



The Book Planter



Ag in the Classroom

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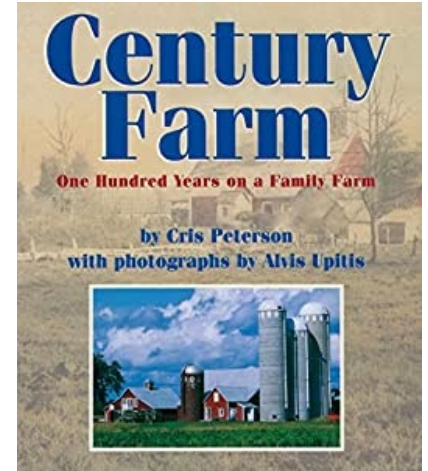
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Century Farm

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Photographs by: Alvis Uptis

A century is a long time—one hundred years. That’s how old the Peterson farm is. What was once a boggy, stump-strewn land is now a thriving dairy farm, worked on and cultivated by five generations of the Peterson family. The author writes in the voice of her husband Gary and offers glimpses of life on the farm they have worked together for more than twenty-five years. This book creates a unique portrait of life over the past hundred years on an American family farm.¹



Fun Facts

- A Century Farm or Centennial Farm is one that has been continuously owned by a single family for 100 years or more.
- North Carolina’s Century Farm Program started in 1970.²
- About 1,800 farms in North Carolina have been honored as Century Farms today.²
- In 2016, Commissioner of Agriculture Steve Troxler announced the department would begin awarding Bicentennial Farm certificates to families who have had a farm in the family for more than 200 years.²

Activity 1: Farming—Then vs. Now³

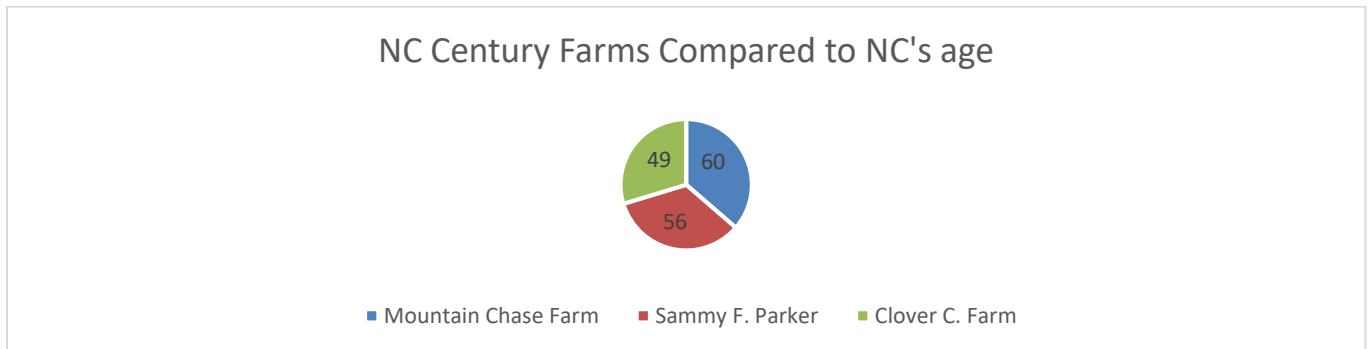
1. Take time to find farming pictures from 100 years or more ago and pictures of farming today.
2. Have students work independently to find similarities and differences between farming then versus farming now, and complete a Venn diagram.
3. Students should think about the following questions while researching:
 - a. What did farm equipment look like?
 - b. What are some of the differences with farm equipment?
 - c. What has happened with the amount of time spent farming/taking care of livestock?
 - d. Describe forms of transportation used then and now. How do they differ?
 - e. At the conclusion of your research, reflect upon how farming has changed. Is it easier now? Is it harder? Defend your answer.
4. Once the Venn diagram is filled out, take time to discuss the answers as a class.

Activity 2: What Makes a Community Livable?⁴

1. Organize students into small groups. Provide each group with a [physical map of your state](#) (see **Links** section for full link).
2. Tell the groups that they are leaders of a community in the 1800s and are looking for a place in the state to settle. Ask the group to identify their settlement location and list at least three reasons for choosing the location.
3. Have the students share their location and reasoning with the class. While the students are sharing, make note of the factors they thought would make the location good for settlement on the board.
4. Lead a discussion about the factors that can make a location good for settlement. Include the notes you took while students were presenting their ideas and the following factors in the discussion:
 - harbors
 - resources for housing and fuel
 - reliable fresh water supply
 - non-hostile neighbors
 - natural defenses
 - reliable food sources
 - suitable land for agriculture
5. Explain to the students that new technologies changed the way places were settled. For example, with the invention of cars, highways were built and people wanted to live in towns with easy access to highways. Some towns that were bypassed by highways and railroads didn't last and became ghost towns.
6. Provide each group with a [cities map of your state](#) (see **Links** section for full link). Instruct them to mark their settlement location on their cities map. Is their site near a populated area? If not, have them consider why. Reasons may include that the land cannot be used to grow crops; the land is too mountainous, dry, or swampy; the location is too remote and far away from major highways; the climate is too harsh; the site is located inside public lands; the site is located inside an Indian reservation.
7. Have the groups research the populated town closest to their site, and answer the following questions.
 - What is the name of the closest town to your settlement site?
 - What is the population?
 - Is the town close to water (rivers, lakes, ocean)?
 - Is the town close to any major highways?
 - What is the climate like?
 - What agricultural crops are grown or raised in this area?
 - What natural resources can be found in this area?
 - Why do you think this town or city is located where it is?
8. Have the students consider the town or city in which they live. Ask them, "Why do you think our town/city is located where it is?" Discuss the resources near your community that make the area livable.

