

*Iceberg Right Ahead: Will You Sink or Float on our Titanic Journey?*

*Anica H. Weeks and Melani T. Blewett*

**Iceberg Right Ahead! Will You *Sink* or *Float* on Our *Titanic* Journey?**

[www.ourtitanicjourney.weebly.com](http://www.ourtitanicjourney.weebly.com)



**Lesson #1 “All Aboard!”**

**Lesson #2 “NTIM: Not That It Matters”**

**Lesson #3 “Trouble on the Horizon”**

**Lesson #4 “Pride Goes Before the Fall”**

Drift back in time to April 1912. Select an identity and receive your boarding pass to embark on the *RMS Titanic*. Use modern technology to explore the storied past of a tragedy. Join us to discover if you survived. Rise to the challenge to create an effective lifeboat with the potential to save the most lives.

Why are people consumed by tragedy?

How does physics serve to improve our understanding of natural forces?

What has society learned from disasters?

Anica H. Weeks

Melani T. Blewett

SPED 6402 Spring 2014

East Carolina University

## TABLE OF CONTENTS

Content Research Paper . . . . .	page 3
Works Cited . . . . .	8
Annotated Bibliography . . . . .	9
Expert Biographies	
Dr. Robert Ballard . . . . .	15
Dr. Melinda Ratchford . . . . .	17
Mr. Craig Wright . . . . .	19
Connection to the Theme: “Interactions” . . . . .	21
Technology Integration . . . . .	24
Content Outline . . . . .	28
Lesson 1: “All Aboard!” . . . . .	31
Boarding Pass . . . . .	37
Cruise Booking Form . . . . .	38
Rubric: Discussion . . . . .	39
Map of the North Atlantic . . . . .	40
Rubric: Daily Blog . . . . .	41
Lesson 2: “NTIM: Not That It Matters” . . . . .	42
Questions: “The Wreck of the Titan” . . . . .	45
Rubric: Development of Flotation Device. . . . .	46
Marconi-gram Form . . . . .	47
Morse Code Alphabet . . . . .	48
Price List for Marconi-grams . . . . .	48
Morse Code Worksheet . . . . .	49
Lesson 3: “Trouble on the Horizon” . . . . .	50
Rubric: Thinglink “Virtual Museum Exhibit” . . . . .	54
Lesson 4: “Pride Goes Before the Fall” . . . . .	55
Rubric: Debate . . . . .	58

## **CONTENT RESEARCH PAPER**

Imagine the relief when brothers Mr. Edgar Giles and Mr. Frederick Edward Giles were told their worthless tickets to board the trans-Atlantic crossing of the White Star liner *Oceanic* would be replaced with tickets to sail on the maiden voyage of White Star's newest and largest ship, the *Titanic*. What luck! (Encyclopedia Titanica, 2013). Those second class tickets cost them 11 pounds 10 shillings each. The coal strike had ended, but the interruption in the supply meant that White Star had a shortage of coal. Without this supply, the *Adriatic* and the *Oceanic* would remain docked while their coal stores were emptied to supply the "The Millionaire's Special" ("*Titanic* Trivia," 2014).

The April 15, 1912 sinking of the *RMS Titanic* is a disaster still capturing hearts and minds more than a century later. The fateful encounter with an iceberg in the northern Atlantic Ocean sent the steamer to the icy depths along with 1,523 unfortunate victims (Sadur, 2010). The *Titanic* is a story of the human quest to succeed and of the human limitations leading to tragedy. While the ship was a marvel of modern technology for its era, several human errors interfered with the ability to save more lives.

The *Titanic* was born of an idea discussed at a dinner party. Competitor Cunard had released a grand ocean liner in 1907, the *Lusitania*, so J. Bruce Ismay of the White Star Line and Lord William James Pirrie of Harland and Wolff Shipbuilders conspired to build a ship of great magnitude, unsurpassed luxury, and modern technology. White Star Shipping agreed to only use the Belfast shipbuilders, Harland and Wolff, and they could not sign contracts with their competitors, especially Cunard.

Thomas Andrews, the nephew of Pirrie, was the Chief Designer. The *RMS*

## *Iceberg Right Ahead: Will You Sink or Float on our Titanic Journey?*

*Anica H. Weeks and Melani T. Blewett*

*Titanic* would be 882.5 feet long and 92.5 feet wide (gross weight 45,000 tons). The design of the *Titanic* surpassed technology of the time. The ship boasted the latest safety features: 16 watertight compartments, each designed with a watertight door to close and trap any water that may have leaked into a compartment. If the two largest compartments filled with water, the ship would not sink. However, the design exceeded the budget and certain expenses had to be left out of the completed product. Ceilings on the watertight compartments became a part of this exclusion. They were like “jars without a lid” (*Titanic: The Birth of a Legend*, 2012). Some attribute this decision to the addition of more cabins (Wilkinson, 2011).

