



# The Book Planter



## Ag in the Classroom

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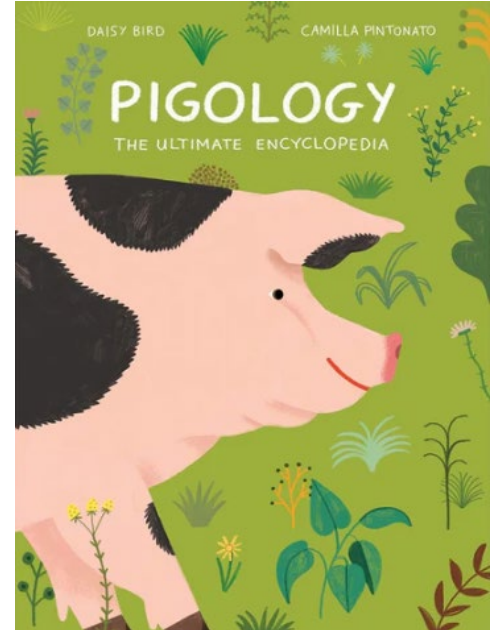
***Pigology: The Ultimate Encyclopedia***

Written by: Daisy Bird

Illustrated by: Camilla Pintonato

Welcome to the wonderful world of pigs! Pigs are full of unexpected surprises. Did you know that when a pig is happy, it will uncoil its curly tail and wag it just like a dog? Or that feral hogs can detect odors from seven miles away? *Pigology* delves into the history of pigs, pig breeds around the world, famous pigs, pigs in culture, and so much more! This lively visual encyclopedia, a follow-up to *Chickenology* (our August 2023 Book Planter selection), offers something to discover for everyone young and old: nature- and animal-loving young readers, pig enthusiasts, pig farmers, and pet pig owners alike! For fun printable companion posters, visit

<https://papress.com/pages/pigology>



**Note for educators: This book discusses reproduction and uses terms and images that may not be appropriate for young readers, specifically on pages 16, 18, and 28.**

### Vocabulary

**Boar:** a male pig

**Gilt:** a female pig that has not born young

**Hog:** a generic term for a pig

**Omnivore:** a person or animal that eats both plants and animals

**Pig:** a domesticated, hoofed animal with sparse bristly hair and a flat snout

**Piglet:** a baby pig

**Pork:** meat from pigs

**Sow:** a female pig who has given birth piglets

**Swine:** a generic term for pigs

**Ungulate:** a hoofed mammal

### Activity 1: Hog Farmer for a Day<sup>1</sup>

#### Materials:

- 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 (optional)
  - Extra paper for making fencing, pipes, feed troughs, etc. (optional)
1. Start a discussion with students about hogs that are raised as pets. Ask, "What is required to raise pigs as pets?" Students may say things like food, water, a mud puddle, etc. Using pp. 58-59 as a guide, outline the following elements with students:
    - Shelter
    - Space
    - Fencing
    - Food
    - Water
  2. Ask the students, "What do you need to survive?" (*food, water, air, and shelter*) Ask the students if they think pigs have the same or different needs. Discuss their responses and guide them to the understanding that pigs have the same basic needs as humans. Just like humans, pigs need space, social interaction, and treatment for injuries and disease.
  3. Next, ask students, "Do you think farmers who raise hogs need the same things to raise hogs for meat?" Allow students time to think this through. Many may agree that they are the same. 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 following questions to 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?
  4. Outline the following with students:
    - Shelter/space/fencing: Hog houses are where hogs are kept. These are temperature-regulated barns or buildings that provide hogs adequate temperature and air flow. They are enclosed to protect hogs from predators. The ground of the barn has slats so that excrement can fall through and remain clean for the pigs. Biosecurity (washing things in and around the barn and wearing clean clothing and boots) is important to hog farmers because this is what keeps the pigs safe from sickness, diseases, or viruses and humans could potentially track into the barn.
      - Show the students pictures from the [NC Pork Ag Mag](#), and discuss the life cycle of a pig. Different stages of the life cycle require different types of shelters.