Activity 3: Percentages with Centennial Farms in North Carolina

1. Have students determine when North Carolina became a state (1789), and calculate North Carolina's age (subtracting 1789 from the current year...2021-1789=232. North Carolina is 232 years old).
2. In this activity, students will find the percentage of how old North Carolina Century Farms are compared to North Carolina's age using the [NC Century Farm Directory](#).
3. Students will complete the NC Century Farms Worksheet (attached at the end of this activity sheet, and in **Links** section below).
4. Answers:
 1. $2021 - 1789 = 232$. NC is 232 years old.
 2. $2021 - 1880 = 141$. Mountain Chase Farm is 141 years old.
 3. $141 \div 232 = 0.60$. Move the decimal place two spaces to the right (or multiply by 100) = 60% Mountain Chase Farm has been around 60% of how long North Carolina has been a state.
 4. Sammy F. Parker farm is 130 years old. It has been around 56% of how long North Carolina has been a state.
 5. Clover C. Farm is 115 years old. It has been around 49% of how long North Carolina has been a state.
 6. (60%, 0.60, $60/100=3/5$) (56%, 0.56, $56/100=14/25$) (49%, 0.49, $49/100$)



Links

- *North Carolina Century Farms: 100 Years of Continuous Agricultural Heritage* (book)
<https://archive.org/details/northcarolinacen1989gorm>
- Maps of States (Activity 2)
<https://geology.com/state-map/>
- North Carolina Century Farms Directory (Activity 3)
<http://www.ncagr.gov/paffairs/Century/location.htm>
- Timeline to Century Farms (lesson plan)
<https://www.ncfb.org/wp-content/uploads/2019/08/LessonPlanTimelineCenturyFarms.pdf>

Sources

1. <http://crispeterson.com/centuryfarm>
2. <http://www.ncagr.gov/paffairs/century/history.htm>
3. http://www.agintheclassroom.org/TeacherResources/Lesson%20Booklets/Cris_Crossed.pdf
4. <https://agclassroom.org/matrix/lesson/768/>

K-5 Subject Areas

Reading, Writing, Speaking and Listening, Science, Social Studies, and Math

NC Standard Course of Study

Reading

- **RL.K.1** With prompting and support, ask and answer questions about key details in a text.
- **RL.K.2** With prompting and support, retell familiar stories, including key details.
- **RL.K.3** With prompting and support, identify characters, settings, and major events in a story.
- **RL.1.1** Ask and answer questions about key details in a text.
- **RL.1.2** Retell stories, including key details, and demonstrate understanding of their central message or lesson.
- **RL.2.1** Ask and answer such questions as who, what, where, when, why, and how to demonstrate understanding of key details in a text.
- **RL.2.3** Describe how characters in a story respond to major events and challenges.
- **RL.3.1** Ask and answer questions to demonstrate understanding of a text, referring explicitly to the text as the basis for the answers.
- **RL.4.1** Refer to details and examples in a text when explaining what the text says explicitly and when drawing inferences from the text.
- **RL.5.1** Quote accurately from a text when explaining what the text says explicitly and when drawing inferences from the 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.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.2.1** Ask and answer such questions as who, what, where, when, why, and how to demonstrate understanding of key details in a text.
- **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.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.5.1** Quote accurately from a text when explaining what the text says explicitly and when drawing inferences from the text.

Writing

- **W.K.6** With guidance and support from adults, recall information from experiences or gather information from provided sources to answer a question
- **W.1.6** With guidance and support from adults, recall information from experiences or gather information from provided sources to answer a question.
- **W.2.6** Recall information from experiences or gather information from provided sources to answer a question.
- **W.3.6** Recall information from experiences or gather information from print and digital sources; take brief notes on sources and sort evidence into provided categories.

Speaking and Listening

- **SL.K.1** Participate in collaborative conversations with diverse partners about kindergarten topics and texts with peers and adults in small and larger groups.
- **SL.K.2** Confirm understanding of a text read aloud or information presented orally or through other media by asking and answering questions about key details and requesting clarification if something is not understood.

