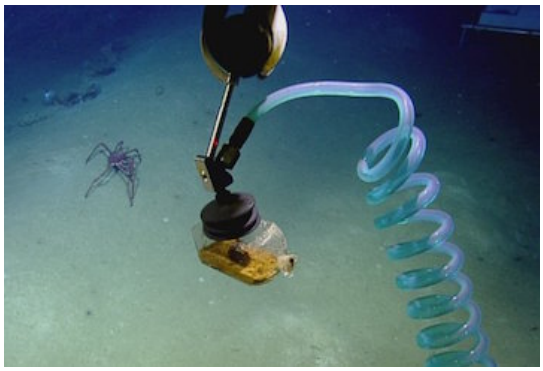
SHIPWRECK STORY | EDUCATOR

Links to Common Core Standards |
CCSS.ELA-LITERACY.WHST.6-8.1: Write arguments focused on discipline-specific content.
CCSS.ELA-LITERACY.WHST.6-8.2: Write informative/explanatory texts, including the narration of historical events, scientific procedures/experiments, or technical processes.

S T E M

Pacing | 2 - 3 class periods (45 minutes each)
Background Needed | Nautilus Exploration Program, sample shipwrecks, maritime history, history of ocean exploration
Assessment | Presentation Rubric provided
Materials/Resources |

- Internet access to reach video resources.
  - Shipwreck Highlights
    - http://nautl.us/2ea1kNA
    - http://nautl.us/2e1ZtKj
    - http://nautl.us/2e6gMOA
  - Artifact Recovery (http://nautl.us/2dl89gi)
  - Cannons (http://nautl.us/2dSpUUi)
- Supplies for creating visual stories- Large paper, markers, pens, flipbooks.
- Other digital tools for storytelling as available: video cameras, video editing software (Windows Movie, iMovie, etc.)



Overview

This module will give students an introduction to the Nautilus Exploration Program's maritime history and archaeology exploration. Students will use research and critical thinking to develop a graphic story about one of the shipwreck sites -originally thought to be one ship wreck, but later discovered to include three ships - explored by E/V *Nautilus* during the 2013 expedition in the Gulf of Mexico.

Objectives & Learning Outcomes

- Students will be able to discuss the causes of shipwrecks and relate them in a causal chain of events.
- Students will develop criteria for using visuals and text to convey different aspects of a story or event report.
- Students will take use data to make inferences and develop a possible hypothesis for the cause of a shipwreck.
- Students will be able to explain various research methods used by modern archaeologists to understand wrecks.

Guiding Questions

- How do shipwrecks happen?
- What roles do technology and human intelligence play in locating wrecks?
- How can the wreck of a ship, plane, or blimp be described as a story?
- What are the major sections of a dramatic nonfiction story?
- How can a nonfiction story be told through text, art, photography, video, and infographics?
- What common fiction elements (foreshadowing, rising action, climax, resolution) can be used to increase a sense of excitement and action in your story?

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Extensions & Adaptations

Introductory |

Group students and ask them to complete a shipwreck story together as a group. This will allow students just being introduced to the standards to be able to model and work within a group setting.

Advanced |

Give students more freedom to complete their infographic or story on any historical wreck or discovery, their research will be self directed.

Extension |

Ask students to develop a proposal to use the Nautilus technology and resources to search for another notable wreck of a marine site that has not yet been found. Challenge them to research the history of the 'lost' item and suggest possible locations to search, depths at those locations and other relevant details. Apply the same method to other discoveries that have occurred during the Nautilus Exploration Program.

Activity/Tasks

Students will:

- Collect images, data and written history of a selected shipwreck.
- Develop a timeline of events based on their data of what could have happened to the shipwreck.
- Use their timeline and data to develop a storyboard explaining the shipwreck.
- Present their story through their choice of medium:
  - one-page news article and photo
  - one-page comic
  - two-minute video
  - infographic poster

Educator: Lesson Procedure/Directions

1. Depending on access to technology either as a class or individually ask students to watch the video resources related to the Monterrey Shipwreck and discuss the wreck.
2. Students will then be asked to develop their own storylines and develop a timeline of events that leads to the series of 3 shipwrecks.
3. Students must check in with the educator at a series of benchmarks during their development of their final story product.
4. Ask students to present their stories to the rest of the class at the end and discuss any differences in their stories.

