

Lesson 2: Animals Need Shelter

Grade Level: Kindergarten

Time: 60 minutes

Subjects: ELA, Science, Engineering

Overview: This lesson is Lesson 2 of 5 in the *Farmers and Ranchers Care about their Animals!* unit of the *Growing Readers* micro-curriculum, based on the book series by Kansas author Dan Yunk. Building on the first read in Lesson 1, students deepen their understanding that farmers and ranchers care for animals by providing safe and appropriate shelter. Through a discussion of animal shelter needs, an authentic engineering design challenge, and guided writing, students design and build shelters for different farm animals while strengthening foundational literacy skills and developing an understanding that different animals require different types of shelter.

Skillset: Activating and connecting prior knowledge from the read-aloud, understanding that different animals have different shelter needs, recognizing that shelter looks different across farm settings, engineering design and building, testing and revising a structure, oral language and collaborative discussion, shared writing as a model for student writing, recognizing that spoken words are represented by letters in print, understanding that words are separated by spaces, identifying upper- and lowercase letters, correct letter formation with line awareness, writing letters for consonant and short vowel sounds, phonetic spelling, and informative writing using drawing, dictating, and writing.

Kansas Academic Standards

Kansas ELA Standards

RF.K.1.b Recognize that spoken words are represented in written language by specific sequences of letters.

RF.K.1.c Understand that words are separated by spaces in print and can point with one-to-one correspondence.

RF.K.1.d Recognize and name all upper- and lowercase letters of the alphabet.

W.K.2 Use a combination of drawing, dictating, and writing to compose informative/explanatory texts in which they name what they are writing about and supply some information about the topic.

W.K.8 With guidance and support from adults, recall information from experiences or gather information from provided sources to answer a question.

W.K.10.a Correctly form upper and lowercase letters with line awareness.

W.K.11.c Write a letter or letters for most consonant and short vowel sounds.

W.K.11.d Spell simple words phonetically, drawing on knowledge of letter-sound relationships.

Science & Engineering Standards

K-ESS2-2 Construct an argument supported by evidence for how plants and animals (including humans) can change the environment to meet their needs.

K-ETS1-2 Develop a simple sketch, drawing, or physical model to illustrate how the shape of an object helps it function as needed to solve a given problem.

K-LS1-1 Use observations to describe patterns of what plants and animals (including humans) need to survive.

National Agriculture Literacy Outcomes

Plants and Animals for Food, Fiber, and Energy

T2.K-2.b Identify animals involved in agricultural production and their uses (i.e., work, meat, dairy, eggs).

T2.K-2.c Recognize that farmers and ranchers are responsible for raising animals that provide food and fiber for people.

Agriculture and the Environment

T5.K-2.a Identify the ways farmers use land to grow crops and raise animals.

Objectives

Science & Engineering Objectives

Students will be able to:

- Explain that farmers and ranchers provide shelter for their animals to keep them safe and healthy.
- Identify that different animals have different shelter needs and that not all farm animals live in barns.
- Design and build a shelter suited to the specific needs of their assigned animal.
- Test their shelter and explain what it is designed to protect the animal from.
- Recall information from the book and class discussion to support their engineering decisions.

English Language Arts Objectives

Students will be able to:

- Recognize that the spoken words in the sentence frames are represented by specific sequences of letters in print.
- Understand that words are separated by spaces in print and point to words with one-to-one correspondence.
- Recognize and name upper- and lowercase letters pointed to during shared writing.
- Compose an informative response using a combination of drawing, dictating, and writing.
- Recall information from the engineering experience to complete the writing prompt.
- Form upper- and lowercase letters correctly with line awareness.
- Write letters for consonant and short vowel sounds when attempting to spell words on their writing sheet.
- Spell simple words phonetically, drawing on letter-sound knowledge.

Materials Needed

Whole Class:

- Book: *Farmers and Ranchers Care about their Animals!* by Dan Yunk, physical copy or author read aloud on unit landing page
- Chart paper titled: “What Does a Good Shelter Do?”

