



# Ag in the Classroom

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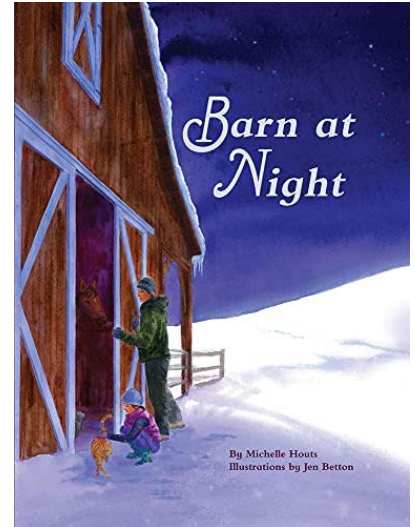
## January 2023 Book of the Month

### *Barn at Night*

Written by: Michelle Houts

Illustrated by: Jen Betton

When you grow up on a farm, adventures happen all day long—even at night! *Barn at Night* follows a father and a daughter as they care for farm animals in two visits to the barn on a working farm. First, waking early to do the routine, daily work in the pre-dawn hours, and in the mid-might visit to the barn to help a horse who's foaling. Written in lyrical poetry, the story shows how farmers feed and care for their animals even in the coldest weather, in both situations that are planned for and for when animals need help—even when humans should be sleeping. *Barn at Night* features cows, barn cats, horses, and other farm animal friends and their babies' names, for fun vocabulary building for young readers – and it ends with the beautiful surprise arrival of a new foal.



### Interest Approach – Engagement<sup>1</sup>

1. Show the students the cover of the book, *Barn at Night*.
2. Ask students what they think the book might be about.
3. What do they see on the cover?
4. Explain that the story explores different animals on the farm.

### Activity 1: Farm Animal Charades<sup>1</sup>

#### Materials:

- *Farm Animal Cards* – Farm Animal Charades
1. Prepare the *Farm Animal Cards*. You may choose to cut and laminate these cards.
  2. After reading the book, have students come to the front of the class (one at a time) and select a card. They will not let anyone know what is on the card and act out that animal. The class will guess which animal they are acting out.
  3. After all of the students have gone or the cards are gone, students can answer the following questions:
    - a. Were there any animals that surprised you that would live on a farm?
    - b. Why might some of these animals be on a farm or be helpful to a farm?

### Activity 2: Pulling Our Weight<sup>1</sup>

[ncagintheclassroom.com](http://ncagintheclassroom.com)

 [NC Farm Bureau Ag in the Classroom](https://www.facebook.com/NCFarmBureau)

 [@AgClassroom](https://twitter.com/AgClassroom)

 [@ncagintheclassroom](https://www.instagram.com/ncagintheclassroom)

## Materials:

- 2 small cups
  - Hole punch
  - String
  - Large craft stick
  - Paper clips or tape
  - Pipe cleaner
  - 1 cup of:
    - Corn
    - Soybeans
    - Milk
    - Molasses
    - Hay
1. After reading the book *Barn at Night*, ask the class what feedstuffs (food) they remember that were mentioned in the book or that a farm animal might eat.
  2. Ask students to consider the differences between each type of food like what color they are, what nutrition they might provide, and how much they might weigh. Introduce weight comparing activity.
  3. Punch two holes on either side near the top of each cup.
  4. Cut identical lengths of string (ex: 12 in.). Pull the string through each hole and tie the string together. Try to make these as equal as possible.
  5. Loop the strings over opposite ends of your craft stick.
  6. Use tape or paper clips to hold the string in place on the craft stick.
  7. Use the pipe cleaner to hook your craft stick in place to a surface (like the back of a chair).
  8. One at a time, put a tablespoon of each foodstuff into each cup to weigh the difference.
    - a. Note: some items like molasses either need to be weighed last or have their own cups.
  9. Discuss the different feedstuffs used and how their weight compares.