Student: Lesson Procedure/Directions

1. Watch the video resources associated with the Monterrey Shipwreck and develop a timeline of events they think best explains the wreckage found and possible history of the wreck.
2. Take notes on the videos to try and pick up on key details, facts, artifacts found and then infer what significance they might have to the story of the wreck.
3. Once you have viewed the videos to understand the wrecks write out your timeline for a series of events that led to the wreck.
4. Have your timeline approved by your teacher.
5. Once your timeline is approved decide on the format you would like to use to present your story:
    1. Comic/Cartoon drawings
    2. Infographic (examples at http://visual.ly/science-infographics)
    3. Website (if tech is available)
    4. News story (if tech is available)
    5. Other medium of student's choice pending approval
6. After completing a sketched out storyboard of your shipwreck get approval to move into the final draft.
7. Present your final draft to the class explaining the story, your justification of events and why you selected that format.

SHIPWRECK STORY | STUDENT

Learning Goals

- Discuss the causes of shipwrecks and relate them in a causal chain of events.
- Develop criteria for using visuals and text to convey different aspects of a story or event report.
- Use data to make inferences and develop a possible hypothesis for the cause of a shipwreck.
- Explain various research methods used by modern archaeologists to understand wrecks.

Check Your Progress

- [ ] Research the Monterrey shipwrecks using the video resources provided.
- [ ] Develop a storyline for the ships, why they were there and the reason they sank.
- [ ] Get approval from your teacher to proceed to develop a story board of your wreck.
- [ ] Get approval to move from story board to final product.
- [ ] Present your final product to your classroom.

Challenge: Uncover the story of a shipwreck, or three, discovered in the Gulf of Mexico and share your findings. How did they end up on the seafloor?

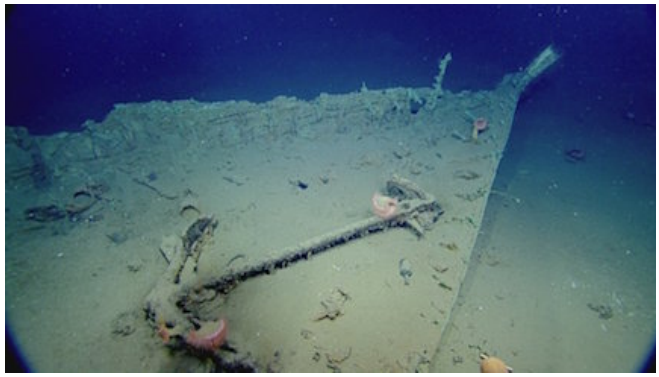
Introduction |

You will be exploring the world of marine archaeology, using clues to discover the origin and story behind a shipwreck found off the coast of Texas. Your mission is to review all of the data and materials that were discovered during the exploration of three shipwrecks. You will use evidence to develop your own ideas and timelines for what led to the ship's sinking. Turn your notes and data into a visual story of the wreck using the tools and materials provided by your teacher.

Procedure |

1. Watch the video resources associated with the Monterrey Shipwreck:
   - Shipwreck Highlights
     - http://nautl.us/2ea1kNA
     - http://nautl.us/2e1ZtKj
     - http://nautl.us/2e6gMOA
   - Artifact Recovery (http://nautl.us/2dl89gi)
   - Cannons (http://nautl.us/2dSpUUi)

   to develop a timeline of events you think best explains the wreckage found and possible history of the wreck.
2. Take notes on the videos to try and pick up on key details, facts, artifacts found and then infer what significance they might have to the story of the wreck.
3. Once you have viewed the videos, write out your timeline for a series of events that led to the wreck.
4. Have your timeline approved by your teacher.
5. Once your timeline is approved, decide on the format you would like to use to present your story:
   1. Comic/ Cartoon drawings
   2. Infographic (examples at http://visual.ly/science-infographics)
   3. Animation
   4. Film
   5. Web page
6. Create your story as a final draft.
7. Present your final draft to the class explaining the story, your justification of events and why you selected that format.