- Chart paper for shared writing model
- Markers
- Animal cards — one per student, teacher-assigned (cow, pig, chicken, horse, sheep, goat)

Engineering Challenge:

- Popsicle sticks (approximately 15–20 per student)
- Modeling clay or playdough (enough for each student to use as connectors)
- Small pieces of cardboard (one per student — for walls or roof base)
- Construction paper cut in a fan/accordion fold to resemble a metal roof (one per student)
- Building mats or trays (one per student, to contain materials)

Writing:

- Build-a-Shelter writing sheet — companion document (one per student)
- Pencils and crayons

Lesson Procedures

1. Connecting to What We Know
 - a. Explain to students: “In our last lesson, we read that farmers and ranchers take care of their animals every day — rain or shine, hot or cold. One of the most important ways they take care of their animals is by making sure they have shelter. Today we are going to think about what shelter means for different farm animals — and then we are going to be engineers and build one.”
 - b. Hold up the book and turn to page 10 (the page with the picture of the farmer feeding in the snow). Read aloud: “This care for their animals takes place every day of the year, rain or shine, hot or cold.”
 - c. Ask students:
 - “If it is raining and really cold outside and you have a chicken, what might happen to that chicken without shelter?”
 - “If it is very cold and a farmer has a newborn lamb, what does that lamb need to stay safe?”
 - “Have you ever seen a barn or an animal shelter? What did it look like? What do you think it was for?”
2. Whole Class Discussion — What Does Shelter Do?
 - a. Display chart paper: “What Does a Good Shelter Do?”
 - b. Explain to students: “Before we build, let’s think like farmers and ranchers. A shelter is something that protects an animal from the weather and keeps it safe. But not every animal needs the same kind of shelter. Let’s think about what a good shelter does.”
 - c. Ask students and record responses on the chart:
 - “What does a shelter need to keep out? What might hurt an animal?” (Rain, wind, snow, heat, cold, predators)
 - “Does every farm animal live in a barn? What animals might stay outside?”
 - “Do you think a cow needs the same shelter as a chicken? Why or why not?”
 - d. Not all animals need barns:

- e. Explain to students: “Here is something important that farmers and ranchers know: not all farm animals live in barns all the time. Cattle, sheep, and goats can often find natural shelter under trees, in low places between hills called draws, or behind hills when the weather is bad. Their thick coats help protect them. But smaller animals — like chickens and pigs — usually need a more protected shelter because they cannot handle cold and wet weather as well.”
 - f. Explain to students: “Farmers and ranchers also protect their smaller animals from predators — animals like coyotes or foxes that might try to hurt them. One way ranchers do this is by using special guard dogs. These dogs live with the flock or herd and protect the animals day and night. A good shelter also helps keep predators out.”
 - g. Ask students:
 - “If you had a flock of chickens, what would you want their shelter to do to keep them safe from a predator?”
 - “Why do you think a cow might be okay sleeping under a tree, but a chicken might not be?”(Add student responses to the chart under two columns if helpful: “Animals that need a barn” and “Animals that can shelter outside.” This visual will support student decision-making during the engineering challenge.)
3. Engineering Challenge Introduction — The Farmer’s Problem
- a. Explain to students: “Now I have a real problem for you to solve. Last night there was a big thunderstorm. One of the animal shelters on a farm blew down. The farmer needs your help. Your job today is to build a new shelter that will protect a farm animal from the weather.”
 - b. Distribute animal cards — one per student, teacher-assigned. Keep table groups diverse, so students are not all building for the same animal.
 - c. Explain to students: “Your animal card tells you which animal you are building for. Before you build, you need to think like an engineer and ask some important questions about your animal.”
 - d. Display and read through the engineering questions together:
 - “Which animal needs this shelter?”
 - “Does it need shade to stay cool, or warmth to stay warm?”
 - “Does it need room to move around inside?”
 - “Will rain get inside if the roof is flat? How can you make a roof that sheds water?”
 - “Can the wind blow it over? How can you make it strong?”
 - “Does your animal need protection from predators?”
 - How did you change the materials to make a place that meets your animal’s needs?”
 - e. Give students 2–3 minutes to think about their animal’s needs before building begins.
 - f. Ask students to share their thinking:
 - “Who has a chicken? What does your chicken’s shelter need to do?”
 - “Who has a cow? Does your cow need a barn, or could it shelter somewhere else?”
 - “Who has a sheep? What did we learn about where sheep can shelter?”This planning step is critical for meeting K-ETS1-2. Students should be able to articulate at least one design decision before they begin building. Prompt

students who are unsure: “Look at the chart we made. What does your animal need most?”

