

MARIE SELBY
BOTANICAL
GARDENS

Historic Spanish Point Pioneers: 1867-1910

4th Grade



Curricular Unit Designed and Prepared by Tracy Calla, 2020



DOWNTOWN SARASOTA
1534 Mound Street, Sarasota, Florida 34236
TEL 941.366.5731

SELBY.ORG



HISTORIC SPANISH POINT
337 N. Tamiami Trail, Osprey, Florida 34229
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STANDARDS COVERED BY THIS UNIT:

Mathematics:

MAFS.4.OA.1.2: Multiply or divide to solve word problems involving multiplicative comparison, e.g., by using drawings and equations with a symbol for the unknown number to represent the problem, distinguishing multiplicative comparison from additive comparison.

MAFS.4.NBT.2.4: Fluently add and subtract multi-digit whole numbers using the standard algorithm.

MAFS.4.NF.3.6

Use decimal notation for fractions with denominators 10 or 100. For example, rewrite 0.62 as $\frac{62}{100}$; describe a length as 0.62 meters; locate 0.62 on a number line diagram.

MAFS.4.NF.3.5 Express a fraction with denominator 10 as an equivalent fraction with denominator 100, and use this technique to add two fractions with respective denominators 10 and 100. For example, express $\frac{3}{10}$ as $\frac{30}{100}$, and add $\frac{3}{10} + \frac{4}{100} = \frac{34}{100}$.

History

SS.4.A.1.1 Analyze primary and secondary resources to identify significant individuals and events throughout Florida history.

SS.4.A.1.2 Synthesize information related to Florida history through print and electronic media.

Standard 4 SS.4.A.4 : Growth of Florida

SS.4.A.4.1 Explain the effects of technological advances on Florida. Examples may include, but are not limited to, steam engine, steamboats, delivery of water to some areas of the state, etc.

SS.4.A.4.2 Describe pioneer life in Florida.

SS.4.A.6.1 Describe the economic development of Florida's major industries.

SS.4.A.6.3 Describe the contributions of significant individuals to Florida.

SS.4.A.8.4 Explain how tourism affects Florida's economy and growth.

SS.4.A.9.1 Utilize timelines to sequence key events in Florida history.

Geography

S.4.G.1.1 Identify physical features of Florida.

SS.4.G.1.2 – Locate and label cultural features on a Florida map.

SS.4.G.1.3 Explain how weather impacts Florida.

SS.4.G.1.4 – Interpret political and physical maps using map elements (title, compass rose, cardinal directions, intermediate directions, symbols, legend, scale, longitude, latitude).

Economics

SS.4.E.1.1 Identify entrepreneurs from various social and ethnic backgrounds who have influenced Florida and the local economy.

SS.4.E.1.2 Explain Florida's role in the national and international economy and conditions that attract businesses to the state.

SS.4.FL.1.1 People have many different types of jobs from which to choose. Identify different jobs requiring people to have different skills.

SS.4.FL.1.6 Describe ways that people who own a business can earn a profit, which is a source of income.

SS.4.FL.1.7 Entrepreneurs are people who start new businesses. Entrepreneurs do not know if their new businesses will be successful and earn a profit. Identify ways in which starting a business is risky for



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entrepreneurs....[learn] about an entrepreneur and identify the type of business started, the possible risks of running the business, and what the entrepreneur expected to earn.

Language Arts:

LAFS.4.RI.1.1: Refer to details and examples in a text when explaining what the text says explicitly and when drawing inferences from the text.

LAFS.4.RI.1.2: Determine the main idea of a text and explain how it is supported by key details; summarize the text.

LAFS.4.W.1.3: Write narratives to develop real or imagined experiences or events using effective technique, descriptive details, and clear event sequences.

LAFS.4.RI.2.4 Determine the meaning of general academic and domain-specific words or phrases in a text relevant to a grade 4 topic or subject area.

LAFS.4.RI.1.3: 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.

LAFS.4.W.1.2 Write informative/explanatory texts to examine a topic and convey ideas and information clearly.

- a. Introduce a topic clearly and group related information in paragraphs and sections; include formatting (e.g., headings), illustrations, and multimedia when useful to aiding comprehension.
- b. Develop the topic with facts, definitions, concrete details, quotations, or other information and examples related to the topic.
- c. Link ideas within categories of information using words and phrases (e.g., another, for example, also, because).
- d. Use precise language and domain-specific vocabulary to inform about or explain the topic.
- e. Provide a concluding statement or section related to the information or explanation presented.

LAFS.4.W.1.3 Write narratives to develop real or imagined experiences or events using effective techniques, descriptive details, and clear event sequences.

LAFS.4.W.2.4 Produce clear and coherent writing in which the development and organization are appropriate to task, purpose, and audience.

LAFS.4.W.2.5 With guidance and support from peers and adults, develop and strengthen writing as needed by planning, revising, and editing.

LAFS.4.W.3.7 Conduct short research projects that build knowledge through investigation of different aspects of a topic.

LAFS.4.W.3.8 Recall relevant information from experiences or gather relevant information from print and digital sources; take notes and categorize information, and provide a list of sources.

LAFS.4.W.3.9 Draw evidence from literary or informational texts to support analysis, reflection, and research.

- b. Apply grade 4 Reading standards to informational texts (e.g., “Explain how an author uses reasons and evidence to support particular points in a text”).

LAFS.4.L.1.2 Demonstrate command of the conventions of standard English capitalization, punctuation, and spelling when writing.



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Teacher Background Information: A History of Historic Spanish Point Taken from the Letters of the Webb family

Traveling to Florida

John and Eliza Webb and their children, Anna, Will, Lizzie, Jack and Ginnie, lived in Utica, New York. John was a pharmacist, after careers as a chemist, clerk and teacher. Eliza suffered from severe asthma and her doctor suggested that a warmer climate would help her condition. They planned to relocate to Virginia, and purchased farmland there, but the Civil War devastated Virginia and prevented their move. In the meantime, John became fascinated with Florida and the writings of a homesteader in Manatee, John Gamble. At the time, Florida was mostly undeveloped wilderness, but John was inspired to take a leap of faith and move to Florida by the Homestead Act passed by Congress in 1862. The Homestead Act gave people ownership of 160 acres of land if they lived on it and improved it over a period of five years.

In Feb 1867, the Webb family sold their farm in Utica, NY, packed up, and traveled by train to New York City along with Eliza's father and sister, Emily Graves. To save money on travel expenses, the family booked passage to Florida on a schooner named the *Sarah Helen*, which was a boat used to haul red cedar logs from Cedar Key on Florida's west coast to the Faber Pencil Company in New York City. On the return trip to Florida from New York, the cargo-hold where the wood was stowed was not full, so the Webb family purchased the space for their belongings and climbed aboard for the journey to Florida.

The voyage south took a couple of weeks and the family spent most of the cruise cold, wet, and seasick. As they approached Key West, the largest city in Florida at the time, they were amazed by an ocean "so clear, they could see down to the bottom."

While touring Key West, the family saw tropical plants and birds for the first time. They also met a man who had fished on the west coast of Florida for many years, a man they described as an "old Spanish trader." He told them of his favorite spot, a beautiful point of land in Sarasota Bay, which he thought would be an ideal place to live. It had everything a pioneer family needed – fresh water, good hunting and fishing, and fertile soil to plant crops. Most notably, it was high ground, a good 15 to 20 feet above any tide a storm might bring. All they would need to do is build a house.

The Final Leg of the Journey

After leaving Key West, the *Sarah Helen* sailed north, entering Tampa Bay to drop cargo. The town of Tampa was described by the Webbs as a "very small town, no business or shopping." The schooner then sailed back south into the mouth of the Manatee River and upriver to Snead Island. There, the family boarded a smaller boat and sailed six miles farther upriver to the village of Manatee. The Webbs rented some rooms at a boarding house there and began their search for a new place to call home.

The first thing the Webbs had to do was purchase a boat and learn how to sail it. Back in Utica, they had traveled by horse and wagon upon a network of roads, some of which were paved with bricks. There



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were also railroads that went most everywhere. The roads of Florida were little more than sandy trails and there were no railroads south of Jacksonville. In the Florida frontier, people traveled by foot or by water, either by poling, rowing or sailing on the inland bays and rivers.

Home Sweet Home

In August 1867, after deciding against several plots of land near Manatee, John Webb began to explore the bay farther south. It was there the family discovered the land the Spanish trader had told them about. After camping on the site for several weeks, the family decided to move there for good. It had been seven months and fourteen days since they had left their home in Utica, New York.