- Discuss the We Care pork initiative with students (found in the Ag Mag). Ask, “Why is this important?” Explain that farmers care deeply for their livestock and want to take the utmost care in raising healthy animals. That also means providing a safe work environment for humans!
  - Food and water: farmers provide nutrition for the pigs that is usually formulated by an animal scientist, or swine nutritionist.
- 5. Explain to the students that they are going to design an environment, a pig barn, that will help farmers 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 paper towel, two toilet paper rolls, two straws cut into eight equal pieces, a piece of white paper cut in half, scissors, and scotch tape.
- 6. Use the following instructions to model for the students how to create the barn:
  - a. **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.
  - b. Cut the paper towel in half and tape it onto the top of the window for the curtain.
  - c. Cut another envelope in half for the ends of the barn.
  - d. 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.
  - e. 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.
  - f. **Food Storage:** Tape four straws, or legs, to each toilet paper roll so that the structures will stand on the legs.
  - g. 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.
  - h. 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 roll.
- 7. 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 the feed, feeders, water troughs, fans, misters, heaters, etc. Students should add their own innovations to the structure.
- 8. Ask the students to share their barns with the rest of the class and explain how their designs help to meet the basic needs of the pigs:
  - a. Food
  - b. Water
  - c. Air
  - d. Shelter
- 9. Explore the [NC Pork Council’s Virtual Reality Video](#)

**Activity 2: Pigology Scavenger Hunt/Breakout EDU Game (attached at the end of this activity sheet)**

Note for teachers: [Breakout EDU](#) games are educational experiences for students using lock boxes with various combinations. You can order your own [Breakout EDU kit](#), or you can create using your own purchased locks and boxes. Students will use the Scavenger Hunt to answer questions from the book *Pigology*. Some of the answers will correspond to lock combinations. For example, if one of the answers is “pig” that could correspond to an alpha lock, or if an answer is “red” that could correspond to a color lock. Of course there are number locks, and shape locks too.

If you do not have access to this resource, you can still use the Scavenger Hunt worksheet in your classroom for other purposes.

### Extension Activities:

- **Pig Breeds:** What pig breeds are grown in North Carolina? Are those the same as the breeds featured or mentioned in *Pigology*? Have students research the breeds and what makes them desirable to raise in North Carolina.
- **Pig Parts:** Have students compare and contrast the physiology and anatomy of pigs and humans (pp. 24-29 in *Pigology*).
- **Who Likes Pork?** Create a poll for students to say what types of pork they like to eat using the examples on pp. 5, 44-45 in *Pigology*. Then, allow students to graph the results. (Note, some students may not eat pork due to various reasons, so you could incorporate non-pork foods into the poll. Or you can poll the students on which pork byproducts they use the most—pp.46-47)
- **Pig Tales:** Using the characters and/or tales on pp. 48-49 and 54-55 in *Pigology*, challenge students to write their own fictional story about pigs. Or they can come up with their own pig catch phrases, using the examples on pp. 52-53

### Links

#### Activity 1:

- NC Pork Ag Mag <https://www.ncfb.org/wp-content/uploads/2020/10/REVISED2-FINAL-WEB-ag-mag-pork.pdf>
- NC Pork Council Virtual Reality Video <https://vimeo.com/238446474>

### Sources

1. <https://agclassroom.org/matrix/lesson/714/>

### K-5 Subject Areas: English Language Arts, Math, Social Studies, and Science

#### English Language Arts (Reading and Writing)

- 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.3 With prompting and support, describe the connection between two individuals, events, ideas, or pieces of information in a text.
- 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. a. With guidance and support from adults, respond to questions and suggestions from adults and/or peers and add details to strengthen writing as needed.
- 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.1.3 Describe the connection between two individuals, events, ideas, or pieces of information in a text.