4. Build-a-Shelter — Engineering Challenge

- a. Distribute building materials: popsicle sticks, playdough connectors, cardboard, and fanned construction paper for roofing. Each student builds on their own tray or mat.
- b. Explain to students: “You are going to use these materials to build a shelter for your animal. Use the playdough to hold your sticks together — that is your connector. The fanned paper can be your roof — notice how the folds help water run off the sides instead of sitting on top. You can use the cardboard for walls. Remember: engineers test and revise. If something falls down, that is not a mistake — that is information. Change your design and try again.”
- c. Students build independently. Allow approximately 15 minutes.
- d. Circulate and prompt engineering thinking:
 - “What is your roof made of? Will water run off it or sit on top?”
 - “Is your shelter strong enough? What would happen if the wind blew on it?”
 - “Does your animal have enough room inside?”
 - “What did you change from your first idea? Why?”
 - “Does your shelter solve the farmer’s problem? How do you know?”
(Students with cattle, sheep, or goat cards may build a simple three-sided windbreak or shade structure rather than a full barn — this is accurate and should be affirmed. If a student builds a small pen near a tree drawn on paper, that is also valid. The goal is design thinking connected to the animal’s actual needs.)

5. Gallery Share & Discussion

- a. After building, invite students to do a brief gallery walk around the room or share from their seat.
- b. For each student or small group, ask:
 - “Which animal did you build for?”
 - “What does your shelter protect your animal from?”
 - “Did you change anything while you were building? What did you fix?”
- c. Ask the class:
 - “Whose shelter looks like a barn? Whose looks different? Why might a shelter look different for different animals?”
 - “Look at the shelters built for cattle or sheep. How are they different from the chicken or pig shelters? Why?”
 - “Dan Yunk’s book says farmers care for their animals every day. How does building a shelter show that a farmer cares?”

6. Shared Writing

- a. Gather students on the carpet where they can all see the chart paper clearly.
- b. Explain to students: “Now we are going to write about what we built. I am going to write the sentence frames on our chart first, and I want you to watch and listen carefully because there are some important things to notice about how writing works.”
- c. Model to students that spoken words become written letters:

- d. Say aloud and then write the first sentence frame on chart paper: "I built a shelter for a _____."
 - e. Explain to students: "Listen as I say the word 'built.' Now watch what happens when I write it — those sounds become letters: b-u-i-l-t. Every word I say out loud becomes a specific sequence of letters on the paper. The letters stand for the sounds in the word. And some words have parts that don't sound exactly the way we expect, like the 'u' in built"
 - f. Model to students that words are separated by spaces:
Point to the completed sentence frame on the chart and explain: "Look at our sentence. Do you see the spaces between the words? I built a shelter for a _____. Each word has its own space. Spaces always separate words in print. Watch me point to each word as I read it: I — built — a — shelter — for — a. One finger, one word."
 - g. Invite a student to come up and point to each word while the class reads the sentence together.
 - h. Point to individual letters in the sentence frame one at a time and say: "Now instead of pointing to words, I am going to point to letters. When I point, everyone calls out the name of that letter. Ready?" Point to at least six letters from the sentence frame. Repeat with any letters students hesitate on.
 - i. Model forming upper- and lowercase letters correctly to students:
 - j. Point to letters in the sentence frames on the chart and explain: "Letters come in two sizes — uppercase and lowercase. The uppercase letter is the big one. The lowercase letter is the smaller one. Let's find some. The word I is uppercase — it is always uppercase when it stands alone. The word built starts with lowercase b."
 - k. Write the remaining sentence frames on chart paper:
 - "I built a shelter for a _____."
 - "It keeps the animal _____."
 - l. Read each frame together as a class, pointing word by word.
 - m. Model completing the first sentence frame by thinking aloud:
 - "I built a shelter for a chicken. I want to write the word chicken. Let me think about the sounds: /ch/ — /i/ — /k/ — /en/. I know ch makes the /ch/ sound. I know i is a short vowel. I will write what I hear: ch-i-ck-e-n. Watch how I form my letters — each one sits right on the line. My c is a short letter; it sits in the middle. My h is a tall letter; it reaches up to the top. Every letter has a place on the line."
 - n. Explain to students: "When you write on your own sheet today, do your best to write the letters you hear in each word. You may not spell every word perfectly — that is okay. What matters is that you are listening for sounds and writing the letters that go with them."
7. Independent Writing — Build-a-Shelter Writing Sheet
- a. Have students return to their seats and distribute the Build-a-Shelter writing sheet.
 - b. Explain to students: "Now it is your turn. Draw a picture of your shelter and your animal in the box. Then complete the two sentence frames. Use our chart to help you remember the words. Write the letters you hear in each blank. If you need help, raise your hand or look at our chart."