Presentation Rubric

OBJECTIVE	CRITERIA			
	4 Exemplary	3 Commended	2 Emerging	1 Developing
Organization |	Student presents information in a logical, interesting sequence which audience can follow. Student capitalizes on audience interest and background knowledge to enhance understanding.	Student presents information in a logical sequence which audience can follow. Student utilizes some audience interest and background knowledge to enhance understanding.	Student inconsistently presents information in a logical sequence which audience can follow. Student attempts to utilize audience interest and background knowledge to enhance understanding.	Student has difficulty presenting information in a logical sequence which audience can follow. Does not utilize audience interest and background knowledge to enhance understanding.
Content Knowledge |	Student does not rely on notes or memory aids; demonstrates full knowledge by answering questions with extended explanations and details.	Use of notes or memory aids is minimal; demonstrates knowledge by answering all questions; may fail to elaborate.	Student frequently relies on notes or memory aids; able to answer rudimentary questions.	Student does not have grasp of information; notes or memory aids may be heavily relied upon; student is unable to answer questions.
Delivery and Audience Engagement |	Student uses a clear voice and correct, precise pronunciation of terms so that all audience members can hear. Maintains eye contact with audience. Relaxed and polished delivery style enhances presentation.	Student uses a clear voice and correct, precise pronunciation of most terms. Maintains eye contact with audience most of the time. Confident delivery style.	Student inconsistently uses a clear voice and correct, precise pronunciation of terms. Occasionally maintains eye contact with audience. Student has difficulty presenting confidently.	Student does not use a clear voice. Correct, precise pronunciation of terms is weak. Minimally maintains eye contact with audience. Student has difficulty presenting confidently.
Graphics, Visual Aids, and/or Products |	Resources carefully prepared to enhance presentation; easy for audience to read and/or view; demonstrates creativity; contains no grammar or spelling errors.	Uses resources to relate to presentation; easy for audience to read and/or view; some creativity exhibited; may contain minor grammar or spelling errors.	Occasional use of resources which enhance presentation; may be distracting to audience or may be difficult to read or view; little creativity exhibited; contains grammar or spelling errors.	Minimal use of resources to enhance presentation; may be distracting to audience or may be difficult to read or view; Little to no creativity exhibited; Contains grammar or spelling errors.
Total Score: _____	**Comments:**			

How Large is Nautilus Nation?

Tracking the reach of Ocean Exploration Trust's education programs is essential in ensuring we are funded to continue making discoveries and inspiring the next generation of explorers.

Name: **My Community (City, State):**

Email Address:

School's Name:

Instruction date: **Grade level instructed:**

Subject area:

My education space is a...

- ❑ Classroom
- ❑ After school program / Club meeting
- ❑ Fair / Festival / Event
- ❑ Museum / Science Center
- ❑ Other. Tell us more:

Who did you engage in your teaching?

Students

Community Members

Select all the OET materials you used in your instruction:

- ❑ STEM Learning Modules. Which ones? _____
- ❑ Digital Resource Library materials. Which ones? _____
- ❑ Nautilus Live website: photo albums ❑ highlight videos ❑ live stream
- ❑ Meet the Team STEM mentor profiles
- ❑ Facebook (NautilusLive) ❑ Twitter (@EVNautilus) ❑ Instagram (@nautiluslive)
- ❑ Other. Tell us more: _____

_____

What made working with OET resources valuable to your instruction (select all that apply)?

- ❑ Hands-on activities ❑ STEM career connections
- ❑ Easy to use lessons ❑ Standards-based lessons
- ❑ Website resource access ❑ Real world application of curricula topics
- ❑ Excitement of cutting-edge discoveries / Unfamiliarity of deep ocean
- ❑ Another reason. Tell us more: _____

_____

Using OET resources increased my confidence in teaching my science, technology, engineering, or math subjects.	❑ Yes	❑ No
OET provided me with helpful and relevant teaching resources.	❑ Yes	❑ No
Using OET resources increased my awareness of STEM careers.	❑ Yes	❑ No
If yes, how so? How can we improve?		

Please scan this document or snap a picture of it with your phone. Email the feedback or questions to education@oet.org. You can also submit feedback online: http://nautl.us/2cp3PNu

Thank You For All You Do!