- RI.1.4 Ask and answer questions to help determine or clarify the meaning of words and phrases in a text.
- RI.1.5 Know and use various text features to locate key facts or information in 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.
- W.1.2 Write informative/explanatory texts in which they name a topic, supply some facts about the topic, and provide closure. a. With guidance and support from adults, organize information and ideas around a topic to plan and prepare to write. b. With guidance and support from adults, focus on a topic, respond to questions and suggestions from peers, and add details to strengthen writing as needed.
- W.1.3 Write narratives in which they recount two or more appropriately sequenced events, include some details regarding what happened, use temporal transition words to signal event order, and provide some sense of closure. a. With guidance and support from adults, organize information and ideas around a topic to plan and prepare to write. b. With guidance and support from adults, focus on a topic, respond to questions and suggestions from peers, and add details to strengthen writing as needed.
- W.1.5 Participate in shared research and writing projects.
- W.1.6 With guidance and support from adults, recall information from experiences or gather information from provided sources to answer a question.
- RI.2.2 Identify the main topic of a multi-paragraph text as well as the focus of specific paragraphs within the text.
- RI.2.3 Describe the connection between a series of historical events, scientific ideas or concepts, or steps in technical procedures in a text.
- RI.2.4 Determine the meaning of words and phrases in a text relevant to a grade 2 topic or subject area.
- RI.2.5 Know and use various text features to locate key facts or information in a text efficiently.
- RI.2.7 Explain how specific images contribute to and clarify a text.
- W.2.2 Write informative /explanatory texts in which they introduce a topic, use facts and definitions to develop points, and provide a concluding statement or section. a. With guidance and support from adults, organize information and ideas around a topic to plan and prepare to write. b. With guidance and support from adults and peers, focus on a topic and strengthen writing as needed by revising and editing.
- W.2.3 Write narratives in which they recount a well-elaborated event or short sequence of events, include details to describe actions, thoughts, and feelings, use temporal transition words to signal event order, and provide a sense of closure. a. With guidance and support from adults, organize information and ideas around a topic to plan and prepare to write. b. With guidance and support from adults and peers, focus on a topic and strengthen writing as needed by revising and editing.
- W.2.5 Participate in shared research and writing projects.
- W.2.6 Recall information from experiences or gather information from provided sources to answer a question.
- RI.3.1 Ask and answer questions to demonstrate understanding of a text, referring explicitly to the text as the basis for the answers.
- RI.3.2 Determine the main idea of a text; recount the key details and explain how they support the main idea.
- RI.3.4 Determine the meaning of general academic and domain-specific words and phrases in a text relevant to a grade 3 topic or subject area.
- 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.
- W.3.2 Write informative /explanatory texts to examine a topic and convey ideas and information clearly. a. Organize information and ideas around a topic to plan and prepare to write. b. Introduce a topic and group related information together; include illustrations when useful to aiding comprehension. c. Develop the topic with facts, definitions, and details. d. Use linking words and phrases to connect ideas within categories of information. e. Provide a concluding statement or section. f. With guidance and support from peers and adults, develop and strengthen writing as needed by revising and editing, with consideration to task and purpose.
- W.3.5 Conduct short research projects that build knowledge about a topic.
- 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.4.3 Explain events, procedures, ideas, or concepts in a historical, scientific, or technical text, including what happened and why, based on specific information in the text.
- RI.4.4 Determine the meaning of general academic and domain-specific words or phrases in a text relevant to a grade 4 topic or subject area.
- 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.
- W.4.2 Write informative /explanatory texts to examine a topic and convey ideas and information clearly. a. Organize information and ideas around a topic to plan and prepare to write. b. Introduce a topic clearly and group related information in paragraphs and sections; include formatting, illustrations, and multimedia when useful to aiding comprehension. c. Develop the topic with facts, definitions, concrete details, quotations, or other information and examples related to the topic. d. Link ideas within categories of information using words and phrases. e. Use precise language and domain-specific vocabulary to inform about or explain the topic. f. Provide a concluding statement or section related to the information or explanation presented. g. With guidance and support from peers and adults, develop and strengthen writing as needed by revising and editing, with consideration to task, purpose, and audience.
- W.4.5 Conduct short research projects that build knowledge through investigation of different aspects of a topic.
- RI.5.1 Quote accurately from a text when explaining what the text says explicitly and when drawing inferences from the text.
- RI.5.4 Determine the meaning of general academic and domain-specific words and phrases in a text relevant to a grade 5 topic or subject area.

- RI.5.7 Draw on information from multiple print or digital sources, demonstrating the ability to locate an answer to a question or to solve a problem efficiently.
- W.5.2 Write informative /explanatory texts to examine a topic and convey ideas and information clearly.
- W.5.3 Write narratives to develop real or imagined experiences or events using effective technique, descriptive details, and clear event sequences.
- W.5.5 Conduct short research projects that use several sources to build knowledge through investigation of different aspects of a topic.

