



Treasure Hunting: Secrets of the Deep

Grades 3 - 5

*This lesson is written to be completed independently
and is recommended for children in grades 3-5.*

In this Lesson Plan, students will learn about treasure hunting and marine archeology by listening and reading books, exploring databases, inventing, and more! This Lesson can be simplified or made more complicated as desired.

This lesson contains activities that have been connected to Missouri Learning Standards using the Missouri Department of Elementary and Secondary Education (DESE) guidelines. Although these lessons have been connected to a state learning standard, they are not intended to replace the educational curriculum provided through public, private, or at-home learning.

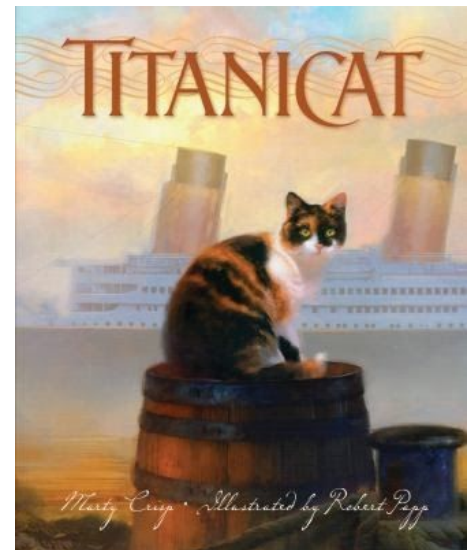
To access videos and databases, click on the hyperlinked text in the lesson plan. An active Christian County Library card is necessary to access select activities. For help, email youthservices@christiancountylibrary.org or call your local community branch.

1. Introduction to the Lesson

- a. Listen to a library staff member [introduce the lesson](#).
- b. Print out the documents and handouts to have ready for the lesson and gather any needed supplies.
- c. Dictionary.com defines marine archeology as, “The branch of archaeology that deals with the recovery of ancient objects found beneath the sea, as shipwrecks or remains from submerged islands, and with the techniques of underwater exploration, excavation, and retrieval.” In other words, marine archaeologists are underwater history detectives and artifact preservers.
 - i. Use Handout A to write about what you think a day in the life of a marine archeologist would be like. Don’t worry! This is a prediction exercise that only allows you a little bit of information. You will learn more as you go through the lesson. At the end of the lesson, go back to this activity and write about what you predicted correctly, what was incorrect, and what needs more research.
 - ii. SDEE Standard: Listen for a purpose 1.A.b; Writing 2.B.a.b.c.;

2. Listen and Write

- a. Listen to a library staff member read [“Titanicat” by Marty Crisp](#)
 - i. Writing Prompt: What event led to Jim leaving the ship? Would Jim have left the ship without 4-0-1? Write about your pet or a pet you know aboard the Titanic. Do they escape like Titanicat? Do they end up saving the ship?
 - ii. DESE Standard: Speaking/Listening 1.A.b; Reading 1.C.b.; 3.A. c.; Writing 2.B.a.b.c.



3. Treasure!

- a. If someone asked you to define the word “treasure,” what would you say?
- b. Many people would define treasure in a number of different ways, but all of them would agree that treasure is something that *has value to them*. This lesson focuses on treasure hunters and marine archaeologists, so let’s try to figure out how each of them would define “treasure.”
- c. Watch this [video](#) about one family who hit \$1 million in gold while treasure hunting.
 - i. Optional Discussion: Listen closely to the ending. Do they get to keep all \$1 million they found? Between how many people did they have to divide the \$1 million? How long did it take them to find the treasure? You may not know the exact answers to these questions, but you have enough information now to answer the next question: After considering all of this, do you think it is easy to make a lot of money as a treasure hunter?
- d. Compare the video you just watched to this [video](#) of a marine archaeologist. What is he excited about?
- e. Discussion: After watching both of these videos, how do you think treasure hunters would define treasure? What about marine archaeologists?
 - i. DESE Standard: Reading 3.C.e.; Speaking/Listening 1.A.b., 3.A.c



4. Watch and Discuss

- a. Watch [these videos](#) about Maritime Archaeology that include some of the most famous shipwrecks that have ever been discovered.



- i. Discussion: Why do you think scientists look for things at the bottom of the ocean? How has technology helped these archaeologists? What are some reasons marine archaeologists want to preserve these places?
- ii. DESE Standard: Speaking/Listening 1.A.b.

5. Art and Imagination!

- a. Imagine a sunken city, shipwreck, or other historical underwater site. Where in the world is it located? When did it happen? Who was there? What happened to them? After you have decided all this, create a unique piece of art depicting your imaginary historical site. Use paint, pencils, paper or whatever you want! You could even make a diorama if you want. You decide.
 - i. DESE Standard: Art VA.Cr.1.A.k

6. Ethics and the Atocha

- a. Learn about how the famed Spanish treasure ship Galleon, Nuestra Señora de Atocha (or the Atocha for short) was found in this [video](#).