Thomas' design also included 64 life boats. Ismay disagreed, saying

Control your Irish passions, Thomas. Your uncle here tells me you proposed 64 lifeboats and he had to pull your arm to get you down to 32. Now, I will remind you just as I reminded him these are my ships. And, according to our contract, I have final say on the design. I'll not have so many little boats, as you call them, cluttering up my decks and putting fear into my passengers. (*Titanic: The Birth of a Legend*, 2012).

Only 20 lifeboats were supplied for the voyage, which was an equivalent of 1,178 seats; there were, however, 2223 passengers on board (*Titanic: The Birth of a Legend*, 2012).

The building of the *Titanic* took place between 1909 and 1911. The cost was \$7.5 million, which was funded by J.P. Morgan, an American whose company owned White Star Line. “Morgan had made a fortune in banking and railroads, and he was one of the richest men in the world” (Burgan, 2004, p. 9). Today that would be equivalent to about \$400 million. Three million rivets were used, and her triple-screw construction was an advancement over her competitors (Ballard, 1988).

Another example of the *Titanic* exceeding technology of the time was the wireless Marconi Radio, receiving messages in Morse code. The sole purpose of this

*Iceberg Right Ahead: Will You Sink or Float on our Titanic Journey?*

Anica H. Weeks and Melani T. Blewett

equipment was for passengers to have the ability to send messages to family/friends while sailing. The radio operators, Harold Bride and Jack Phillips, had a full time job keeping up with the passenger requests (Ballard, 1988). The radio even broke down after the third night of sailing. Eventually the operators fixed the problem (Burgan, 2004, p. 19). Reports of large ice fields had been received by the *Titanic* from other ships.

As more reports of ice were received, Captain Smith decided to head southwest before heading west to the U.S. in hopes of missing any drifting icebergs. At 9 P.M. Capt. Smith retired to his cabin leaving orders with the Second Officer, Charles Lightoller, to come get him if there was any trouble. Around 9:30 P.M., another message was received in the radio room by Phillips that an iceberg was directly in the ship's path. This message was lost in a pile and never made its way to the bridge. At approximately 10:55 P.M., the exhausted Phillips rudely signaled for the *Californian's* radio operator to "Shut up!" during yet another ice warning (Brewster & Coulter, 1998, p. 41). Just before 11:40 P.M., the large dark shape was spotted from the crow's nest. "Iceberg right ahead" (Burgan, 2004, p. 23).

Except for those crewmen below decks, the impact of the iceberg wasn't the metal-shearing, screeching event one might expect. Jack Thayer, a first-class passenger, reported a slight sway only because he was standing by his bed, ready to turn in for the night. Other passengers remained unaware of the impact at all (Ballard, 1988). The impact buckled the metal plates below the waterline, allowing the rivets to fail in the bow section. The bridge immediately sealed the watertight doors, but the survivable number of four damaged compartments had been exceeded. Andrews and

*Iceberg Right Ahead: Will You Sink or Float on our Titanic Journey?*

Anica H. Weeks and Melani T. Blewett

Captain Smith inspected below decks, and the proverbial death knell sounded. A flooding fifth compartment and floating mail sacks indicated that “the ship had not much more than an hour to live” (Ballard, 1988, p 23).

Captain Smith ordered the lowering of lifeboats shortly before midnight, and the horrifying truth became clear (Wilkinson, 2009). The shortage of lifeboats would lead to the deaths of more than half of the souls aboard. In the confusion of a middle of the night evacuation, only 712 people escaped in lifeboats offering the promise of survival to 1,178 (Hopkinson, 2012). Some of the wealthiest names of New York City society were among the lost: John Jacob Astor IV, Benjamin Guggenheim, and Mr. and Mrs. Isidor Strauss (Encyclopedia Titanica, 2013). Survivors were rescued by the *Carpathia* in the early dawn hours of April 15, 1912 (Lord, 1955). The grim task of recovering bodies was assigned to the chartered vessel *Mackay-Bennett*, who recovered 306 floating bodies between April 21 and 26 (Sadur, 2010).