The family named their new home *Spanish Point* in honor of the “old Spanish trader.” Just as the trader had told them, this point of land had everything they would need for their homestead, but there was still much work to be done.

The first task was to build shelter. John ordered lumber for a house and had it floated down the bay from Manatee. They built a home at the highest part of the point and constructed it to take advantage of the breeze. This would help keep the mosquitoes away and keep them cool in the Florida heat. They covered the windows with oil cloth and built a fireplace out of coquina rock from nearby islands. The roof was thatched with palm fronds until wooden shingles could be installed. A cistern was built next to the house to collect rainwater for drinking. They built a kitchen adjacent to the main house. The separation kept the heat, cooking smells, and risk of fire away from the family sleeping quarters.

The Early Years

John was well-known for his agricultural skills, and the family planned to farm sugar cane as a cash crop. Florida’s climate had been recognized as a good place to grow citrus fruit since the first citrus trees arrived with the Spanish in the 1500s. John decided to grow citrus, too, and planted his first trees in 1868. The family also grew tomatoes, sweet potatoes, pumpkins, watermelons, and bananas.

The Webb family’s citrus groves were so successful that they built a packing house along the bay where they washed, sorted and shipped their fruit by boat. They used their own boats to sail the fruit to Cedar Key or Key West, 2 of the main Florida ports, enroute to lucrative Northern markets. The Webb Packing House soon became the shipping station for the fruit and vegetables from other area farms. This packing and shipping operation provided additional income for the family.

Building a home and planting crops wasn’t the only hard work the family had to do in their new Florida home. Once plants started to grow, the deer, rabbits, and raccoons would eat the tender shoots and leaves, and fences had to be constructed to keep wildlife away. The deer soon learned to jump the fences, so Will and Jack would take turns guarding the plants through the night. Soon both of them became accomplished hunters and the family often had fresh game for their dinner table.

The Webbs also enjoyed the abundance of fish and oysters from Little Sarasota Bay and turtle eggs from the gulf beaches. Sea turtles are protected by laws today, but at the time it was acceptable to eat whatever the land provided. Anna, Lizzie and Ginnie might have gathered shellfish and turtle eggs while



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the men fished and hunted. Will and young Jack learned to catch grouper and other game fish in the gulf. A letter home to Utica told of Will catching 30 mullet on one throw of a homemade cast-net and Jack landing a 40 pound stingray. Eliza reported that the family was thriving in their new home and her health had never been better. Despite the hard work and rough conditions, Spanish Point was a paradise.

An Important Discovery

We refer to the Webb family as pioneers because they were among the first people to settle on the Florida frontier under the Homestead Act. They soon discovered that other people had lived here before them. John Webb had been college-educated and he was aware that the shell mounds of his new home at Spanish Point were likely mounds created by early indigenous people.

One day while John was digging a trench to drain a field, he uncovered a human skull. Not much was known about the early people of Florida, so John sent the skull to the Smithsonian Institution in Washington, D.C. The Smithsonian recognized the importance of his find and sent archaeologists to Spanish Point to study the mounds and the Florida environment. (For more information on the archaeological history of Spanish Point, download Selby Gardens' curricular unit, *The Native Americans of Historic Spanish Point*)

Webb's Winter Resort and the Town of Osprey

Visits from scientists and family friends encouraged the Webbs to open their home to people who would pay to stay at Spanish Point. Ever the entrepreneur, John Webb was soon advertising "Webb's Winter Resort" in northern newspapers and welcoming tourists to their home. Webb's Winter Resort became the first tourist resort in Sarasota County, and hosted visitors for the next 30 years.

The Webb family, the guests of Webb's Winter Resort, and the members of the community that had begun to grow in the area needed to receive mail regularly to stay in touch with people up North. At the time, settlers and visitors in Florida depended on ship crews to take and deliver their mail as they landed in various ports. They also asked travelers to carry and deliver mail on their way up and down the coast. At Spanish Point, Will Webb often sailed off to collect and deliver mail.

National postal service had been in existence since 1775, but the government required a road for official mail delivery. In 1876, a road between Spanish Point and Sarasota was completed. John Webb applied to the then-called Post Office Department for a post office at Spanish Point in 1881. The Postal service requested a one-word name for the post office and John chose "Osprey." In 1884, the new Osprey Post Office was established at Spanish Point in the Webb's Winter Resort dormitory, with John Webb as its first Postmaster. It became a local meeting place for the area's 60 families.

New Century & New Beginning

In 1884, while the Webbs were fighting a nearby forest fire, Eliza inhaled a good deal of smoke and because of her asthma, became very ill. She soon died and was buried in the Pioneer Cemetery next to her daughter Ginnie, who had died after a fall down some stairs a few years earlier. John grieved, but he



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realized the challenging pioneer life required a strong partner. Three years later In 1887, he married Eliza's sister, Emily.

In 1894, a hard freeze hit Florida and killed all John Webb's citrus trees and ruined his sugarcane and other crops. He was too old to start again, so he began to sell portions of his property. He and Emily, along with Will, continued to operate Webb's Winter Resort. He also continued to serve the community, leading regular services each Sunday at Mary's Chapel and reciting the Declaration of Independence to celebrate each Fourth of July.

Both John and Emily died in 1908. They are buried in the Pioneer Cemetery next to Eliza. The Webb children and grandchildren operated Webb's Winter Resort for another year, but they had lives of their own, so the property was put up for sale. In 1910, the Webb homestead was purchased by a dynamic woman who would become another important figure in the history of the Sarasota area, Bertha Palmer.

Some Webb Family Biographies

Anna Webb

When the Webbs first arrived in 1867, they met a former soldier named Robert Griffith in the village of Manatee. Eldest daughter Anna Webb and Robert fell in love and were married at Spanish Point in the spring of 1868. They homesteaded a piece of land that also was made up of shell mounds, on Snead Island on the river in Manatee. Robert and Anna had three children: Florence, Walter, and Roseanna.

Ginnie and Lizzie Webb

In 1873, Will and Jack sailed to Cedar Key to take their sister Lizzie to the railroad station. Lizzie was going north to attend school. While at Cedar Key, the three Webbs met Frank Guptill. Frank worked for an insurance company and he was traveling south to investigate a shipwreck near Spanish Point. Will and Jack offered him a ride.

They soon discovered that Frank was a well-traveled sailor from Maine and an accomplished boat builder. Before the trip was over, they had talked Frank into staying in the area and helping the Webb family build a new boat. The boat, which became known as the *Vision*, took a whole year to build and cost more than a year's income. When finished, it was a beautiful 10 ton schooner. The completion of the *Vision* helped to establish Frank's boat building business on Little Sarasota Bay.

In the meantime, Frank fell in love with Ginnie Webb. They were married when she was 17, in 1877. About 18 months later, while Frank and Will were in Key West delivering produce, a pregnant Ginnie fell down the stairs and passed away. She was laid to rest in a clearing at the edge of the shell midden. This area became the family cemetery, now known as Pioneer Cemetery.

Frank mourned for almost two years. He later married Ginnie's older sister, Lizzie in 1881. Frank and Lizzie would spend the next 31 years together. Frank and Lizzie received 20 acres of land at the northern



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end of the Webb homestead as a wedding gift from John and Eliza Webb. Frank established a boatyard there, and he and Lizzie lived on one of the boats he had built while he was building a grand house for them overlooking the bay. The home was completed in 1901, and the Guptills helped out with Webb's Winter Resort by letting guests stay in rooms in their house. Their house still stands today and is known as the Guptill House.

Will Webb

Will Webb was a young man of 18 years old when his family made their move to Florida. The Webbs relied on him for many things and he worked right beside his father to establish their new home. Like all pioneers, Will developed many skills and talents – working the land, building the things they needed, fishing, and hunting. He once killed a panther that had strayed too close to the homestead, and a bobcat in the henhouse on the same day. He would often guide and assist Webb's Winter Resort visitors, from deer hunting along the Myakka River to gathering shell specimens from the bay for Smithsonian scientists. He also became an accomplished sailor and was often the family member who sailed off for the mail, delivered produce to markets in Cedar Key, Tampa and Manatee, or shuttled guests to and from the resort.

In 1877, Will married his third cousin, Marguerite Webb. Together they claimed their own homestead land along the bay and raised two children, Charles and May Belle (Mabel). Later, they developed and platted their property into today's community of Osprey. Will Webb continued to help run Webb's Winter Resort until selling the property to Bertha Palmer in 1910. He died in 1932 and is buried in the Pioneer Cemetery next to his wife.