- b. Search “shipwrecks” on [Explora Elementary](#). Select the book “Shipwrecks” by Nick Hunter and read pages 16-23. The last page talks about a common controversy: is treasure hunting and bringing artifacts back to the surface right or wrong? Some people believe it is wrong, because it disturbs a place where people died and is a historical site that should be left as it is. Other people believe the artifacts should be rescued and studied to learn more history and about the people who were there. They also believe the artifacts should be on

display for other people to learn about history and know the stories of the people the artifacts used to belong to.

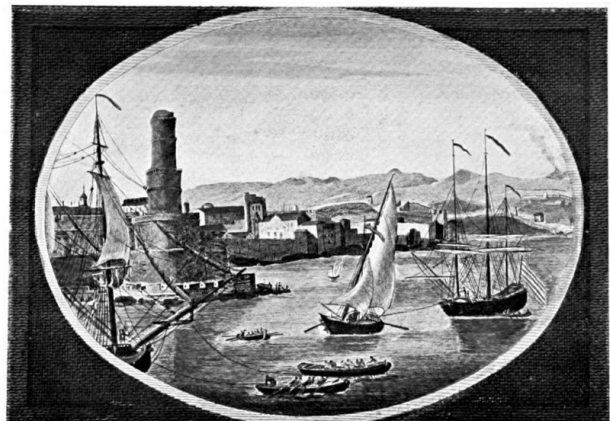
- i. Discussion: What do you think about this controversy? Do you think historical sites should be left alone or preserved? Or do you think there is another option that hasn't been mentioned here?
- ii. DESE Standard: Speaking/Listening 1.A.b.

7. Titanic STEAM Activity

- a. The Titanic is possibly the most famous shipwreck of them all. On April 10, 1912, the mammoth luxury liner hit an iceberg and sank. The Titanic was said to be “unsinkable” because of the state-of-the-art design of the bulkheads (watertight walls). This design localized the damage. In other words, if one section of the ship was damaged and water was leaking in, it would stay in a compartment, instead of continuing to flow into the rest of the ship. Unfortunately, the walls were not high enough in these compartments, which caused water to flow over the walls into other compartments. Additionally, the iceberg gouged a long line of damage through the side of the ship, allowing water into too many of the compartments for the ship to stay afloat. The iceberg that caused all this was large. If the iceberg was so large, why didn't Titanic see it?
- b. Using Handout B, do an iceberg experiment to help you understand why.
 - i. DESE Standard: Geometry and Measurement: Measure or estimate length, liquid volume, and weight of objects.

8. Cooking Activity

- a. A modern day Atlantis is buried off the shores of [Port Royal, Jamaica](#), and it was once home to many pirates! An earthquake, a tsunami, and a strange

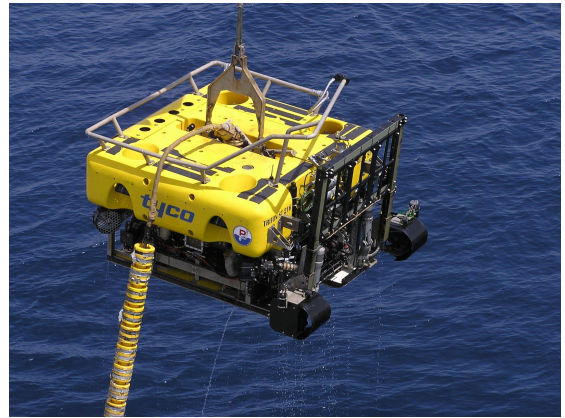


scientific phenomenon known as [liquefaction](#) sank two-thirds of this pirate city into the ocean, preserving the town in time. It is a [marine archaeologist's dream](#)!

- b. Hop onto [A to Z World Food](#), select “Jamaica” and look through the appetizer recipes. Pick one (or several!) and make it. What do you think? Does it taste different than anything you’ve had before or does it taste like something in your culture? Did you like it? Why or why not?

9. Dive Into Technology

- a. Did you know technology is a huge part of marine archaeology and treasure hunting? Often artifacts and shipwrecks lie in hostile and hard to access places for humans. Additionally, many clues are buried under the ocean floor. Skim through these [exploration tools](#) (click on “marine archaeology”) and then dive a little deeper into the ones that are interesting to you.
 - i. Discussion: Which one was your favorite and why? Would you ever want a job that would let you use or build this technology?
 - ii. DESE Standard: Reading 3.A.b.c.d; Speaking/Listening 1.A.b.



10. Invent It!

- a. Using Handout C, invent a new tool that will help marine archaeologists and treasure hunters preserve their precious artifacts. Draw a schematic (a design for your invention) and write about what it does, how it works, and how it will help rescue artifacts from the water.
 - i. DESE Standard: Writing 2.B.a.b.c.