The impact of the Titanic disaster has been far-reaching. The inquiries and government actions as a result of the massive loss of life still affect sea passengers today. The SOLAS (Safety of Life at Sea) guidelines require that lifeboat seats and lifejackets are available for every soul on board times two. Today’s ships must be prepared to offload all passengers from one side in the event of listing. Mandatory safety drills ensure that crew members are trained frequently to handle emergencies. The original guidelines from the International Convention for the Safety of Life at Sea were adopted in 1914 as result of investigations into the *Titanic* (International Convention for the Safety of Life at Sea, 1974). Dr. Robert Ballard, the oceanographer who discovered the *Titanic’s* final resting place in 1985, assures the modern traveler

*Iceberg Right Ahead: Will You Sink or Float on our Titanic Journey?*

*Anica H. Weeks and Melani T. Blewett*

that today's ships are safer since the metal seams of the hulls are welded instead of riveted (personal communication, January 19, 2014). The obsession with the ship continues today, but speculation on the raising of the *Titanic* is futile since the deterioration is too severe and the ship would crumble (R. Ballard, personal communication, January 19, 2014).

The loss of the *Titanic* and the many people representing a cross-section of humanity has captured the hearts and minds of researchers, readers and movie-goers. The trust in technology to overcome nature is a life lesson for us all. While the *Titanic's* safety measures were contemporary for her time, the "virtually unsinkable" ship never completed her maiden voyage (Adams, 2009, p. 10). The combination of human errors led to a costly lesson in the value of human life and its loss. As is true in modern times, the flurry of information immediately following the tragedy was confusing and often misinformed. The final toll mounted to 1,523 dead with many bodies never recovered, including those of two lucky brothers named Edward and Frederick Giles.

**Works Cited**

- Adams, S. (2009). *Titanic*. Rev. ed. London: DK Pub.
- Ballard, Dr. R. (1988). *Exploring the Titanic*. Toronto, ON: Madison Press, 1988.
- Brewster, H., L. Coulter, and K. Marschall (1998). *882 1/2 amazing answers to your questions about the Titanic*. Reprint. New York: Scholastic, 2013.
- Burgan, M. (2004). *We the People: The Titanic*. Minneapolis: Compass Point Books.
- Encyclopedia Titanica* (2013). 26 Jan 2014. Web. <<http://www.encyclopedia-titanica.org>>.
- Hopkinson, D. (2012). *Titanic: voices from the disaster*. New York: Scholastic Press.
- "Interesting Facts." (2000). *The Unsinkable RMS Titanic*. 17 Jan 2014. Web. <<http://www.titanicstory.com/interest.htm>>.
- "International Convention for the Safety of Life at Sea (SOLAS), 1974." (2014). Version 5. *International Maritime Organization*. Web. 25 Jan. 2014. <[http://www.imo.org/About/Conventions/ListOfConventions/Pages/International-Convention-for-the-Safety-of-Life-at-Sea-\(SOLAS\),-1974.aspx](http://www.imo.org/About/Conventions/ListOfConventions/Pages/International-Convention-for-the-Safety-of-Life-at-Sea-(SOLAS),-1974.aspx)>.
- Lord, W. (1955). *A night to remember*. Reprint. New York: Bantam Books, 1997.
- Sadur, J.E. (2010). "R.M.S. Titanic Facts & Figures Page." *Jim's Titanic Website*. Web. 26 Jan. 2014. <<http://www.keyflux.com/titanic/index.htm>>.
- "Titanic: The Birth of a Legend." *Ultimate Titanic*. 2012. Web. 26 Jan. 2014. <<http://www.kevin-cummins.squarespace.com/design/#.UuT4Ftgo4uQ>>.
- "Titanic Trivia." (2014). *Encyclopædia Britannica, Inc.* Web. 17 Jan 2014. <<http://www.britannica.com/titanic/browse?browseld=302999>>.
- Wilkinson, P. (2011). *Titanic: disaster at sea*. New York: Scholastic.



### **Annotated Bibliography**

Ballard, R. (1988). *Exploring the Titanic*. Toronto, Ontario: Madison Publishing, Inc.

Ballard shares a narrative of the design and building of the great ocean liner. He shares the perspective of various survivors as they experience the unfolding events.

Ballard, R. (2013). Mapping a New America: Expanded Boundaries and Hidden Treasures. *National Geographic* (224)5: 78-85.

Ballard discusses his new venture to map the underwater holdings of the United States. The 1983 expansion of American territories opens these submerged regions for exploration development of natural resources. Ballard discusses the collaboration of scientists and the modern technology facilitating the cooperation among scientists around the world.

Ballard, R. D., & Hively, W. (2000). *The eternal darkness: a personal history of deep-sea exploration*. Princeton, N.J.: Princeton University Press.

This text shares Dr. Ballard's experiences as an undersea explorer. He is enchanted by the largest unexplored area on earth, our oceans, and he shares his quest to expose the world to the wonders of the sea floor.

Cameron, J. (Director). (1997). *Titanic* [Motion picture]. United States: Paramount Home Video.