Jack Webb

Jack Webb was nine years old when he arrived with his family at Spanish Point. He grew up in a young boy's paradise, surrounded by abundant fishing, hunting, and places to play and explore. Jack was the youngest boy in the family, but was often expected to perform feats beyond his age, like keeping panthers and bobcats away from the henhouse or sailing on extended trips with his brother. Because of these expectations, Jack also learned many skills and became a local guide and fine craftsman. Jack took resort guests on hunting trips to the Myakka River area.

He married a local girl named Emma Andrews and they built a home at Spanish Point in 1885. His father-in-law, Dr. Andrews, became mixed up in a murder plot in the small village of Sarasota. While awaiting trial, Dr. Andrews broke out of jail and escaped to California. They soon followed the rest of the Andrews family to California. In 1890, Jack and his young wife sold their house to his father, and it became the dormitory of Webb's Winter Resort. He kept in touch with his Florida family through letters. Jack became a jeweler and lived the remainder of his life out west. He and Emma never had children.



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Mary & Mabel

In February of 1892, Mary Sherrill and her mother arrived at Webb's Winter Resort from Louisville, Kentucky. Mary, a young woman in her 20s, was suffering from tuberculosis. They hoped the warm Florida climate would cure her illness. Mary spent her days at Spanish Point enjoying the breeze and peaceful views of the bay from the top of the mound near Pioneer Cemetery. Sadly though, after five weeks Mary died.

Mary's family and friends wanted to mark the spot she had found so comforting in her final days. As a memorial, they decided to build a chapel next to the Pioneer Cemetery. The Sherrill family sent money for lumber and materials. Will Webb built the chapel designed by William Dutton, another guest at Webb's Winter Resort. Family and friends donated stained glass windows, a pump organ, a library of books, and various furnishings.

On September 25, 1895, a bell donated by Mary's friends at the New England Conservatory of Music, arrived for the chapel's steeple. On that very day, Will Webb and his wife Marguerite welcomed their baby daughter into their family. Mrs. Sherrill asked that the baby be named Mary Bell in honor of the occasion. Marguerite, though, preferred the name May Belle.

May Belle was teased on her first day of school when children mimicked the spelling of her name and called her "May Belly." She went home and told her family her new name was Mabel, which she used for the rest of her life.

To learn more about the history of Florida and the Sarasota area, visit selby.org and the following websites:

www.floridamemory.com
www.scgov.net/historycenter
www.sarasotahistoryalive.com
www.eyewitnesstohistory.com
www.myfloridahistory.org



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Activity: Visit Florida, Then and Now

Social Studies:

- SS.4.A.8.4 Explain how tourism affects Florida's economy and growth.
- SS.4.A.4.1 Explain the effects of technological advances on Florida.
- SS.4.G.1.2 Locate and label cultural features on a Florida map.
- SS.4.G.1.1 Identify physical features of Florida.
- SS.4.G.1.3 Explain how weather impacts Florida.
- SS.4.E.1.2 Explain Florida's role in the national and international economy and conditions that attract businesses to the state.
- SS.4.C.2.1 Discuss public issues in Florida that impact the daily lives of its citizens.
- SS.4.FL.2.2 Explain that people make choices about what goods and services they buy because they can't have everything they want. This requires individuals to prioritize their wants.
- SC.35.CS-CS.2.1 Solve age-appropriate problems using information organized using digital graphic organizers (e.g., concept maps and Venn-diagrams).

Language Arts:

- LAFS.4.RI.3.7 Interpret information presented visually, orally, or quantitatively (e.g., in charts, graphs, diagrams, time lines, animations, or interactive elements on Web pages) and explain how the information contributes to an understanding of the text in which it appears.
- LAFS.4.RI.1.1 Refer to details and examples in a text when explaining what the text says explicitly and when drawing inferences from the text.

Science:

- SC.35.CS-CC.1.1 Identify technology tools for individual and collaborative data collection, writing, communication, and publishing activities
- SC.35.CS-CC.1.2 Describe key ideas and details while working individually or collaboratively using digital tools and media-rich resources in a way that informs, persuades, and/or entertains.
- SC.35.CS-CC.1.4 Describe how collaborating with others can be beneficial to a digital project.

Teacher note: Part 1 of this activity should be done at the beginning of this module. Part 2 should be done at the conclusion of this module.

Part 1: Visit Florida Today!

Materials:

- Examples of travel brochures, posters, billboards, etc. These need not be strictly Florida sites or attractions.
- Word processing or desktop publishing software/ app; many have templates for flyers and brochures

Procedure:

1. Display the brochures or flyers for tourist attractions and ask if the students can identify them. Do any of them want to visit any of these places? Have any of the students ever been to any of these places?



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2. For the places the students would like to visit, ask them: Why do they want to go to that place? What do they know about it already? How did they learn about it? What would they want to know before they go? Where would they look for that information?
3. If there are places that students have visited, ask the students about their experiences: How did they first learn about it? How or why did they decide to go to these places? What activity was the most fun? What was the best place to eat? The best place to stay?
4. Display the brochures and flyers again. Discuss key features that make them attractive and interesting, provide necessary information, and make the location or event seem appealing
5. Using the student responses from above, create a list of the reasons people visit Florida
6. Discuss with students the economic impacts of tourism and its effects on Florida.
7. Divide students into pairs to create a travel brochure for the Sarasota Bay area using a word processing or desktop publishing app. The brochure can be general, or reference a specific attraction or event. If applicable, include the information a traveler would need, like transportation, rates or prices, dates, etc.

Part 2: Visit Florida, Way Back When

Materials:

- A word processing or desktop publishing app; many have templates for flyers and brochures
- Previous student work: posters and brochures created in Part 1 of this activity

Procedure:

1. Discuss with students what they learned in this unit, particularly the reasons that both homesteaders and tourists wanted to come to Florida and the Sarasota Bay area. Compare and contrast the reasons.
2. Create a list with students of the different attractions, locations, and activities that Sarasota Bay area visitors might have enjoyed while staying at Webb's Winter Resort in the last decades of the 1800s.
3. As a whole group, have students create a Venn Diagram to compare and contrast travel to Florida in the 1800s with travel and tourism today. Categories to compare and contract include transportation, accommodations, attractions/activities.
4. Divide students into pairs to create a "vintage" brochure using a word processing or desktop publishing app for a trip to the Sarasota Bay area and Webb's Winter Resort during the late 1800s. The brochure may feature one specific attraction or activity, or be more general. The poster should be attractive and informative, and include information a traveler would want to know in order to plan a trip.
5. Have students present both of their travel brochures or flyers to the class. Students should also discuss in their presentations how working with a partner helped them to create their final products.



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Activity: A video visit to Historic Spanish Point

Materials:

internet access: go to <https://youtu.be/oEzd6zWQWzg>

Procedure:

1. Show the video
2. In the video, there are several questions posed by hosts Amy and John. Stop the video at these points and have the students discuss their answers to the questions.
3. Inform the students that they will have the opportunity to explore the ways pioneer life was different and similar to our own, and to try their hand at pioneer skills.

Activity: A Picture is Worth 1000 Words: Using Primary Sources

Social Studies:

SS.4.A.1.1 Analyze primary and secondary resources to identify significant individuals and events throughout Florida history.

SS.4.A.1.2 Synthesize information related to Florida history through print and electronic media.

SS.4.A.4.2 - Describe pioneer life in Florida

Language Arts:

LAFS.4.RI.3.7 Interpret information presented visually, orally, or quantitatively (e.g., in charts, graphs, diagrams, time lines, animations, or interactive elements on Web pages) and explain how the information contributes to an understanding of the text in which it appears.

LAFS.4.RI.2.6 Compare and contrast a firsthand and secondhand account of the same event or topic; describe the differences in focus and the information provided.

LAFS.4.RI.3.8 Explain how an author uses reasons and evidence to support particular points in a text.

LAFS.4.RI.3.9 Integrate information from two texts on the same topic in order to write or speak about the subject knowledgeably.

LAFS.4.W.2.4 Produce clear and coherent writing in which the development and organization are appropriate to task, purpose, and audience.

LAFS.4.W.2.5 With guidance and support from peers and adults, develop and strengthen writing as needed by planning, revising, and editing.

LAFS.4.W.2.6 With some guidance and support from adults, use technology, including the Internet, to produce and publish writing as well as to interact and collaborate with others; demonstrate sufficient command of keyboarding skills to type a minimum of one page in a single sitting.

LAFS.4.W.3.7 Conduct short research projects that build knowledge through investigation of different aspects of a topic.

