# The Journal of John James

**Educational Aspect** - This adventure involves using nature guides to learn about local plants, birds, and animals and John James Audubon.

Aligned Standards:

- K-LS1-1. Use observations to describe patterns of what plants and animals (including humans) need to survive.
- 1-LS1-1. Use materials to design a solution to a human problem by mimicking how plants and/or animals use their external parts to help them survive, grow, and meet their needs.*
- 3-LS1-1. Develop models to describe that organisms have unique and diverse life cycles but all have in common birth, growth, reproduction, and death.
- 4-LS1-1. Construct an argument that plants and animals have internal and external structures that function to support survival, growth, behavior, and reproduction.
- 5-LS1-1. Support an argument that plants get the materials they need for growth chiefly from air and water.

# Forgeries

**Educational Aspect -** This adventure involves learning about artwork and different ways to tell if the artwork is original or forged. They will also learn about UV light and ink and how curators use it to look for forgeries and damages.

Aligned Standards:

- 1-PS4-2. Make observations to construct an evidence-based account that objects in darkness can be seen only when illuminated.
- 1-PS4-3. Plan and conduct investigations to determine the effect of placing objects made with different materials in the path of a beam of light.
- 4-PS4-2. Develop a model to describe that light reflecting from objects and entering the eye allows objects to be seen.
- MS-PS4-2. Develop and use a model to describe that waves are reflected, absorbed, or transmitted through various materials.
- HS-PS4-3. Evaluate the claims, evidence, and reasoning behind the idea that electromagnetic radiation can be described either by a wave model or a particle model, and that for some situations one model is more useful than the other.
- HS-PS4-4. Evaluate the validity and reliability of claims in published materials of the effects that different frequencies of electromagnetic radiation have when absorbed by matter.
- HS-PS4-5. Communicate technical information about how some technological devices use the principles of wave behavior and wave interactions with matter to transmit and capture information and energy.*

# The Great Raft

**Educational Aspect -** This adventure involves learning about Captain Shreve and him designing a snag boat, what dredging is and why it is important, and how and why to use a transit.

Aligned Science Standards

- K-2-ETS1-1. Ask questions, make observations, and gather information about a situation people want to change to define a simple problem that can be solved through the development of a new or improved object or tool.

Aligned Social Studies Standards

- K.2.4 Recall facts about people of the past and present
- 2.1.5 Describe how the achievements of famous Americans, of the past and present, changed society
- 2.1.7 Describe how early explorers and settlers, American Indian nations, and western migration influenced the development of the United States
- 2.2.5 Describe how location, weather, and physical features affect where people live and work
- 3.1.2 Explain how technology has changed family and community life in Louisiana over time
- 3.1.3 Use distinctive vocabulary to sequence events related to Louisiana history
- 3.2.1 Explain how major explorers and leaders contributed to the early development of Louisiana
- 3.4.3 Describe how people have changed the land to meet their basic needs over time in Louisiana
- 3.4.5 Describe how humans affect the environment in Louisiana
- 4.2.2 Cite evidence to support the key contributions and influence of people in the history of the United States
- 4.3.1 Explain how inventions and new processes affected the lives of people, migration, and the economy of regions of the United State
- 4.6.2 Describe the human impact on the land and bodies of water of the five regions of the United States
- 8.2.5 Analyze causes and effects of major events and evaluate their impact on the growth and development of Louisiana
- 8.5.1 Describe how natural phenomena impact the physical environment of Louisiana

# Liquid Gold

**Educational Aspect -** This adventure involves learning about the different steps in how to drill for oil and what is needed to complete each step.

Aligned Standards:

- K-ESS3-3. Communicate solutions that will reduce the impact of humans on the land, water, air, and/or other living things in the local environment.*
- 4-ESS3-1. Obtain and combine information to describe that energy and fuels are derived from natural resources and their uses affect the environment.
- 5-ESS3-1. Obtain and combine information about ways individual communities use science ideas to protect the Earth's resources and environment.
- MS-ESS3-1. Construct a scientific explanation based on evidence for how the uneven distributions of Earth's mineral, energy, and groundwater resources are the result of past and current geoscience processes.
- MS-ESS3-3. Apply scientific principles to design a method for monitoring and minimizing a human impact on the environment.*
- HS-ESS3-1. Construct an explanation based on evidence for how the availability of natural resources, occurrence of natural hazards, and changes in climate have influenced human activity.
- HS-ESS3-2. Evaluate competing design solutions for developing, managing, and utilizing energy and mineral resources based on cost-benefit ratios.*

# The Blue Note

**Educational Aspect -** This adventure involves learning about different instruments and chords that are used with each instrument.

Aligned Standards:

- 1-PS4-1. Plan and conduct investigations to provide evidence that vibrating materials can make sound and that sound can make materials vibrate
- 1-PS4-4. Use tools and materials to design and build a device that uses light or sound to solve the problem of communicating over a distance.
- 4-PS3-2. Make observations to provide evidence that energy can be transferred from place to place by sound, light, heat, and electric currents.
- 4-PS3-4. Apply scientific ideas to design, test, and refine a device that converts energy from one form to another.
- MS-PS4-2. Develop and use a model to describe that waves are reflected, absorbed, or transmitted through various materials.
- 4-PS4-1. Develop a model of waves to describe patterns in terms of amplitude and wavelength and that waves can cause objects to move.
- MS-PS4-2. Develop and use a model to describe that waves are reflected, absorbed, or transmitted through various materials.

# Transmission

**Educational Aspect -** This adventure involves learning about different types of encrypted codes and cyphers including Morse Code, Caesar cipher, and Phonetic Alphabet that was used during 1940 in the Army and Navy during WWII.

Aligned Science Standards:

- 1-PS4-4. Use tools and materials to design and build a device that uses light or sound to solve the problem of communicating over a distance.*
- 4-PS4-3. Generate and compare multiple solutions that use patterns to transfer information.
- MS-PS4-2. Develop and use a model to describe that waves are reflected, absorbed, or transmitted through various materials.
- HS-PS4-5. Communicate technical information about how some technological devices use the principles of wave behavior and wave interactions with matter to transmit and capture information and energy.*

Aligned Social Studies Standards:

- K.2.4 Recall facts about people of the past and present
- 1.1.3 Compare and contrast lifestyles of the past to the present
- 2.1.5 Describe how the achievements of famous Americans, of the past and present, changed society
- 2.1.6 Identify historical turning points and describe their impact on students' lives using maps, documents, visuals, and technology
- 7.1.3 Analyze the causes and effects of key events and ideas in the development of the United States
- 7.1.5 Analyze primary and secondary sources to answer questions related to United States history
- 8.2.8 Investigate and describe the impact of World War II on Louisiana's social, political, and economic systems
- U.S. 4.9 Analyze major events, turning points, and key strategic decisions of World War II and describe how they affected the outcome of the war
- WH.6.6 Explain the origins, key individuals, battles, and major events of World War II