The famous film has usable excerpts to reflect the history of the era and the difference in the social classes. The opening scene is revealing since the wealthy board without interference, but the lower classes must undergo health inspections for lice. The motion picture brought the tragedy of the *Titanic* back to the forefront of the public's mind, and it renewed interest in memorabilia from the

*Iceberg Right Ahead: Will You Sink or Float on our Titanic Journey?*

Anica H. Weeks and Melani T. Blewett

wreckage.

Davenport-Hines, R. (2012). *Titanic lives: Migrants and millionaires, conmen and crew.*

London, England: Harper Press.

From those looking for prosperity in the gilded age of America, to some of the wealthiest names among American and British society, to the men who built and owned the vessel, Davenport-Hines gives vivid detail to the human stories of the calamity.

Landau, E. (2001). *Heroine of the Titanic: the real unsinkable Molly Brown.* New York:

Clarion Books.

This narrative shares the life story of Margaret Brown, the vivacious and opinionated woman who threatened a ship's crewman in order to commandeer her lifeboat and assist in saving more lives during the sinking of the *Titanic*. From her humble beginnings in poverty to her rise to the highest levels of wealthy society, the book follows the life and times of this activist who continued her efforts to help others after the sinking of the famous ship.

Lassieur, A. (2012). *Can you survive the Titanic?: an interactive survival adventure.*

Mankato, Minn.: Capstone Press.

Lassieur offers young readers a choice of three paths: a member of the ship's medical crew, a governess to a wealthy family, and a 12-year old boy traveling to New York. The book designates page numbers to pursue the story of each character as it unfolds, so the book can be read three times with differing outcomes.

Levy, N. (Director). (2011). *Titanic's final mystery* [Documentary]. United States:

*Iceberg Right Ahead: Will You Sink or Float on our Titanic Journey?*  
Anica H. Weeks and Melani T. Blewett

Smithsonian Channel.

Tim Maltin follows a quest through history and science to explain how the “unsinkable” ship met its demise in an encounter with an iceberg during its maiden voyage. This documentary seeks to explain the scientific anomaly of weather-induced mirages, or “soft horizons,” which obscured the iceberg’s location until only 37 seconds before the fatal collision.

Lord, W. (1955). *A night to remember*. New York, NY: Bantam Books.

A noted authority on the sinking on the famous ship, Walter Lord reveals a narrative of the events as they happen. Readers follow the fates of various passengers and crewmembers as they face the tragic events of the evening.

Lord, W. (1986). *The night lives on: New thoughts, theories, and revelations about the Titanic*. New York, NY: William Morrow and Company.

Lord shares his continued research into the tragic events leading to the demise and aftermath of the world-renowned maritime disaster. His own quest for answers to the many questions generated by the fateful decisions and choices made by captain and crew are revealed in a narrative form.

Mowbray, J. (1998). *Sinking of the Titanic: Eyewitness accounts*. Mineola, NY: Dover Publications. Reprint.

Originally published within months of the sinking, this is a collection of memories from survivors and those traveling on the *Carpathia*. This edition includes a reprint of the original sensationalist title page as well as images of the ill-fated ship’s interior spaces.

Robertson, M. (2013). *The wreck of the titan*. Las Vegas, NV: Create Space

*Iceberg Right Ahead: Will You Sink or Float on our Titanic Journey?*

Anica H. Weeks and Melani T. Blewett

Independent Publishing.

A novella originally written in 1898 under the title “Futility: The Wreck of the Titan,” Robertson writes a narrative of a massive vessel that has the finest amenities of a first class hotel, has the latest developments in technology and design, and has the elite of world society aboard. The ship strikes an iceberg on its maiden voyage and sink, resulting in the deaths of most people aboard. The eerie quality of reading this story and recognizing many of the details of this fiction work in the very real tragedy of the Titanic’s sinking 14 years later is fascinating to all who are fascinated by the famous disaster.

Stewart, M. (2012). *Titanic*. Washington, D.C.: National Geographic.

A high-interest, low level reader, this book combines many photographs with large-print text to engage reluctant readers into the facts and details of the ship, its journey, and its demise. Using colorized photographs with very few in the original black-and-white, the author brings the *Titanic* into the modern understanding of young readers.

Sullivan, R. (Ed.). (2012). *Titanic: The tragedy that shook the world*. [Special issue]. *Life*, 12(4).

This vivid collection of photos and stories memorializes the sinking of the *Titanic* and was published for the one-hundredth anniversary of the disaster. This special issue includes historic photographs from passenger areas of the ship as well as stories of passengers’ lives and deaths. This issue also reflects on the portayal of the *Titanic* through numerous films , and it shares captivating color photographs of the wreck site and artifacts as seen by Dr. Robert Ballard and his

*Iceberg Right Ahead: Will You Sink or Float on our Titanic Journey?*  
Anica H. Weeks and Melani T. Blewett

research team.