LAFS.4.W.3.8 Recall relevant information from experiences or gather relevant information from print and digital sources; take notes and categorize information, and provide a list of sources.

LAFS.4.W.3.9 Draw evidence from literary or informational texts to support analysis, reflection, and research.

b. Apply grade 4 Reading standards to informational texts (e.g., “Explain how an author uses reasons and evidence to support particular points in a text”).



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Materials:

- Internet access
- Pencil or pen
- Notebook

Teacher Background Information on Analyzing Photos:

(Taken from *Engaging Students with Primary Sources*, Smithsonian National Museum of American History Kenneth E. Behring Center)

Photographs provide us with images of past events. Today, historians study the content and the meaning of these visual images to locate information about a particular topic, time, or event. Photographs can convey countless details about life. For historians and for us, “A picture is worth a thousand words.”

Historians who study the everyday lives of anonymous people find photographs are an invaluable source. Sometimes photographs are the only means of reconstructing the material world and behavior of people who did not leave many written records.

Yet, photographs, like other primary sources, must be studied carefully and critically. While they appear to be the most objective and accurate of all primary sources, they MAY not be. Photographs are the product of many variables, including, the photographer’s intention, the user’s need, the viewer’s interpretation and the equipment’s technical abilities.

Photographers have the ability to manipulate, intentionally or unintentionally, the record of the event. It is the photographer—and the camera’s frame—that defines the picture’s content. Thus, the photographer chooses what will be in the picture, what will be left out, and what the emphasis will be.

The first steps in using photographs as a primary source are to identify the subject and content of the photograph, and the contextual information that may not be in the photograph, such as learning about the photographer. What was the photographer’s intention? Was the photographer hired for a specific purpose? Was the photographer a partial or seemingly impartial observer, an insider or an outsider?

Like all other primary sources, photographs must be studied in conjunction with other evidence. One must look at many photographs, related documents, and oral histories to determine if a photograph’s information is unusual or part of a larger pattern.

Procedure:

1. Divide students into pairs or small groups.
2. Discuss with students the value of primary sources for discovering and understanding the past.
3. Discuss with students some of the pros and cons of relying on images as a resource for studying history or culture. You may find it useful to compare historical images with images from today to elicit further critical thinking (for example, manipulated, edited, cropped, or carefully curated images on social media). Would a historian 100 years from now be able to come to accurate conclusions about our lives?
4. Refer to or display the chart below during the discussion or after the students offer their ideas. Can they think of any others? Do they have any experience of any of these?



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A Picture is Worth 1000 Words: Using Primary Sources to Understand History

PHOTOGRAPHS: PROS	PHOTOGRAPHS: CONS
<ul style="list-style-type: none"> ● Visual records of a moment in time. ● Efficiently convey many more details about people, places, objects, and events than written reports. ● Convey information that is best communicated in visual terms (eg., hair and clothing styles, colors, interior design). ● Can provide evidence of attitude, which is important to the study of people who did not leave many written records. ● Can stimulate personal interest or involvement of the viewer. ● Can be used to stimulate the memory of a participant, witness, or another viewer. ● Do not require knowledge of a particular language to understand what is happening. 	<ul style="list-style-type: none"> ● Not a complete or objective source: does not equate directly with the reality of the event itself. ● People, places, dates, and/ or the photographers are often unidentified. ● Reflect the bias or perspective of the photographer, including choices about: <ul style="list-style-type: none"> ○ what is included in the frame ○ the moment in time recorded ○ subject matter that the person or people present thought was important to record ○ whether or not to manipulate the people or objects in the picture ● Relationship of the photographer to the subject matter is often difficult to determine. ● The emotions and thoughts of those involved are often not clear or evident. ● Photographs must be studied in conjunction with other evidence. One must look at many other photos and/or other source materials to determine if the photo or its subject matter is typical, part of a pattern, or unusual in some way.

1. Tell the students that they will be playing the roles of historians and examining some photos of historic life in Florida.
2. Display the powerpoint slideshow or provide copies of the photos.
3. Have the teams select 2 or 3 images they wish to analyze. Provide time in class for students to complete an analysis of the images using the Analysis tool below.



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Primary Source Analysis Tool

FIRST IMPRESSIONS

Objective Observation	Subjective Observation	Prior Knowledge	Deduction
Describe what you see – people, forms and structures, the arrangement of the various elements. Avoid personal feelings or interpretations. Your description should help someone who has not or cannot see the image to visualize it.	Describe your personal feelings, associations, and judgments about the image. Always base your subjective response on something you see. For example, "I notice ____, and it reminds me of ____."	Record prior knowledge based on experience, study, assumptions, and intuition.	Make deductions (or educated guesses) based on your observations and prior knowledge.

TAKE A CLOSER LOOK

What?	<ul style="list-style-type: none"> ● What is it? Make a list of any objects in the photograph. ● What is happening in the photograph? Make a list of any activities you see. ● If there are people in the picture, what are they doing? ● What kind of clothing and hairstyles are being worn? ● Are there any animals in the photograph? ● Are there any signs, or lettering on buildings? What do the words say? What do they mean? ● Does anything appear unusual about the image or the language? ● What is the point of this particular photograph, or document and/or this archive as a whole? ● What is the bias of the source of this photo/ information? ● What do you think happened just before the picture was taken? ● What do you think happened just after the photograph was taken? ● What changes (like damage, color changes, obvious edits, etc.) can be seen? ● What might have caused the changes?
What Else?	<ul style="list-style-type: none"> ● What else could it be? ● What else could it mean? ● What else does it remind you of?



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Why?	<ul style="list-style-type: none"> ● Why did the event happen? ● Why was the photo taken/ document created? ● Why is this event and document/ photo important?
When?	<ul style="list-style-type: none"> ● What time of year is pictured? Time of day? ● When did the events happen? ● When was this photo taken/ item made/ story told/ document written? ● When was it found or collected?
Where?	<ul style="list-style-type: none"> ● Where did the(se) event(s) happen? ● Where was the photograph taken? ● Where was the photo made? Found? Collected (ie. stored in an archive) ● Where could you find more background information on this?
Who?	<ul style="list-style-type: none"> ● Who is depicted? Make a list of any people in the photograph. ● If people are in the photograph, what do you think their relationships are to one another? ● Can you speculate on any relationships between people pictured and anyone not in the picture? ● Who took the photograph? Why did they do it? ● Who else knew the people, or knew about the event depicted? ● Who still knows about the people or event?
How Many?	<ul style="list-style-type: none"> ● How many more items like this one can I find? ● How many people took part in or were affected by this event?
Which?	<ul style="list-style-type: none"> ● Which of these items is most important? ● Which of these items is related to something in your textbook or other secondary sources?
Other?	<ul style="list-style-type: none"> ● What is one thing you will remember most about this photograph? Why? ● What questions do you have about the photo that you can't answer by analyzing it? How could you find answers to these questions? Where would you go for more information?

This Image Analysis Form is adapted from the Library of Congress Primary Source Analysis Tool for Students at <http://www.loc.gov/teachers/>



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Part 2: Extra, Extra! Read-Write All About it!

1. Tell students to imagine they are a reporter for a Northern newspaper or magazine in the second half of the 1800s. Their editor has assigned them to write an article about pioneering in Florida. Their readers in the North are unlikely to know much, if anything, about Florida and are eager to know as many details as possible.
2. The pictures chosen in part 1 of this activity will be the photos that accompany their article. Based on analysis of the selected photos as well as what they know about Florida pioneer life, students should write a story to explain what Southwest Florida is like, and what peoples' lives are like. Students can use one or more of the internet sources below to learn more.
3. Students should not only include details about the people, events, or objects depicted in the photos, but connect them to the larger story of pioneer life in the second half of the 1800s.

floridamemory.com

myfloridahistory.org

sarasotahistoryalive.com

newtownalive.org/

museumoffloridahistory.com/

scgov.pastperfectonline.com/

dos.myflorida.com/library-archives/research/explore-our-resources/florida-history-culture-and-heritage/pioneer/

Extensions

- Students use the same process to study photos of other historic eras
- Students can use the same process to study written documents (such as letters or publications) either from the pioneer era or other eras of history.



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Activity: Pioneer Careers, Still Here Careers?

Language Arts:

LAFS.4.W.2.4 Produce clear and coherent writing in which the development and organization are appropriate to task, purpose, and audience.

LAFS.4.W.2.5 With guidance and support from peers and adults, develop and strengthen writing as needed by planning, revising, and editing.

LAFS.4.W.3.7 Conduct short research projects that build knowledge through investigation of different aspects of a topic.

