



Lesson Four: Protecting Pigs

Level: Elementary

PURPOSE

Students will build a pig barn and discover farmers raise pigs in barns to protect them from disease, predators, and weather.

NEBRASKA STATE EDUCATION CONTENT STANDARDS CONNECTION

SC.3.7.2.E Generate and compare multiple possible solutions to a problem based on how well each is likely to meet the criteria and constraints of the problem.

SC.3.7.2.C Construct an argument with evidence that in a particular habitat some organisms can survive well, some survive less well, and some cannot survive at all.

ESTIMATED TIME

40 minutes

MATERIALS NEEDED

- » Business-size envelopes, 4 per group
- » Paper towel, 1 per group
- » Toilet paper rolls, 2 per group
- » Drinking straws, 2 per group (cut into 8 equal pieces)
- » 8.5" x 11" white paper, 1 per group (cut in half)
- » Scissors
- » Scotch tape
- » Markers
- » Extra paper for making fencing, pipes, feed troughs, etc.

VOCABULARY

Environment: The surroundings or conditions in which a person, animal, or plant lives or operates.

Farrowing House: A barn where a litter of pigs is born.

Finishing Barn: A barn where pigs live when they are eight weeks old until they are ready for market at six months old.

Litter: The group of young animals born at one time.

Nursery Barn: A barn where piglets live after they are weaned at three weeks old until they are moved to the finishing barn at eight weeks old.



Piglet: A baby pig.

Predator: An animal that preys on others.

Sow: A mother pig.

Wean: To help a baby stop feeding on its mother's milk and to eat other foods.

BACKGROUND INFORMATION

Read or summarize the following information to students.

Like humans and other animals, pigs have four basic needs—air, water, food, and shelter. Pigs also need social interaction with other pigs, treatment for injuries and diseases, and space to stand, stretch, and lie down.¹ Pigs raised on farms live in environments that are designed to help farmers meet these needs. Barns protect pigs from weather, disease, and predators. Farmers provide pigs with fresh air, clean water, nutritious food, and shelter.

Pigs are omnivores. They eat both plants and animals. Pig feed typically consists of corn and soybean meal mixed with vitamins and minerals. It is a common misconception that farmers feed pigs table scraps or slop. Feeding pigs garbage, raw meat, meat scraps, or restaurant waste puts them at risk and is illegal in the United States.

Computer technology is used to help control the temperature inside the farm buildings where pigs live. Pigs are susceptible to heat and cold stress. Because pigs are unable to sweat to regulate their temperature, farmers use fans and misters to help them stay cool in the summer. Heaters are used to help pigs stay warm in the winter. Pigs also have sensitive skin that is prone to sunburn. Providing shade for pigs is an important part of keeping them healthy and safe.

Newborn pigs are called piglets. Piglets are born in a litter in a farrowing house. They weigh 2-3 pounds when they are born and start walking almost as soon as they are born. Mother pigs are called sows. For the first three weeks, piglets nurse from a sow about once every hour. At three weeks old, when the piglets weigh about 15-20 pounds, they are weaned and moved to a nursery barn. In the nursery barn, piglets are given solid feed and drink water from waterers. The pigs always have access to food and water, but do not overeat because they will only eat until they feel full. At eight weeks old, when the pigs are about 40-60 pounds, they are moved to a finishing barn. Pigs go to market when they are six months old and weigh 280 pounds.

Part One: Learning Activity

INTEREST APPROACH

1. Ask the class, "Where do pigs live?"
2. Have students research where pigs live at and report back their answers.
 - Answers may vary from on farms, outside or in barns.
3. View the video A Field Trip to Ohio Pig Farms. www.youtube.com/watch?v=rAw7Fs_IAW4
4. Explain to students that they will be learning more about how a pig's environment can protect them.



CONDUCT ACTIVITY

Adapted from Ohio Pork Council:

1. Ask the students to imagine that they are farmers who raise pigs. Open up a classroom discussion about how the students would take care of their pigs. Use the Background Information, Vocabulary and following questions guide the discussion:
 - How will you keep the animals warm on cold days?
 - How will you keep them cool on hot days?
 - What and how will you feed the animals?
 - What will you do to keep your pigs healthy?
 - How will you keep your pigs safe from predators?
 - Who will take care of your pigs every day?
 - How will the pigs affect the land or air in which they live (soil, odor)?
 - Can the environment hurt the pigs (weather)?
 - What other needs do the pigs have, and how will you take care of these needs?
2. Explain to students they are going to design an environment, a pig barn, that will meet the needs of pigs. Organize students into small groups or allow students to work individually. Provide each student or group with four business size envelopes, a towel, two toilet paper rolls, two straws cut into eight equal pieces, a piece of white paper cut in half, scissors, and scotch tape.
3. Use the following instructions to model for the students how to create the barn:
 - Barn
 - Cut an oval hole in one envelope, making a large side window for the barn.
 - ♦ This window provides the proper ventilation for the pigs.
 - Cut the paper towel in half and tape it onto the top of the window for the curtain.
 - Cut another envelope in half for the ends of the barn.
 - Tape the ends of the barn to the “sides of the barn” envelopes, one of which has the hole for the window and paper towel curtain, so that you have four sides, or a rectangle.
 - Use the final envelope to create a roof by creasing it in half lengthwise and attaching it with tape to the top of the rectangle.
 - Food Storage
 - Tape four straws, or legs, to each toilet paper roll so that the structures will stand on the legs.
 - Use a half piece of paper and make a cone shape by twisting and taping the ends. Tape the cone shape on the end of the toilet paper roll without the straw legs.



- Use the other half piece of paper to make another smaller cone shape and tape it between the straw legs on the other end of the toilet paper.
4. Remind the students that their barn designs should help farmers meet the needs of pigs. Allow time for the students to create fencing, pipes to carry feed, feeders, water troughs, fans, misters, heaters, etc. Students should add their own innovations to the structure.
 5. View the Build Your Own Pig Barn Tutorial for more information:
www.youtube.com/watch?v=O_8lweAq05o

FOLLOW UP QUESTIONS

1. What are some features of barns that ensure pigs are comfortable?
 - The building's climate control ensures the pigs don't get too hot, and slatted floors ensure easy cleaning.
2. What are some jobs of pig farmers? Which of these do you most think you'd most enjoy doing? Why?
 - Checking on pigs' health, keeping feeders and waterers full, cleaning the building, and moving pigs.

Part 2 (Optional): Attend a Virtual Field Trip

Biosecurity is a procedure to protect animals against disease. Farmers limit travel to their pig barns by practicing biosecurity. This ensures they can raise their pigs in a safe and healthy environment.

Virtual Field Trips allow farmers to open their barn doors to show students what happens inside. The farmer uses a tablet to connect with classrooms to be a part of a live, video-chat allowing students to have their questions answered in real time.

Visit the Nebraska Farm Bureau Foundation website, www.nefbfoundation.org/educators/get-involved/virtual-field-trips, to see a list of upcoming Virtual Field Trips and to sign up for a time to attend. If you have questions, please contact Nebraska Farm Bureau Foundation at foundationforag@nefb.org or (402) 421-4747.

SOURCES UTILIZED

Pigs on the Farm lesson, National Agricultural Literacy Curriculum Matrix
agclassroom.org/teacher/matrix/lessonplan.cfm?lpid=653&author_state=0&search_term_lp=pig

NATIONAL AGRICULTURAL LITERACY OUTCOMES

Plants and Animals for Food, Fiber & Energy

T2.3-5e. Understand the concept of stewardship and identify ways farmers care for soil, water, plants, and animals.