Williams, J. H. (2012). *A rare Titanic family: the Caldwell's story of survival.*

Montgomery, AL: NewSouth Books.

Dr. Williams shares the personal history of one family aboard the *RMS Titanic* as they sought safe return to the United States from travels abroad. The details of early life of the young married couple and their journey with their infant son unfolds in a well-researched and documented fashion to reveal the unique story of a young father who was allowed to board a lifeboat, perhaps because he was mistaken for a woman since he had a baby in his arms.

Wolfe, C. (Producer). (1996). *Music aboard the Titanic* [Compact Disc]. Memphis, Tennessee: Inside Sounds.

This collection of songs from the White Star songbook, including the haunting “Nearer My God to Thee” transports the listener to the public spaces of the ship, including the first class dining room, the second class lounge, and the Palm Court among others.

Wolfinger, K. (Director). (2007). *Titanic's Achilles heel* [Documentary]. United States: A & E Television Networks.

What weakness caused the fatal breakage of the *Titanic* and the massive flooding that destroyed its buoyancy? This documentary identifies the expansion plate as the culprit. In the effort to stretch the ship to exceed its competitors, this critical section was added to the center of the ship. Researchers seek to learn about the 70-foot section that may have sheared from the bottom of the ship upon impact with the iceberg. Video footage of searching a new field of the

*Iceberg Right Ahead: Will You Sink or Float on our Titanic Journey?*

Anica H. Weeks and Melani T. Blewett

seabed and the resulting discovery that changed the understanding of the wreck are the highlights of this documentary.

Wolfinger, K. (Director). (2012). *Titanic at 100: Mystery Solved* [Documentary]. United States: A&E Television Networks.

A team of engineers, historians, and imaging experts join forces to answer one of the most consuming questions surrounding the legendary disaster. Using modern computer-graphics techniques as well as extensive exploration of the wreck site, this documentary seeks to illustrate the events of the *Titanic's* April 12, 1912 encounter with the iceberg and its subsequent sinking.

Wolfinger, K. (Director). (2006). *Titanic's Final Moments: Missing Pieces* [Documentary]. United States: A & E Home Video.

The researchers visit the wreckage of the *Titanic* to discover details of the events after its impact with the iceberg. The quest reveals new details of the damage and subsequent demise of the ship. The fact that a ship of such revolutionary design could sink so quickly has captured the minds of scientists and historians for decades, and this film seeks to explain how the ship's design contributed to its destruction.

### **Dr. Robert Ballard**

Dr. Robert Ballard is an oceanographer and author of over 25 books on undersea exploration of shipwrecks. During his career of 55 years, he has discovered numerous shipwrecks from the *Lusitania*, to the *Bismarck*, to the *PT109*, but history will best remember him as the one who finally found the location of the *RMS Titanic*. After many failed attempts by other teams, the sonar nets showed promising details as they marked a grid over the northern Atlantic seabed believed to be the final resting place of the *Titanic*. On September 1, 1985, the crew celebrated as they began to see the details of the boilers emerging from the sea bottom. Dr. Ballard's perseverance had brought him his prize.

Through email contact, he shared that while most of his time is spent securing funding for further exploration and research, he continues to plan future expeditions. President Ronald Reagan nearly doubled the size of the United States' domain by extending our territorial waters. Nicknamed "The New America," Dr. Ballard's next goal is to map this uncharted region.

Of his experiences with the famous *Titanic*, Dr. Ballard says that he is surprised at the preservation of the interior spaces of the wreck. He also voices strong opposition to those who wish to strip the artifacts from the site: "You do not take belt buckles off the ARIZONA in Pearl Harbor. You do not go to Gettysburg with a shovel." He also warns that any theories of raising the *Titanic* are futile since the ship's deterioration would cause it to crumble. He believes that people are interested in disaster in order to find an explanation; for the *Titanic*, he says that it is simply an "example of a captain going [too] fast in an area he was warned had iceberg[s]." The lesson we must learn is this: "Don't

*Iceberg Right Ahead: Will You Sink or Float on our Titanic Journey?*

*Anica H. Weeks and Melani T. Blewett*

overdrive your headlights.”

*Dr. Robert D. Ballard works at the Woods Hole Oceanic Institution in Woods Hole,*

*Massachusetts. He can be contacted via email at [rballard@whoi.edu](mailto:rballard@whoi.edu).*



**Dr. Melinda Ratchford**

Dr. Melinda Ratchford is an associate professor at Belmont Abbey College who defines herself as a *Titanic* historian. Having presented speeches about the historical perspectives of the ship 243 times, she is well-respected as an authority on the subject. She has presented week-long sessions for NCCAT, and she has traveled this year with the North Carolina Humanities Council's Road Scholars as a speaker on the tragedy.