LAFS.4.W.3.8 Recall relevant information from experiences or gather relevant information from print and digital sources; take notes and categorize information, and provide a list of sources.

LAFS.4.W.3.9 Draw evidence from literary or informational texts to support analysis, reflection, and research.

b. Apply grade 4 Reading standards to informational texts (e.g., “Explain how an author uses reasons and evidence to support particular points in a text”).

LAFS.4.L.1.2 Demonstrate command of the conventions of standard English capitalization, punctuation, and spelling when writing.

LAFS.4.W.2.6 With some guidance and support from adults, use technology, including the Internet, to produce and publish writing as well as to interact and collaborate with others; demonstrate sufficient command of keyboarding skills to type a minimum of one page in a single sitting.

Social Studies:

SS.4.FL.1.1 People have many different types of jobs from which to choose. Identify different jobs requiring people to have different skills.

SS.4.FL.1.2 People earn an income when they are hired by an employer to work at a job.

Explain why employers are willing to pay people to do their work

SS.4.FL.1.3 Workers are paid for their labor in different ways such as wages, salaries, or commissions.

Explain the ways in which workers are paid.

SS.4.FL.1.5 People can earn income by renting their property to other people. Identify different types of property (such as apartments, automobiles, or tools) that people own and on which rent is paid.

SS.4.FL.1.6 Describe ways that people who own a business can earn a profit, which is a source of income.

SS.4.FL.1.7 Entrepreneurs are people who start new businesses. Entrepreneurs do not know if their new businesses will be successful and earn a profit. Identify ways in which starting a business is risky for entrepreneurs.

Materials:

- Internet access to <https://www.bls.gov/ooh/>
- copies of the worksheet below
- a word processing program or app
- OR
- pens and pencils

Procedure:

1. Familiarize yourself with the Bureau of labor statistics’ website, and how to use the Occupation Outlook handbook <https://www.bls.gov/ooh/about/teachers-guide.htm>



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2. Review with students the different kinds of jobs done by the Webb family and other members of their community.
3. Have students choose 2 or 3 of these jobs (listed below) that they think they might enjoy, and do some research on the Bureau of Labor Statistics website <https://www.bls.gov/ooh/> to answer the questions below.
4. Have students discuss their findings and thoughts on these careers with the rest of the class
 - *AGRICULTURAL PACKING AND SHIPPING COMPANY OWNER John Webb*
 - *ARCHAEOLOGIST visiting Smithsonian scientists studying mounds at Spanish Point*
 - *ARCHITECT William Dutton, guest at Webb's Winter Resort, designer of Mary's chapel*
 - *BOATBUILDER (aka shipwright) Frank Gupstill, husband of Lizzie Webb*
 - *CARPENTER/ WOODWORKER Frank Gupstill, husband of Lizze Webb*
 - *CLERK OF COURT Robert Griffith, husband of Anna Webb*
 - *COOK Eliza, Lizzie and Ginnie Webb*
 - *FARMER John Webb, Robert Griffith and many other pioneers*
 - *FISHERMAN, the "Spanish Trader," Will and Jack Webb,*
 - *GARDENER Eliza, Lizzie and Ginnie Webb, and many other pioneers*
 - *HOTEL OWNER OR MANAGER (aka hotelier) John and Eliza & Emily Webb*
 - *HOUSEKEEPER Eliza, Lizzie and Ginnie Webb*
 - *JEWELER Jack Webb*
 - *PHARMACIST John Webb*
 - *POSTMASTER John Webb*
 - *TAILOR/ SEAMSTRESS Eliza, Lizzie and Ginnie Webb*
 - *TEACHER John Webb and other pioneer community members*
 - *TOUR GUIDE Will and Jack Webb*
 - *SHIP'S CAPTAIN/ BOAT CAPTAIN Will Webb*
 - *STOREKEEPER/SHOPKEEPER other community members*



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CAREER RESEARCH WORKSHEET

Career Title: _____

RESEARCH QUESTIONS:

Which Occupation Group does this career belong to?: _____

Career Description: _____

Do people work in this career today? If so, how many people? _____

How much does a person earn per year in this career today? _____

Is the career projected to grow, decline, or remain unchanged in the future? Why or why not? _____

What are some steps to take to help you to enter or advance in this career? _____

CRITICAL THINKING QUESTIONS:

Why would someone need or want another person to do this job? _____

What are the positive aspects of this career? _____

What are the possible negative aspects of this career? _____

Do you think this career is the same today as it was in the 1800s? If it is different, how? _____

How could you find out how much a person in the 1800s earned in this career? Were you able to find any data? _____



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Activity: Celestial Navigation aka Taking the “SEAnic” Route

Math:

MAFS.4.MD.3.6 Measure angles in whole-number degrees using a protractor.

Science:

SC.4.E.5.1 Observe that the patterns of stars in the sky stay the same although they appear to shift across the sky nightly, and different stars can be seen in different seasons.

SC.4.E.5.3 Recognize that Earth revolves around the Sun in a year and rotates on its axis in a 24-hour day.

SC.4.E.5.4 Relate that the rotation of Earth (day and night) and apparent movements of the Sun, Moon, and stars are connected.

Social Studies:

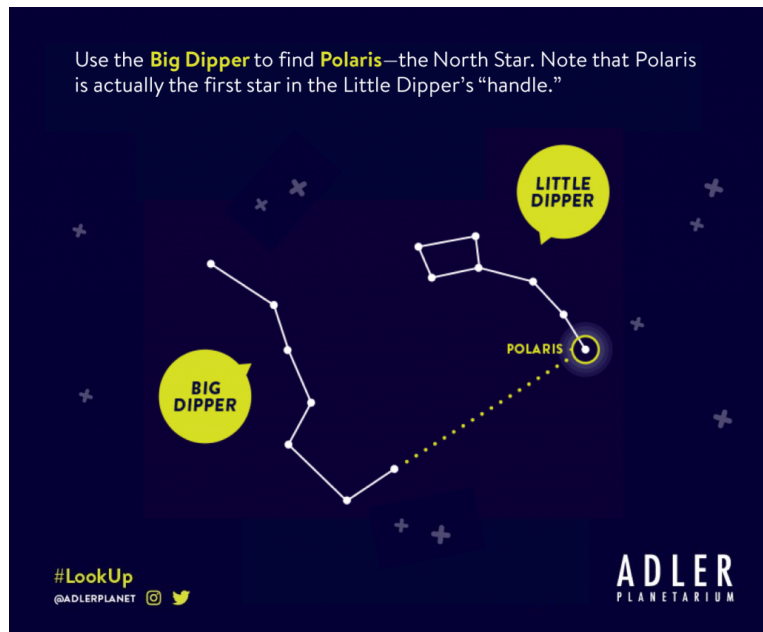
SS.4.G.1.4 Interpret political and physical maps using map elements (title, compass rose, cardinal directions, intermediate directions, symbols, legend, scale, longitude, latitude).

Teacher Background Information: Some History of Navigation

Exploration and travel by water was very important throughout much of history as well as for pioneers in Florida. In the central and southern parts of the state, there were few roads and no railroads until the early 20th Century. Knowing how to sail, row, and navigate bodies of water were critical skills. Following a river or coastline is one way to plan and stay on a route. Venturing out into the open ocean or into unknown waters, though, meant there were no landmarks, and no direct, predetermined or familiar routes from Point A to Point B. Long-distance sailing (and overland travel, for that matter) required a reliable and predictable means of navigation.

Explorers long ago recognized that the sun and the stars were fixed in the heavens and could be seen wherever one might venture; hence, these celestial bodies became the navigator's most reliable tool. Here in the Northern Hemisphere, the major guide star is the North Star also known as Polaris.

The sun is easy to spot, but how do you find the North Star? As seen in the illustration, if you draw a straight line from the star at the tip of the Big Dipper's ladle to the bright star at the end of the handle of the nearby Little Dipper, you will see Polaris!



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Like the sun and the moon, stars appear to move from east to west. Simply tracking their movement across the night sky should tell you which way you're facing. As well, when you move south, Polaris will appear to move closer to the horizon, and when you move north, Polaris will appear higher in the sky.

A compass is another time-honored method of determining direction. The Chinese, Olmecs, and Greeks knew about magnetism and the tendency of a magnet to align itself in a north-south direction as early as 2000 years ago. Compasses built specifically to aid in navigation began to appear about 1000 years later. Early compasses consisted of an iron pin that was struck by a lodestone (a naturally magnetic stone) and then mounted in a small box, hung by a thread or floated in water. Students will be creating a version of the latter in this module!