## **Activity 3: Exploring Senses on the Farm<sup>1</sup>**

### Part 1 Materials:

- Molasses
- Milk
- Honey
- Cinnamon
- Cup measures: ½ cup, 1 cup
- Teaspoon measures: 1 tsp, ¼ tsp
- Tablespoon measures: 1 tbsp
- Microwave

- Small Cups, 1 per student
- *Exploring Senses on the Farm Worksheet*

Part 2 Materials:

- Oats
- Straw
- Hay

Procedures:

*Preparations:*

1. Give out copies of *Exploring Senses on the Farm Worksheet*.
2. Check if any students have any allergies to the materials used in this activity (milk, hay, etc.) and make plans for accommodations.

*Part 1:*

3. Read the book *Barn at Night* to students. Have students recall that the narrator shares “molasses and milk” smell so sweet.”
4. Ask students, “Has anyone ever tried molasses and milk? If so, what did it taste and/or smell like?” If not, ask students to guess what it smells like. Note: you may need to explain to students what molasses is if they are not familiar with it.
5. Draw students’ attention to *Exploring Senses on the Farm Worksheet 1*. Explain that they will be exploring the many senses found on a farm.
6. Ask students if anyone can name one of the five senses. Keep facilitating the discussion to elicit all five senses. Do a quick review for any students who are unfamiliar.
7. Have the class make molasses and milk following the recipe below. Use this as an opportunity to explain how fractions exist in baking, illustrating how  $\frac{1}{2}$  and  $\frac{1}{4}$  units make up whole units.

Molasses and Milk Recipe

2  $\frac{1}{2}$  cups milk

2 tbsp molasses

4 tsp honey

$\frac{1}{4}$  tsp cinnamon

In a bowl, mix together milk, molasses, honey and cinnamon. Then, microwave until steaming but not boiling (approximately 2 minutes). Remove from the microwave and stir again to ensure all ingredients are combined. Allow to cool slightly. Distribute into small cups for students to try.

8. Allow students to taste the molasses and milk. After they do, they should fill out the taste column with their observations.
9. Have students fill in the remaining four columns for molasses and milk: sight, sound, smell, and touch.
  - a. Note: Older students can work independently or in groups to fill out the table. For younger students, you may want to fill out one big table as a whole class.

### Part 2:

10. Organize students to be grouped around tables. Distribute a small amount of oats, hay, and straw to each table. Have students work in their groups to fill out the rest of the table, identifying their observations about each item.
  - a. Note the “Taste” column for straw and hay are crossed out, as students should not taste these. If necessary, elaborate on human-edible versus human-inedible items.
11. After groups have finished, have them complete the following writing prompt: Write a few sentences to tell your friends more about life on the farm using specific words about your senses (see, feel, hear, smell, taste, etc.). They can write their paragraph on the back of their worksheet or in a journal.

## Links

### Sources

1. American Farm Bureau Foundation for Agriculture. *Barn at Night Educator’s Guide*; 2021.

### K-5 Subject Areas: Reading, Science, Social Studies, Math

#### Reading

- **RL.K.1** With prompting and support, ask and answer questions about key details in a text.
- **RL.K.10** Actively engage in group reading activities with purpose and understanding.
- **RL.1.1** Ask and answer questions about key details in a text.
- **RL.1.3** Describe characters, settings, and major events in a story, using key details.
- **RL.1.4** Identify words and phrases in stories or poems that suggest feelings or appeal to the senses.
- **RL.1.7** Use illustrations and details in a story to describe its characters, setting, or events.
- **RL.2.10** Actively engage in group reading for the purpose of connecting prior knowledge and experiences to text.
- **RL.4.2** Determine a theme of a story, drama, or poem from details in the text; summarize the text.
- **RL.4.5** Explain major differences between poems, drama, and prose, and refer to the structural elements of poems and drama when writing or speaking about a text.
- **RI.K.1** With prompting and support, ask and answer questions about key details in a text.
- **RI.K.2** With prompting and support, identify the main topic and retell key details of a text.
- **RI.K.7** With prompting and support, describe how the words and illustrations work together to provide information.
- **RI.1.1** Ask and answer questions about key details in a text.
- **RI.1.2** Identify the main topic and retell key details of a text.
- **RI.1.6** Distinguish between information provided by pictures or other illustrations and information provided by the words in a text.
- **RI.1.7** Use the illustrations and details in a text to describe its key ideas.
- **RI.1.8** With guidance and support, identify the reasons an author gives to support ideas in a text.
- **RI.2.1** Answer who and what, where questions to demonstrate understanding of details in a familiar text.
- **RI.2.2** Identify the main topic of text.
- **RI.2.5** Locate key facts or information in a familiar text.
- **RI.2.10** Actively engage in group reading of information text for the purpose of connecting prior knowledge and experiences to text.
- **RI.3.5** Use text features and search tools to locate information relevant to a given topic efficiently.
- **RI.3.7** Use information gained from illustrations and the words in a text to demonstrate understanding of the text.
- **RI.4.1** Refer to details and examples in a text when explaining what the text says explicitly and when drawing inferences from the text.
- **RI.4.2** Determine the main idea of a text and explain how it is supported by key details; summarize the text.