Her passion is the people. She sees the artifacts as windows into the lives of the passengers and crew. "When you see a ring, a ring without a stone in it, it makes you wonder, 'Who owned that ring?' and 'Did they survive?'" she stated during a phone interview (Dr. Melinda Ratchford, personal communication, 14 April 2014).

She has traveled the world pursuing the story of the *Titanic*, from Southampton, to Belfast, to New York, to Halifax. "If it relates to the *Titanic*, I've been there," she claims. In 1996, she spent a week at the wreck site with the Discovery Channel as they attempted to raise a piece of the hull.

She has met Dr. Robert Ballard, and she reports that they have agreed to disagree. She attributes their differing perspectives to their difference in specialties. He is a scientist, but she is an historian. While Ballard has strong feelings that the wreck site should remain undisturbed, Ratchford feels that the true history of the ship is in the lives of its passengers, and she feels that the artifacts recovered from the site are a vital piece to preserving that history. She does believe that the site should be protected from scavengers, but since, worldwide, only two ships are capable of exploring the site, she is not overly concerned that artifacts will be stolen.

*Iceberg Right Ahead: Will You Sink or Float on our Titanic Journey?*

*Anica H. Weeks and Melani T. Blewett*

Having presented material hundreds of times to audiences of four to 104 years old, Dr. Ratchford's passion for the *Titanic* is evident in her over 50 years of research in the topic and her desire to share with others.

*Dr. Melinda Ratchford may be contacted by phone at 704-461-6846 or email at*

[MelindaRatchford@bac.edu](mailto:MelindaRatchford@bac.edu).

### **Mr. Craig Wright**

Craig Wright is presently the boat builder at the NC Maritime Museum in Beaufort, NC. A life-long interest in boats led him there ten years ago. However, he has followed the path of many other occupations throughout the years.

Mr. Wright was born in Bladenboro, NC, and six years later his family moved to Connecticut. After high school, he earned a degree in Philosophy from Upsala College in New Jersey. Shortly after graduating, he also attained a degree in Industrial Arts of Teaching from Millersville State College in Pennsylvania. From there, he went to the Lutheran Seminary and studied Theology.

At the age of nine, young Craig made his first attempt at building a flotation device. The water's edge was a favorite place for him to play, yet his mother told him that he better not be late or wet when he returned home. Craig was forced to construct a raft in hopes that he could be in the water and avoid a spanking. Boy Scouts continued the path of boat building during his childhood as he reconstructed broken canoes. This hobby followed him into college, as well as Mr. Wright currently has two canoes that he is building at his home.

Mr. Wright feels strongly that the most important skill in boat building is simply to pay attention to detail. When asked if he had any comments or thoughts about the sinking of the *Titanic*, he reiterated the same thought that the engineers did not pay attention to the details of the plans. "The devil's in the details, and Heaven is in the details."

Teacher, preacher, frame builder, cabinet maker, boat builder, Mr. Wright is definitely a "jack of all trades."

*Iceberg Right Ahead: Will You Sink or Float on our Titanic Journey?*

*Anica H. Weeks and Melani T. Blewett*

*Mr. Craig Wright can be contacted by phone 252-728-7317 ext. 35 or by email at  
ammonoosuc@hotmail.com.*

## CONNECTION TO THE THEME

### **Iceberg Right Ahead: Will You Sink or Float on Our *Titanic* Journey?**

Students participating in this camp session will interact with technology, the environment, history, and each other to investigate many aspects of one of the most famous tragedies on the sea.

**Interactions with technology:** After students interact with their chosen alter egos for the week of camp, they will use the technology of GPSr units to locate hidden containers revealing the fate of their person aboard the *Titanic*. Students will interact with history as they create a daily blog using computers and reflect on the experiences of the passengers and crew during the ill-fated voyage. Students will generate a ThingLink interactive museum exhibit to engage an intended audience of their peers and parents, and these exhibits will be shared via the camp session's Weebly site. Students will interact with technology as they design a better flotation device to improve the number of lives saved. They will use the scientific method to develop a hypothesis and experiment to improve outcomes. Students will analyze the technology of the time period and compare it to today as they reflect on the ease of modern communication versus the difficulties of the historical time period. Students will interact with the Morse code, through the Internet and a signal modulator, and will create messages through the eyes of their adopted persona that might have been sent to family and friends awaiting their arrival in America. They will also create an original distress code that may have signaled the urgency of the SOS.

