partner onto their bracelet. *If your students do not know each other well, they may choose to just spell their partner’s name instead.*
 - Students should then trade their flockship bracelets and help each other tie them on. Explain to students that sheep are herd animals and are happiest and safest when they are surrounded by friends.
5. Whole class discussion and reflection of activity.

Flockship Bracelet Bead Representation

Use the following explanations to help your students build their Flockship Bracelets with the appropriate colored beads.



Yellow: Feed

Sheep need 3 basic things to survive: food, water, and shelter. Sheep feed is often made of corn and soybean meal.



Blue: Water

The most important nutrient any animal needs is water! Mature sheep drink between 1-3 gallons of water a day.



Red: Shelter

To live a long and healthy life, sheep need some kind of shelter for protection from weather and predators.



White: Shearing

Sheep's wool needs haircuts just like we do! This is called shearing. Sheep are shorn about once a year.



Purple: Scouring

The wool is washed in hot water and soap to remove dirt and grease, and to collect lanolin, a natural byproduct used in cosmetics.



Green: Carding

Wool carding is a process that opens up the wool fibers and prepares them for spinning. Carding is often done with a set of combs.



Pink: Spinning

Wool spinning is the process of twisting raw wool fibers into yarn.



Orange: Weaving

Once the wool has been spun into yarn, it can be woven into clothes, like sweaters or mittens, for you and me!

TEACHER RESOURCES

Video Resource

- [Follow this link](#) to find a great video helping understand the steps in the wool processing process.

Completed Bracelet Example



Extension Ideas

- Complete the IAITC [Sweater Weather Weaving](#) lesson. Have students create other types of braids if they know how. Students could even teach each other various types of braiding and/or knot tying.
- Have students demonstrate their understanding of the wool production process by creating a timeline, drawing a cartoon or comic strip, creating a short video or skit, or writing a fictional story.
- Watch a video from a farmer discussing what it takes to raise sheep.
- STEM: Have students use a wool spinning kit to weave their own textile after creating a small loom. The spinning kits can be found at <https://agclassroomstore.com/wool-spinning/>.
- Scientific Inquiry: Take this a step further and have students dye their wool. What products (natural or manmade) are better for dyeing wool? Cranberries? Beets? Smashed blueberries? Kool-aid? Have them make predictions and then test their chosen variables.
- Read [Homespun Sarah](#) by Verla Kay and discuss how many people in the 18th century raised their own sheep to make their own clothes.
- Discuss how wool played an important role in colonial America before the Revolutionary War.
 - What is the Wool Act of 1699 and why did the British Parliament issue this upon the colonists? Why do you think the colonists protested? How did they protest? (Colonists refused to purchase or wear any textiles imported from Great Britain and instead chose to raise sheep and make their own clothes; this became a patriotic act that symbolized their devotion to American independence and freedom.)
 - What plants/animals do we get other fibers from?
- Have students examine fibers under a magnifying glass.
- Compare and contrast wool fibers to other fibers like cotton, cashmere, silk, synthetic, and various plant fibers used to make common products like rope and baskets, for example.
 - What are the differences in texture? Fiber size? Color? Smell?
 - Why are different fibers used for different things?
- Go to agintheclassroom.org to contact your County Literacy Coordinator for free classroom sets of our Ag Mags!