- c. Students complete the writing sheet independently, using a combination of drawing, dictating, and writing as appropriate for their level.
- d. Circulate and support:
 - Prompt for drawing: “Draw your animal inside or near the shelter you built.”
 - Prompt for sentence 1: “What animal did you build for? Write or say the name of your animal.”
 - Prompt for sentence 2: “What does your shelter keep the animal safe from? Write the word you hear.”
 - Support for spacing: “When you finish one word, leave a finger space before you start the next word. Show me your finger space.”
 - Support letter formation: “Let your letters sit on the line. Show me where the line is.”
 - Support phonetic spelling: “Say the word slowly. What sound do you hear first? Write that letter.”
 - Support for letter recognition: “Show me the first letter in that word. What letter is that? Is it uppercase or lowercase? Why?”

(Differentiation note: Students who need additional support may dictate their answers to the teacher or a classroom helper while the teacher scribes. Students who are ready for a challenge can be prompted to add a third sentence explaining why their shelter is the right one for their animal. Accept all levels of writing — scribbles, letters, invented spelling, and conventional spelling are all developmentally appropriate at this stage.)

8. Closing Discussion & Kansas Connection

- a. Gather students back together with their writing sheets.
- b. Ask students:
 - “What animal did you build a shelter for? What did your shelter need to do for that animal?”
 - “Did anyone build something other than a barn? Tell us about it.”
 - “In our book, farmers care for their animals every day. How does building a shelter show that a farmer cares for their animals?”
 - “If you were a farmer or rancher, which animal would you want to take care of? What kind of shelter would you build?”
- c. Kansas Connection:
 - Explain to students: “Kansas farmers and ranchers build and maintain shelters for their animals all across our state. On beef cattle ranches in the Flint Hills, cattle use natural features for shelter such as hills, draws, and windbreaks for protection. On farms in western Kansas, chickens and pigs have carefully built shelters that keep them safe from the weather and from predators. Whether a shelter is a big red barn or a simple three-sided windbreak, it is there because a farmer or rancher took the time to build it. That is what it means to care for an animal every day — rain or shine, hot or cold.”
 - Ask students:
 - “Have you ever seen an animal shelter on a farm or ranch? What did it look like?”
 - “Do you know anyone who takes care of farm animals? What do they do to keep their animals safe?”

Assessment: Student understanding is assessed through teacher observation during the whole-class discussion, engineering challenge, gallery share, shared writing, and independent writing. Teacher should note whether students can explain that farmers provide shelter to keep animals safe and healthy, identify that different animals have different shelter needs and articulate at least one design decision based on their animal's needs, demonstrate understanding that spoken words are represented by letters in print and that words are separated by spaces, recognize and name upper- and lowercase letters pointed to on the chart, use a combination of drawing, dictating, and writing to complete the informative writing sheet, recall information from the engineering experience and class discussion to respond to the writing prompts, form letters with line awareness, and write letters for consonant and short vowel sounds when completing their writing sheet. The Build-a-Shelter writing sheet serves as the primary written artifact for this lesson.

Supplemental Activities: Display the completed Build-a-Shelter writing sheets alongside the “What Does a Good Shelter Do?” anchor chart from this lesson and the “Why Do Farmers and Ranchers Care for Their Animals?” chart from Lesson 1. Guide students to see the connection: farmers build shelters because they care about their animals’ safety and well-being — two of the reasons on their Lesson 1 chart. For an extension activity, invite students to draw a picture of their animal inside or near its shelter and write or dictate one sentence about what the shelter protects the animal from. These drawings can be added to the classroom display alongside the writing sheets and serve as an additional artifact of student thinking about animal needs and shelter design.

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Student Name: _____

Build-A-Shelter

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