**Interactions with the environment:** How did the designers of the Titanic impact the conditions of its demise? How did the arrogance of the ship's owner play a role? What

## *Iceberg Right Ahead: Will You Sink or Float on our Titanic Journey?*

*Anica H. Weeks and Melani T. Blewett*

have we learned about altering our interactions with the environment to increase our survival? Students will explore the technical aspects of the ship's construction and how those circumstances led to its tragic end. They will learn the consequences of cutting budgets in the interests of profit and how those fateful decisions resulted in the enormous tragedy. During a lesson in physics using angles, students will feel the experience of the passengers on a listing deck. Students will learn about the vocabulary of icebergs and develop an understanding of their characteristics; this will improve their understanding of how the *Titanic* interacted with its environment. Students will analyze the crucial decisions which tempted fate and how pride and greed led to tragic ends.

**Human Interactions:** Students will interact with history as they adopt a persona from the doomed ship. They will consider the events from the perspective of this persona to refine their focus into a personal tragedy. They will consider the perspectives of one's gender, social class, and age in survival rates and experiences on the ship. How did the time period impact the human interaction? How did the technology of the time period impact communication? Students will also interact with an author's depiction of historical events within a historical fiction text and/or film. They will evaluate the author's craft and use of historical facts to form an opinion of the reliability of the source for learning opportunities. They will learn to measure the truth and separate fact from myth. Through the development of questions, students will be given the opportunity to interact with experts with differing perspectives about the Titanic: the technical, the historical, and the personal. Students will interact with one another through their blogging journals to memorialize their trips aboard "the *Titanic*." Students will also reply to one another as they engage each other to extend responses and question each other while projecting

*Iceberg Right Ahead: Will You Sink or Float on our Titanic Journey?*

*Anica H. Weeks and Melani T. Blewett*

their adopted personas. Their ThingLink museum exhibits will allow students to research the volumes of information available and to interact with a real-life audience to share their findings and their learning with peers and parents. The sessions Weebly site will allow students to communicate their experiences to teachers, classmates, friends and family beyond those participating in the camp session.

Interactions require not only that students create an impact but also that they are impacted by their experiences. This unit seeks to impact their understanding of the tragedy, their ability to use perspective in communicating, and their understanding of buoyancy. This unit allows students to impact their peers and others in their lives by sharing their new experiences in innovative ways.

## **TECHNOLOGY INTEGRATION**

Putting technology into the hands of students yields new possibilities since we are not limited to the experiences within classroom walls. The technology in this unit will provide opportunities for the students to connect with the historical tragedy of the RMS Titanic in order to impact their modern understanding. While scientific principles of buoyancy remain the same, the technology of the era impacted the survival rates of the passengers. Today's technology will allow students to explore the international impact of the sinking while offering a window into the lives of the Titanic's travelers.

Initially, students will use GoogleEarth to identify key locations associated with the voyage. Students will apply a knowledge of latitude and longitude by geocaching to discover the ultimate fate of their selected persona from the voyage. The Internet will be a valuable resource as students collect weblinks, photos, and videos to create a Thinglink interactive museum exhibit to demonstrate their learning. They will also blog daily from the perspective of their selected Titanic persona. Facilitators will use technology to share materials using the projector to display maps, videos, and images.

While it is a common practice to display a map to teach the skills of latitude and longitude, students participating in this unit will have the opportunities to apply the knowledge to real world applications. Students will use Garmin E-Trex handheld GPS receivers to locate designated spots on campus. At the end of the week, students will visit the designated locations to learn the fate of the selected persona. This is a quiet space to have an introspective moment to reflect on the outcome of the voyage for the individual with whom the student has identified throughout the week.

Students will be identifying with these Titanic travelers as they generate blogs



*Iceberg Right Ahead: Will You Sink or Float on our Titanic Journey?*

*Anica H. Weeks and Melani T. Blewett*

using our Weebly camp site. Desktop computers will accomplish this just as well as laptops. Students will adopt the identity of the selected voyager, and as they progress through the learning of the week, they will post from the perspective of the individual. Each day brings new adventures to the travelers just as each day brings participants new knowledge. The use of the Weebly campsite blog will allow students to probe each others' thinking and extend their own reflection on events as they reply and respond to one another.

Students will also create Morse code messages utilizing a radio-frequency signal generator to mimic the technology of the Marconi radio on the Titanic. Students in the modern world have difficulty visualizing a world without cell phones and text messages, and this exposure will allow them to contrast the technology of the time period with their own lives. Understanding the limits of technology on the Titanic is crucial to understanding the disaster. The fascination with new technology was a major factor in the timely sharing of iceberg warnings.