11. Optional Activity

- a. Visit a museum with marine artifacts such as the [Shipwrecked Treasure Museum](#) in Branson, the [Titanic Museum](#) in Branson, or the [Arabia Steamboat Museum](#) in Kansas City.
- b. Too expensive? Create your own museum with artifacts you create or things you find in a local body of water, such as a river, creek, lake or pond. Be sure to have signs explaining what the artifacts are and why they are important. Then, have your friends or family take a tour!
 - i. DESE Standard: Art VA.Cr.1.A.k



➤ **Explore more! Here are some optional links for more learning and fun!**

- [Monitor National Marine Sanctuary](#)
- [National Maritime Historical Society](#)
- [NOAA Marine Archaeology Lessons](#)
- [Papahānaumokuākea Marine National Monument](#)

➤ **Learning Standard**

- c. The learning standards attached to each activity can be found at the following links:
 - i. [Missouri Learning Standards/Missouri Department of Elementary and Secondary Education \(DESE\)](#)

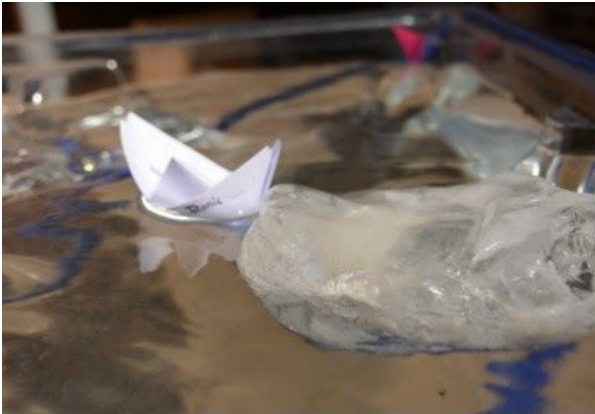
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Titanic STEAM

Adapted from: <https://www.science-sparks.com/titanic-science-make-an-iceberg/>

The Titanic famously sank on the 14th April 1912 in the North Atlantic Ocean after colliding with an iceberg. This activity models how an iceberg sits in the ocean and explains one of the reasons why the iceberg that collided with Titanic wasn't spotted until it was too late!



Titanic Science Make an Iceberg



MATERIALS:

- Balloon
- Water
- Ruler
- Water filled container
- "Boat" (Can be made of paper, aluminum foil, etc.)

INSTRUCTIONS

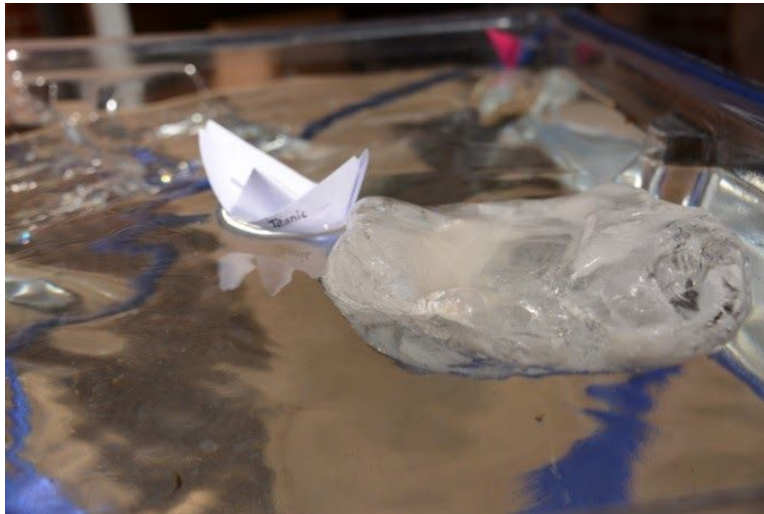
1. Fill a balloon with water, fasten the end, and leave in a freezer until frozen.
2. Once frozen, carefully cut away the balloon and discard.
3. Place the iceberg into your container of water.
4. Measure how much of the iceberg is above and below the water.

WHY DOES THIS HAPPEN?

Did you know around 90% of an iceberg is underwater? Is this the same for your iceberg? So much of an iceberg is under water because water expands as it freezes, meaning the ice is less dense than the surrounding water. Sea water, because it is salty, is more dense than fresh water meaning that the ice floats slightly higher in sea water than in our experiment.

EXTENSION TASKS

How could you work out how much water is displaced by the balloon?
The iceberg that hit the Titanic was formed from fresh water, but what do you think would be different if you made your iceberg using salty water?



Invent It!

Invent a new tool that will help marine archaeologists and treasure hunters preserve their precious artifacts. Draw a schematic (a design for your invention) here.

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