#### Math

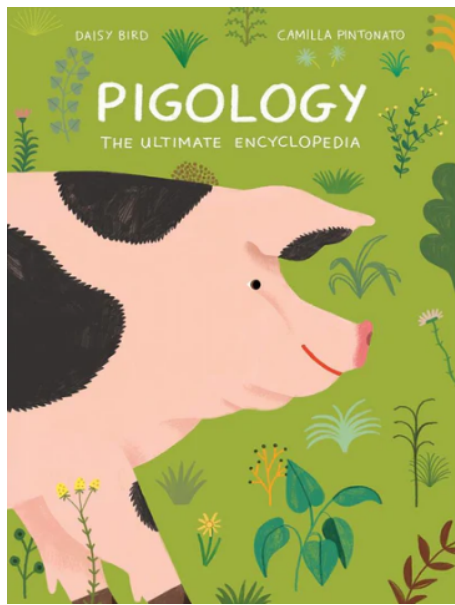
- 1.MD.4 Organize, represent, and interpret data with up to three categories. • Ask and answer questions about the total number of data points. • Ask and answer questions about how many in each category. • Ask and answer questions about how many more or less are in one category than in another.
- 2.MD.10 Organize, represent, and interpret data with up to four categories. • Draw a picture graph and a bar graph with a single-unit scale to represent a data set. • Solve simple put-together, take-apart, and compare problems using information presented in a picture and a bar graph.
- 3.MD.3 Represent and interpret scaled picture and bar graphs: • Collect data by asking a question that yields data in up to four categories. • Make a representation of data and interpret data in a frequency table, scaled picture graph, and/or scaled bar graph with axes provided. • Solve one and two-step “how many more” and “how many less” problems using information from these graphs.
- 4.MD.4 Represent and interpret data using whole numbers. • Collect data by asking a question that yields numerical data. • Make a representation of data and interpret data in a frequency table, scaled bar graph, and/or line plot. • Determine whether a survey question will yield categorical or numerical data.
- 5.MD.2 Represent and interpret data. • Collect data by asking a question that yields data that changes over time. • Make and interpret a representation of data using a line graph. • Determine whether a survey question will yield categorical or numerical data, or data that changes over time.

#### Social Studies

- K.B.1.1 Identify cultural practices in local communities and around the world.
- K.B.1.2 Compare cultural practices of people in local communities and around the world.
- 1 B.1.1 Identify cultural practices and traditions in local communities and places around the world.
- 1.C&G.1.1 Exemplify ways individuals and groups play a role in shaping communities.

#### Science

- 1.L.1 Understand characteristics of various environments and behaviors of humans that enable plants and animals to survive.
- 1.L.2 Summarize the needs of living organisms for energy and growth.
- 4.L.1 Understand the effects of environmental changes, adaptations and behaviors that enable animals (including humans) to survive in changing habitats.
- 5.L.2 Understand the interdependence of plants and animals with their ecosystem.



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

# *Pigology* by Daisy Bird

# SCAVENGER HUNT

## Answer Key

1. How fast can a wild pig run? (31 mph)
2. What color is the Large White breed? (pink)
3. What types of illnesses can pigs suffer from? (flu, stress, trichinosis)
4. How much did Hogzilla weigh? (800 lbs.)
5. How many millions of years ago did entelodonts roam? (19 to 45 million)
6. Which part of the pig is often prized in certain cultures, much like a trophy?  
(tusks)
7. How much more sensitive to smells are pigs snouts compared to our noses?  
(2,000 times)
8. What is a skill that pigs have that landed them on the island of Major Cay in the Bahamas? (They swim.)
9. What are the physical qualities of the Gloucester Old Spot breed? (Pale coloring with black spots, lop ears, upturned nose)
10. Which character in Greek mythology turned people into pigs? (Circe)

If using with Breakout EDU boxes, here are some possible lock combinations:

Word lock: SWIM (#8)

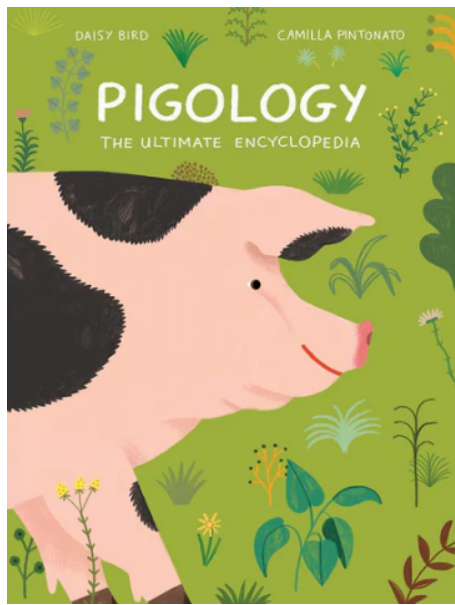
4-digit lock: 2000 (#7)

3-digit lock: 800 (#4)

Color lock: pink dots, black dots, or pink and black dots (#9)



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

# *Pigology* by Daisy Bird

## **SCAVENGER HUNT**

1. How fast can a wild pig run?
2. What color is the Large White breed?
3. What types of illnesses can pigs suffer from?
4. How much did Hogzilla weigh?
5. How many millions of years ago did entelodonts roam?
6. Which part of the pig is often prized in certain cultures, much like a trophy?
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9. What are the physical qualities of the Gloucester Old Spot breed?
10. Which character in Greek mythology turned people into pigs?



**Ag in the Classroom**