By the time of the pioneer era in the United States, compass design and reliability had improved substantially, but locating the North Star continued to be (and still is today) an important means of determining direction. As it turns out, Polaris is always located directly above the North Pole, within about 1°.

Like direction, latitude is fairly easy to measure. The easiest method is the use of Polaris as a guide star. Because Polaris is located above the North Pole, a traveler's latitude is the angle of elevation of the North Star relative to the horizon. One of the most reliable and useful instruments for taking this reading (and others) is the sextant, which was refined about 100 years before the pioneer era in the US - and still in use today. This method is so simple to use, in fact, that students should have little problem determining their latitude using the rudimentary sextant that they will create in this module!

While these celestial navigation methods work well enough to keep a mariner more or less on course, precision is key. For latitude, just a 1° difference in measurement means a distance 60 nautical miles (69.1 miles)! The better your measurement, the better you will know your actual location. Further, magnetic North and true north (the actual location of the North Pole) are different owing to shifts in the earth's magnetic fields. The difference is called "declination" which can be quite significant depending on your relative location. (As of this writing, declination for Sarasota County was ~ 5° W). While knowing your declination isn't necessary for the activity in this module, interested students can calculate it on NOAA's website, here <https://www.ngdc.noaa.gov/geomag/calculators/magcalc.shtml?#declination>

Part 1: Find Your Way with a DIY Compass

Materials:

- several corks pre-cut crosswise into ~ ½ inch discs.
- pliers and/ or thimbles to be distributed to each student/ pair, or used by the teacher, rotating through the classroom, to push needles through the cork pieces one per student, or pair of students.
- pre-cut cork disc
- sewing needle
- magnet (flat refrigerator magnets are fine, but stronger magnets work better)
- wide cup or bowl
- Water



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Note: Keep magnets away from other magnets and electronic devices, such as computers, cell phones, Smartboards and TV screens.

Procedure:

1. Review with students what they already know about cardinal directions and compasses.
2. Discuss with students the challenges pioneers experienced while traveling without smartphones or GPS.
3. Elicit student thoughts on how navigation and traveling by water, as most pioneers did in central and southern Florida before the 20th Century, might present different challenges to travel over land.
4. Introduce the concept of celestial navigation.
5. Tell students that a compass is one way pioneers and other early travelers figured out what direction they were traveling in, and that they will be making their own compass to determine directions.
6. Have students work individually or in pairs, and distribute materials. Instruct them to follow these steps:
7. Holding the end of the needle, and using a swipe motion, run the length of the sewing needle along the magnet about a dozen times. Always swipe the needle in the same direction against the magnet. If you are using a weaker magnet, such as a flat refrigerator magnet, you may need to double the number of swipes. Your needle should now be temporarily magnetized.
8. Laying the cork disk on a flat surface, VERY carefully push the needle through the rounded side of the disk by using a thimble or a pair of pliers. Push the needle all the way through the disk so that about the same amount of needle is sticking out from both sides
9. Fill a wide cup or bowl with at least one inch of water.
10. Float the cork-n-needle on the water, flat side up. Try to keep the disc in the center, away from the sides of the cup. Congratulations, you have a compass!
11. Ask students to describe what they see the needle doing. When it stops moving, what direction does it point toward?
12. Using a real compass, a map, or a GPS app, have students confirm what direction north is. Did the DIY compasses point in that direction?

Critical thinking questions:

- Did the needles in the DIY compasses align themselves along the Earth's north and south poles?
- What is the science behind this? Why did the compass do what it did?
- Did any compasses not work as expected? If so, why might this have been?
- Could you make a compass with a needle that always points its tip to the South?
- Are there any limitations or disadvantages to using a compass like this? What about real compasses?

Extensions:

- If you have magnets with different strengths, such as a flat refrigerator magnet and a rare earth magnet, compare compasses that were magnetized with different magnets. How well do the compasses work compared with one another?
- Place a magnet next to the compass. What happens to the needle as the magnet is moved close to it? How close does the magnet need to be to affect the compass? Try this with a metal object.



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- Make compasses using materials other than cork: For example, threading the needle through a small circle of wax paper, or placing the needle on top of a small leaf. How does a compass made using paper or a leaf compare with one made using a piece of cork? How else could you make a magnetic compass?

Part 2: Determining Latitude with a DIY Sextant

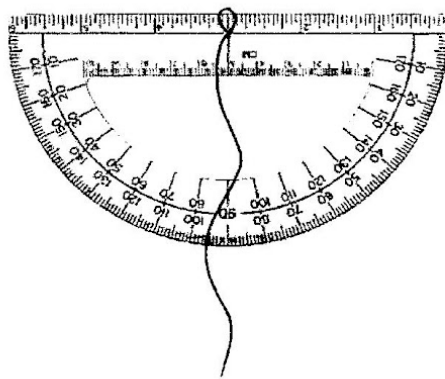
Materials:

One per student or pair of students:

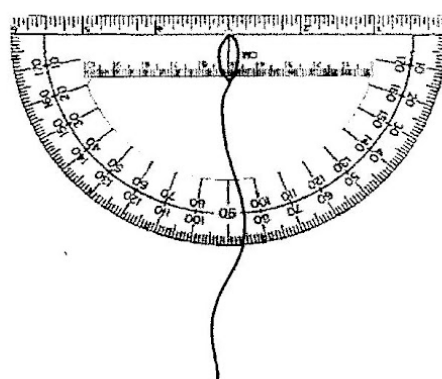
- protractor
- string or fishing line (works best if string is at 2x as long as the protractor is wide)
- a weight such as a steel nut, a washer, a large bead or a large paperclip.
- drinking straw
- tape

Procedure:

1. Discuss with students what they already know about latitude and longitude
2. Elicit student thoughts about why knowing their latitude and longitude coordinates is important, and how the Webb family and other Florida pioneers who traveled by boat might figure out their coordinates without a GPS.
3. Ask students if they have ever heard of a sextant. You may wish to display the photo of this sextant in the collection of the Florida maritime Museum <https://www.theclio.com/entry/103506/tour/5>
4. Ask students if a sextant reminds them of something they have seen before? Have them take out their protractors. Tell the students they will be making a sextant and finding the latitude of the schoolyard, classroom, or other location
5. Have students work individually or in pairs and distribute the materials. Follow these directions:
6. Turn the protractor upside down, so that the straight edge faces up.
7. Tie one end of the string through the hole in the center of the protractor. Be sure that the string is tied like the image on the right.



Incorrect



Correct

8. Tie the weight to the other end of the string.



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9. Tape the straw along the straight edge of the protractor.
10. If indoors or unable to see the North Star, pick an object above head-level to stand in for the North Star.
11. Look through the straw of the sextant and locate the object.
12. Once the object is in focus, hold still until the weight stops swinging. Have your partner read the angle on the protractor. If working individually, once the string stops moving, hold it in place along the protractor by placing a finger over it
13. Read the angle. The angle is determined by where the string is resting.
14. Determine your latitude, with this simple formula: 90 minus angle of the object. For example: If the object was spotted at an angle of 70° , the angle of elevation is 20° (or $90 - 70$).
15. Look up the latitude on a map, or with a GPS app to see where you may be. How accurate was the sextant reading? What might account for any variation?

Extension:

On the next clear night, try to find Polaris and measure latitude from different locations, such as from home or a park according to your homemade sextant. How does the latitude differ?

Advanced Student Extension:

Have students do some research to find out how a pioneer sailor or other early explorer might determine longitude without a GPS, and to find the longitude of their own location.



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Activity: Frank Guptill's Boatbuilding Challenge, aka Whatever Floats Your Boat!

Math:

MAFS.4.NBT.2.4: Fluently add and subtract multi-digit whole numbers using the standard algorithm.

Social Studies:

SS.4.FL.1.2 People earn an income when they are hired by an employer to work at a job. Explain why employers are willing to pay people to do their work.

SS.4.FL.1.3 Workers are paid for their labor in different ways such as wages, salaries, or commissions. Explain the ways in which workers are paid.

SS.4.FL.2.2 Explain that people make choices about what goods and services they buy because they can't have everything they want. This requires individuals to prioritize their wants.

SS.4.FL.2.4 Discuss that whenever people buy something, they incur an opportunity cost. Opportunity cost is the value of the next best alternative that is given up when a person makes a choice.

SS.4.FL.2.5 Explain that costs are things that a decision maker gives up; benefits are things that a decision maker gains. Make an informed decision by comparing the costs and benefits of spending alternatives.

SS.4.FL.2.6 Predict how people's spending choices are influenced by prices as well as many other factors, including advertising, the spending choices of others, and peer pressure.