- **RI.4.5** Describe the overall structure of events, ideas, concepts, or information in a text or part of a text.
- **RI.4.7** Interpret information presented visually, orally, or quantitatively and explain how the information contributes to an understanding of the text in which it appears.
- **RI.5.2** Determine two or more main ideas of a text and explain how they are supported by key details; summarize the text.

### Science

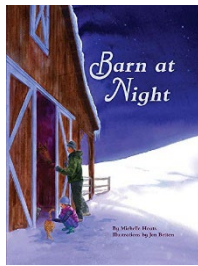
- **K.P.2** Understand how objects are described based on their physical properties and how they are used.
- **K.L.1.2** Compare characteristics of living and nonliving things in terms of their: structure, growth, changes, movement, basic needs.
- **1.P.1** Understand how force (pushes or pull) affect the motion of an object.
- **1.L.1.1** Recognize that plants and animals need air, water, light (plants only), space, food and shelter and that these may be found in their environment.
- **1.L.2.1** Summarize the basic needs of a variety of different plants (including air, water, nutrients, and light) for energy and growth.
- **2.L.2.1** Identify ways in which many plants and animals closely resemble their parents in observed appearance and ways they are different.
- **3.P.1** Understand motion and factors that affect motion.
- **3.P.2** Understand the structure and properties of matter before and after they undergo a change.
- **4.L.1** Understand the effects of environmental changes, adaptations and behaviors that enable animals (including humans) to survive in changing habitats.
- **5.L.3** Understand why organisms differ from or are similar to their parents based on the characteristics of the organism.

### Social Studies

- **K.G.2** Understand the interaction between humans and the environment.