- **SL.K.3** Ask and answer questions in order to seek help, get information, or clarify something that is not understood.
- **SL.K.4** Speak audibly and express thoughts, feelings, and ideas clearly.
- **SL.1.1** Participate in collaborative conversations with diverse partners about grade 1 topics and texts with peers and adults in small and larger groups.
- **SL.1.2** Ask and answer questions about key details in a text read aloud or information presented orally or through other media.
- **SL.2.1** Participate in collaborative conversations with diverse partners about grade 2 topics and texts with peers and adults in small and larger groups.
- **SL.2.2** Recount or describe key ideas or details from a text read aloud or information presented orally or through other media.
- **SL.2.4** Tell a story or recount an experience with appropriate facts and relevant, descriptive details, speaking audibly in coherent and complete sentences.
- **SL.3.2** Determine the main ideas and supporting details of a text read aloud or information presented in diverse media and formats, including visually, quantitatively, and orally.
- **SL.3.4** Report on a topic or text, tell a story, or recount an experience with appropriate facts and relevant, descriptive details, speaking clearly in complete sentences at an understandable pace.
- **SL.4.2** Paraphrase portions of a text read aloud or information presented in diverse media and formats, including visually, quantitatively, and orally.
- **SL.4.4** Report on a topic or text, tell a story, or recount an experience in an organized manner, using appropriate facts and relevant, descriptive details to support main ideas or themes; adjust speech as appropriate to formal and informal discourse.
- **SL.5.2** Summarize a written text read aloud or information presented in diverse media and formats, including visually, quantitatively, and orally.
- **SL.5.4** Report on a topic or text or present an opinion, sequencing ideas logically and using appropriate facts and relevant, descriptive details to support main ideas or themes; adapt speech to a variety of contexts and tasks.

Science

- **1.E.2** Understand the physical properties of Earth materials that make them useful in different ways.
- **1.L.1** Understand characteristics of various environments and behaviors of humans that enable plants and animals to survive.
- **4.L.1** Understand the effects of environmental changes, adaptations and behaviors that enable animals (including humans) to survive in changing habitats.

Social Studies

- **K.H.1** Understand change over time.
- **K.G.1** Use geographic representations and terms to describe surroundings.
- **K.G.2** Understand the interaction between humans and the environment.
- **1.H.1** Understand that history tells a story of how people and events changed society over time.
- **1.G.1** Use geographic representations, terms and technologies to process information from a spatial perspective.
- **1.G.2** Understand how humans and the environment interact within the local community.
- **2.H.1** Understand how various sources provide information about the past.
- **2.G.1** Use geographic representations, terms and technology to process information from a spatial perspective.
- **2.G.2** Understand the effects of humans interacting with their environment.
- **3.H.1** Understand how events, individuals and ideas have influenced the history of local and regional communities.
- **3.G.1** Understand the earth's patterns by using the 5 themes of geography: (location, place, human environment interaction, movement and regions).
- **3.E.1** Understand how the location of regions affects activity in a market economy.
- **4.G.1** Understand how human, environmental and technological factors affect the growth and development of North Carolina.
- **5.G.1** Understand how human activity has and continues to shape the United States.

Math

- **3.OA.3** Represent, interpret, and solve one-step problems involving multiplication and division.
- **3.OA.6** Solve an unknown-factor problem, by using division strategies and/or changing it to a multiplication problem.
- **3.NBT.2** Add and subtract whole numbers up to and including 1,000.
- **3.MD.3** Represent and interpret scaled picture and bar graphs.
- **4.OA.3** Solve two-step word problems involving the four operations with whole numbers.
- **4.NF.3** Understand and justify decompositions of fractions with denominators of 2, 3, 4, 5, 6, 8, 10, 12, and 100.
- **4.NF.4** Apply and extend previous understandings of multiplication to:
 - Model and explain how fractions can be represented by multiplying a whole number by a unit fraction, using this understanding to multiply a whole number by any fraction less than one.
 - Solve word problems involving multiplication of a fraction by a whole number.
- **4.NF.6** Use decimal notation to represent fractions.
- **4.MD.4** Represent and interpret data using whole numbers.
- **5.NF.3** Use fractions to model and solve division problems.
- **5.NF.4** Apply and extend previous understandings of multiplication to multiply a fraction or whole number by a fraction, including mixed numbers.

Name: _____

NC Century Farms Worksheet

Use information from: <http://www.ncagr.gov/paffairs/Century/location.htm>

1. North Carolina became a state in the year 1789. How many years old is North Carolina? Show your work.
2. Mountain Chase Farm in McDowell County started in 1880. How old is this farm? Show your work.
3. Using your answers from questions 1 and 2, find the percentage of how long Mountain Chase Farm has been a farm compared to how long North Carolina has been a state. Show your work.
4. Find the percentage of how long the Sammy F. Parker farm in Sampson County has been around to how long North Carolina has been a state. Show your work.
5. Find the percentage of how long Clover C. Farm in Franklin County has been around to how long North Carolina has been a state. Show your work.
6. With your three different percentages, write all three in decimal and fraction form. Then, create a pie graph with the three percentages.



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