SS.4.FL.2.7 Planning for spending can help people make informed choices. Develop a budget plan for spending, saving, and managing income.

Science:

SC.4.N.3.1 Explain that models can be three dimensional, two dimensional, an explanation in your mind, or a computer model.

SC.4.N.1.8 Recognize that science involves creativity in designing experiments.

SC.4.P.10.4 Describe how moving water and air are sources of energy and can be used to move things.

SC.4.P.12.1 Recognize that an object in motion always changes its position and may change its direction.

SC.4.P.12.2 Investigate and describe that the speed of an object is determined by the distance it travels in a unit of time and that objects can move at different speeds.

SC.4.N.1.6 Keep records that describe observations made, carefully distinguishing actual observations from ideas and inferences about the observations.

Materials:

- copies of student pages, below
- popsicle sticks
- aluminum foil
- paper
- glue
- drinking straws
- corks
- paper clips
- tape
- rubber bands
- ruler to measure lengths of tape and rubber bands
- tags or card(s) to list prices of items



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- Lumber (popsicle sticks) =\$50 each
- Sheet Metal (aluminum foil) =\$25 persheet
- Sail Cloth (paper)= \$20 per sheet
- Welding material (glue) =\$50 bottle
- Reinforcements (straws, paper clips) =\$25 each
- Buoys (corks) =\$50 each
- Cable and rope (rubber bands, tape) =\$10 per inch
- stopwatch
- tape measure
- electric fan or hair dryer (optional)
- test “ocean” :kiddie pool or a plastic bin at least 18” long and 6” deep. An outdoor body of water is even better! If testing the boats indoors, have towels or a mop on hand!
- cargo: dried beans, pennies, small rocks, marbles, etc. It is best if all cargo is identical.

Procedure:

1. Set up the test ocean by filling the pool or bin with water. Affix the measuring tape to the pool, with 0 at the starting line. Display the building materials and their prices.
2. Begin the lesson by asking, how many students in the class have been on a boat? What types? Continue with a discussion of different types of boats and their purposes. (Raft, kayak, battleship, speed boat, barge, sail boat, etc.) Discuss different sizes, shapes, and how boats have been used by people throughout history.
3. In pioneer Florida, boats played a very important role in the lives of the people who lived here: Until the very late 1800s, water was the best way to travel. (recall the information in the teacher background section)
4. Ask the students what are the three things that every boat must do. All boats must float, carry cargo, and have a means of propulsion
5. Tell the students they are to imagine that they are Frank Guptill, a skilled boatbuilder who eventually married into the Webb family. Explain the activity and directions to the students. (See student pages below).
6. Present the “warehouse” of boatbuilding materials. Students must purchase at least one of each of the following: Popsicle sticks, aluminum foil, sheet of paper, and glue. All other materials are optional.
7. Students purchase their materials by subtracting the prices of their chosen items from their budget. They are only allowed to build their boats with items they purchase. They cannot buy from or trade items with a classmate, but they are allowed to modify items they’ve purchased.
8. Before students embark on building their own boats, remind them that their boat must pass the three main tests:
 - Does the boat float upright in water?
 - Does the boat carry cargo?
 - Is it successfully wind-powered?
9. Explain that there is no right or wrong way to build their boat and there are thousands of ways to use the materials to build a successful boat.
10. Remind students that they are creating models of something that, if successful, they will want to build again in the future. The students should record as they go!



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11. Make sure the students record their design (with as many details as possible, such as dimensions, materials, etc.) and that they don't just start building. These are very important steps, and it's easy to forget once time has passed.
12. While they are building their boats, ask students to think of a name for their boats. Go around the room and provide assistance where necessary.
13. When their boats are built, have the students come up to the test tank. Before testing their boats, ask each student:
 - The name of their boat
 - How much cargo is it supposed to carry?
 - Explain the rationale for the boat design before testing it.
14. Load the predicted amount of cargo. Record the amount of cargo and cost of materials for each model on the data sheet so that all students will be involved in determining the winner.
15. Test each boat in the three main areas (floating upright, cargo capacity, and propulsion).
16. For the wind, you can either have your students give one really good blow toward their boat or use a fan. If using a fan, please be careful with electricity near water. You will want to make sure the fan and the "ocean" are firmly anchored, or even assign a student as a fan monitor.
17. For boats that pass the test, you may wish to test them again with more cargo.
18. For extra math practice, graph all of the boats' data (cargo, distance, time) to find the average, the range, and best boat for the money.
19. When everyone is finished, ask each person or group about their observations during the boatbuilding challenge. If their boat was not successful, what modifications would they make next time? How did they feel about working within a budget? What changes would they have made if they had a bigger budget? A smaller budget?
20. Discuss modes of transportation today vs the transportation available to pioneers. What were some benefits and drawbacks to shipping goods via each mode? How about today?



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Student Page

“Whatever Floats Your Boat!” Frank Guptill’s Boat Building Challenge

The Problem:

Pioneer farmers in 1800s Southwest Florida made the most money by selling their fruit and vegetables in markets in the Northern states. Shipping by sea was the most efficient way to do so. They had to ship their produce to the ports in Key West or Cedar Key, where it was put on a bigger boat that sailed to northern ports like New York. This process might take weeks! The farmers did not get paid until the fruit and vegetables reached their final destination, and then only if it was fresh and undamaged. It was important, then, to ship as much as possible, as quickly and smoothly as possible. And of course, the boat must not sink or capsize in a storm!

The Challenge:

Imagine you are Frank Guptill. Will and Jack Webb help their father ship the family’s citrus crop to market, and they need a new boat. They want you to build a wind-propelled boat that sails quickly but is large and strong enough to carry many boxes of heavy oranges. They also have a limited budget. They’d like to see a model of your design before they decide to hire you.

Brainstorm, Design and Build!

Remember that a big part of this challenge is to create a model that will carry a lot of oranges and sail quickly, but it must also be economical to build. Choose your materials wisely.

You have a budget of \$700.00 to build your boat.

You *must* construct your model boat using at least one of each of the following materials:

- Popsicle sticks, aluminum foil, paper, and glue.

You may also use any of the following optional materials:

- straws, corks, tape, rubber bands, paper clips.

Consider the following questions as you plan your design:

Which materials work best in water?

What are some features of your design that will keep the boat upright?

What are some features of your boat that allow it to hold the most cargo?

What are some features of your design that will help the boat move quickly and smoothly?

Sketch your boat design and brainstorm ways that might make it meet the specifications, but also stay within the budget. Build your model and test it to see if you will get the job!



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Boatbuilding Challenge Design Sheet

Sketch your design and record the details- including costs- here.



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Boatbuilding Challenge Class Data Sheet

Boat Name	Total cost	Amount of Cargo Predicted	Amount of Cargo Carried	Distance	Time



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Activity: Pioneer Kids' Chores - Churning Butter, aka You Butter Believe It!

Social Studies:

SS.4.A.4.2 Describe pioneer life in Florida.

Science:

SC.4.P.9.1 Identify some familiar changes in materials that result in other materials with different characteristics, such as decaying animal or plant matter, burning, rusting, and cooking.

Teacher Background Information:

Pioneer children did almost as many chores around a homestead as the adults. Churning butter is a chore that an older child might have been in charge of. Students may be familiar with the typical butter churn used by American pioneers: the plunge churn (aka dash churn), which is a type of wooden barrel with a long wooden stick that moves up and down through a hole in the lid of the barrel. The stick itself might have had holes in it, or it could have crossed boards attached to the bottom, or a wooden circle with holes, similar to a potato masher. The agitation of the cream with this device caused the solids to separate from the liquid in the cream, and butter was the result. In this activity, students will make their own butter by replicating this chemical reaction with kitchen implements that are more common today.

Cream is an emulsion: a colloid (mixture) of 2 or more liquids that do not mix, where one liquid is in the form of tiny droplets, suspended in the other liquid. Cream is milk that contains a high percentage of fat in the form of fat globules, microscopic membranes filled with fat molecules. The protein in the milk keeps the fat droplets suspended. When you shake the cream you force the fat droplets to crash together. If they crash together with enough force, the membranes burst and spill out the fat molecules. Fat and water don't mix, so as the fat molecules burst from the membranes they will join to other fat molecules. At first, the free fat molecules are few and far between, so they have to align themselves with the neutral air molecules that have been forced into the cream as it's been shaken. When this happens, the air becomes trapped in the cream and forms whipped cream. As you continue churning, more globules burst and the freed fat molecules have plenty of other fat molecules to clump together with. The formerly fluffy whipped cream releases the trapped air and the fat solidifies into butter while the liquid buttermilk separates out. As this process continues, two new substances are formed: a solid (butter) and a liquid (buttermilk)! Science is delicious!