### Math

- **NC.3.NF.1** Interpret unit fractions with denominators of 2, 3, 4, 6, and 8 as quantities formed when a whole is partitioned into equal parts;
- **NC.3.NF.3** Represent equivalent fractions with area and length models by: • Composing and decomposing fractions into equivalent fractions using related fractions: halves, fourths and eighths; thirds and sixths. • Explaining that a fraction with the same numerator and denominator equals one whole. • Expressing whole numbers as fractions, and recognize fractions that are equivalent to whole numbers.
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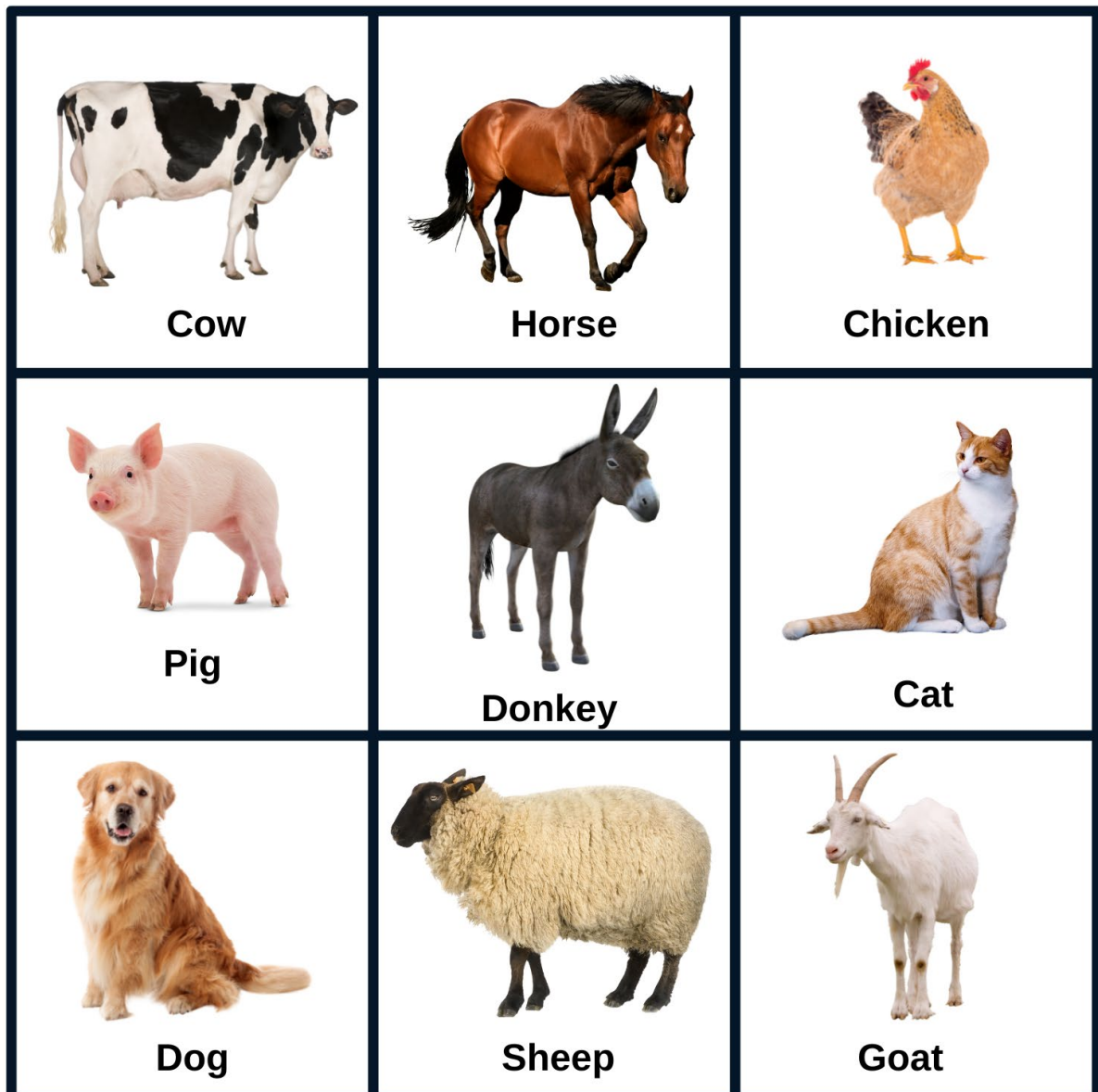
**Barn at Night by Michelle Houts**  
Farm Animal Cards  
Farm Animal Charades



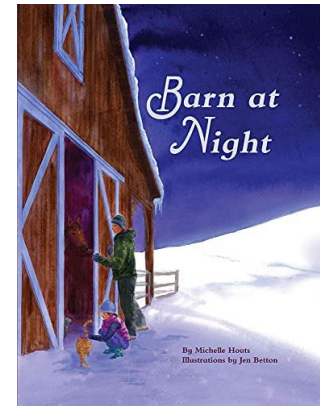
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**Barn at Night** by Michelle Houts  
*Exploring Senses on the Farm*  
 Worksheet 1



Name: \_\_\_\_\_

	<b>Sight</b> What does it look like?	<b>Sound</b> What can you hear?	<b>Smell</b> What does it smell like?	<b>Touch</b> What does it feel like?	<b>Taste</b> What does it taste like?
<b>Molasses Milk</b>					
<b>Oats</b>					
<b>Straw</b>					
<b>Hay</b>					

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