Materials:

- a mason jar or other (preferably transparent) container with a very tight lid. You may also opt to use one individual baby food jar per student.
- enough heavy whipping cream to fill jar(s) half full.
- 2 mixing bowls (or 2 small bowls per student)
- A spatula. If using baby food jars, students can use popsicle sticks or their (very clean) fingers instead of spatulas.
- Cold water
- Salt (optional)



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Procedure:

1. Bring cream to room temperature. Food safety precaution: make sure not to leave cream out for more than two hours.
2. Fill the mason jar about *halfway* with cream. Make sure the lid is on tight and start shaking the jar(s)! You may want to turn on dance music to get students jumping and dancing around to make “churning” easier.
3. After a minute or two of shaking, students will notice that the cream is becoming whipped cream. The shaking will begin to get slightly more difficult.
4. After several more minutes of constant shaking, the cream will begin to thump around in the jar and stick to the sides. At this point it will start to resemble thick curdled milk. Don’t stop shaking!
5. Soon, students will notice the fat in the cream clumping together, and spaces forming on the sides of the jar. Keep shaking!
6. Suddenly, the thickening cream will become very easy to shake. Shaking has separated the buttermilk out of the butter, and the fat sticks together in one big lump. Have students pour the liquid buttermilk into one of their bowls and continue shaking until no more buttermilk separates out and all the buttermilk has been poured into the bowl. You can drink the buttermilk or save it for recipes (any saved buttermilk should be refrigerated).
7. Have the students dump the lump of butter into the other bowl, and pour cold water over it. (just enough to cover the butter with water). The goal of the rinsing process is to remove any trapped buttermilk to prevent spoiling. Instruct students to press the butter against the side of the bowl to squeeze out any extra buttermilk. You may have to demonstrate.
8. When the water gets cloudy with buttermilk, have students pour the liquid out into a sink or large tub if a sink is not available. Cover the butter with more cold water, repeating until and the water stays clear.
9. Once the butter is fully rinsed, spread it on crackers or bread and eat! You may wish to add salt to improve taste.
10. While students are snacking, discuss the science behind making butter.



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Extension Activity or Assessment: Pioneer Jeopardy!

Social Studies:

SS .4.A.4.2 - Describe pioneer life in Florida

SS.4.A.1.2 – Synthesize information related to Florida history through print and electronic media.

Materials:

- Internet access to: <https://www.playfactile.com/floridapioneers/>
- Projection device, such as a Smartboard
- Answer key (below)

Teacher Notes:

- *When launching this game, Factile will show multiple options on some screens. Most of the displayed options are available with premium Factile subscriptions, but this game can be played without a subscription. The instructions for the free version are below.*
- *Teachers or a designated “game show host” will control this game. The answer key is below.*
- *The questions and answers are not necessarily covered in this module’s resources. Some answers may be found in other Florida history materials, while others may be new to students. For this reason you may wish to use this activity as part of a larger Florida Pioneer unit.*
- *This Factile game can only be played once. The questions will be the same in any subsequent game. You may wish to make your own version of this game with additional questions in order to play multiple games or elimination rounds*
- *If you do not have internet access, use the answer key to create an analog version of the game.*
- *If you are teaching remotely via video conference, the free version of Factile will only allow for 5 players. If students are video conferencing from home, teams will not be able to confer privately. You may wish to use the answer key below to create your own version of this game. If possible, you could divide the class into separate breakout rooms, each with up to 5 participants and one game show host.*
- *Players do not need to answer in the form of a question.*
- *To make the stakes higher, you may wish to offer a prize for the winning team.*

Procedure:

1. Click “Play Now.” Click on the number of teams or individuals playing the game (up to 5 in the free version) Click “No” when asked to play in buzzer mode (buzzer mode is available with paid subscription). Allow students to choose their avatars from the options presented, and click on the chosen avatars.
2. Determine how students will “buzz in” (raising hands, ringing a bell, blowing a kazoo, etc.)
3. Determine which team starts the game. (coin toss, draw straws, etc) The starting team begins the game by choosing a category and a dollar amount.
4. Click on the selected question and read it aloud. The team who “buzzes in” first (may or may not be the team who selected the first question) attempts to answer the question. If they get it right, click on the check mark on that player’s podium. The correct answer will display on the screen and they will earn the dollar amount assigned to the question. If they get it wrong, click on the X



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on their podium. They will lose the dollar amount, and the remaining players have a chance to answer the question by buzzing in. The process repeats until someone answers correctly.

5. If nobody answers correctly, the correct answer will be displayed when the last player's X is clicked. When the correct answer has been revealed and reviewed, click "continue." The game board displaying categories and dollar amounts will reappear and the process begins again. The team who last answered a question correctly gets to choose the next question.
6. Once all of the questions on the board have been answered you will enter "Final Factile". Players will wager a dollar amount to be won if they answer correctly, or lost if they answer incorrectly. Students must choose an amount less than or equal to the total amount of money they have earned. Players with \$0 or negative amounts will only be allowed to wager \$0. Once valid wagers have been entered for each player, click "Enter Valid Wagers" then "Play." The final question will be displayed.
7. Set a 30-second timer for students to decide on an answer. They should write down and submit their final answer to the teacher or game show host before time is up. if playing via video conference, students can also send a private message with their answer to the host. Announce each team's final answers, and click the check marks or Xs as appropriate. The dollar amounts will automatically be added or subtracted, and the winning team will be revealed.



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Florida Pioneer Jeopardy! Answer Key

Florida's Frontier

\$100 – What is a frontier? / *A frontier is uncharted territory; a place not yet explored.*

\$200 – True or False: Overall, pioneers got along great with the Seminole Indians. / *False. The pioneers had many issues with the Seminole Indians resulting in the 3 Seminole Indian Wars.*

\$300 – How long did pioneers have to stay on land received through the Armed Occupation Act? / *5 years*

\$400 – What is the legend behind the name, “cracker?” / *Some believe it came from the sound of the whip the cowmen used to herd their cattle.*

\$500 – True or False: Pioneers came to Florida before it became a state. / *True. They started moving to Florida in the early 1800s. The Armed Occupation Act of 1842 encouraged Americans to move south. Florida became a state in 1845.*

Good Cookin’

\$100 – True or False: Pioneers ate rodents. / *True. Squirrel soup was actually a thing!*

\$200 – True or False: Pioneers ate a lot of chicken and beef. / *False. The pioneers occasionally ate chicken and beef, but they needed to keep their chickens for eggs and their cows for milk. A large part of their meat came from animals they hunted.*

\$300 – What grain made up a huge part of their diet? / *Corn*

\$400 – True or False: Pioneers purchased most of their food from the general store. / *False. They had to grow most of their food with gardens and livestock as well as hunt native animals.*

\$500 – What were the most common animals the pioneers hunted? / *Answers will vary, but may include: deer, opossum, squirrel, turkey, alligator, turtle, various fish, raccoons and other small animals.*

Chores, Oh My!

\$100 – What time did pioneer women usually wake up to begin their daily chores? / *Before sunrise, between 4am and 5am.*

\$200 – Explain how pioneers washed their clothes. / *The clothes were boiled, then scrubbed with a wash board and lye soap. Afterwards, they were hung up to dry.*

\$300 – How long did it take for pioneers to wash their clothes? / *All day! Oftentimes, they would only wash their clothes once or twice a month!*

\$400 – What were typical chores for boys and men? / *Answers may vary but should include hunting, building, fixing, sowing the fields, clearing land and tending to the livestock.*

\$500 – What were typical chores for girls and women? / *Answers may vary but should include Cooking, washing laundry, growing the fruit and vegetable garden, tending to the livestock and making clothes.*

Home Sweet Home

\$100 – When the pioneers arrived on their land, was there already a house on their property? / *No. The land had to be cleared and the family had to build their own home.*

\$200 – How many rooms did a typical pioneer house have? / *1-2 rooms.*

\$300 – What are the benefits of having an outdoor kitchen or a kitchen not inside their cabin? / *Risk of fire and preventing the house from getting too hot.*

\$400 – What were the pioneer cabins made from (walls and roof)? / *Wood from the trees cleared from the property. The roof could be made from either palm fronds or wood shingles.*

\$500 – True or False: Neighbors would help families build their cabins. / *True.*

Final Factile

How many acres did the pioneers receive through the Armed Occupation Act of 1842? / *160 acres*



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