Facilitators will use the Internet to share additional resources with session participants. So much information is available that many sites and links will not be covered within the camp session's time limits. The availability of information on the Internet will allow students to continue to explore their interests in our topic beyond the limited seat time. Facilitators will provide handouts with QR codes, links, article summaries, and additional resources for students to explore independently.

Students will also generate a Thinglink to serve as an interactive museum exhibit to share with their parents, the campmates, friends, and even teachers in their regular setting. Thinglink allows students to collect Internet-based photos and to create hotspot

*Iceberg Right Ahead: Will You Sink or Float on our Titanic Journey?*

*Anica H. Weeks and Melani T. Blewett*

links for their own virtual museum. Another option is to link to websites to share additional opportunities for research and further reading. Students may also generate their own videos or music clips to post to their hotspots in Thinglink. This will offer a creative opportunity to express themselves and their feelings about the Titanic. Thinglink is Internet-based, so desktop computers will be efficient in creating this product, but this also allows students to preserve and share their work through the world-wide web. This virtual museum will allow them to reflect on their own learning as well as share it with others. Ideally, Thinglink displays well on iPads. The interactive nature of the application responds well to touch. A limited number of iPads will suffice for the display and sharing of the completed museum exhibits, but Thinglink is a web-based application, so the functionality is available through other Internet-capable devices.

Facilitators for this unit will utilize the projector to display maps, photos, ship diagrams, websites, and videos. The availability of two of our experts, Dr. Julie Hedgepeth Williams, whose own family members survived the ordeal, and Dr. Melinda Ratchford, who has studied the Titanic for over fifty years, will allow students to ask questions during the week. We would like for students to contact Drs. Hedgepeth and Ratchford via email, and Dr. Ratchford has already agreed to respond within 24 hours. Currently, these experts are comfortable with email exchanges and phone calls. The availability of Dr. Ballard is more uncertain due to his schedule. Additionally, we have secured the expertise of Mr. Craig Wright, a boat builder in residence at the North Carolina Maritime Museum in Beaufort. Through email, he is willing to field students' questions about buoyancy, material selections, and design of their flotation device.

*Iceberg Right Ahead: Will You Sink or Float on our Titanic Journey?*

*Anica H. Weeks and Melani T. Blewett*

The overall goal for the use of technology within the unit is to provide the students with engaging and stimulating activities that will lead to their discovery, understanding, and reflection of the historical content of the Titanic and the impact that it has made on the world. Hands-on experience with GPSr units will give a real-life purpose to map skills. The use of a radio frequency signal generator and an online journal will serve to transport students back to traveling aboard the ship, while the Internet will allow students to research technical aspects of the design and construction. The creation of a virtual museum via Thinglink will allow students to creatively share their learning and inquiries into Titanic resources. Students will use the technology of the modern world to explore the limitations of the technology of the Titanic's world and how those limitations led to tragedy.

## CONTENT OUTLINE

- I. The Birth of the Titanic
  - A. The Planning
    - 1. Bruce Ismay of White Star Line
    - 2. Lord William James Pirrie of Wolff Shipbuilders
  - B. The Design
    - 1. Thomas Andrews, designer
    - 2. Ship's Dimensions, 882'8" by 92'5"
    - 3. Modern Advancements in Technology
      - a. The Watertight compartments
        - i. buoyancy-the ability or tendency to float in water or air or some other fluid.
        - ii. weight- force of gravity
        - iii. density-the degree of compactness of a substance.
        - iv. force- push or pull upon an object resulting from the object's *interaction* with another object
        - v. equilibrium- both forces are equal
        - vi. surface area- the amount of an object's surface that touches the water
        - vii. Archimedes' principle - the upward force exerted on an object floating in liquid is equal to the weight of the fluid displaced by the object
        - viii. displacement -the volume of liquid pushed aside by a submerged (or partially-submerged) object
      - b. The Marconi Room
        - i. Guglielmo Marconi's radio
        - ii. Samuel Morse's code
    - 4. The Budget
      - a. J.P Morgan, the investor
      - b. Exclusions
    - 5. The Grandeur
- II. The Voyage
  - A. The Passengers
    - 1. First Class
    - 2. Second Class
    - 3. Third Class
  - B. The Departure
    - 1. Close call with the *SS City of New York*
    - 2. Other Superstitions
  - C. The Crew
    - 1. Captain Edward J. Smith
    - 2. Radio operators, Harold Bride and Jack Phillips
    - 3. Second Officer, Charles Lightoller
    - 4. Lookouts, Frederick Fleet and Reginald Lee

*Iceberg Right Ahead: Will You Sink or Float on our Titanic Journey?*

*Anica H. Weeks and Melani T. Blewett*

D. The Map

1. Map skills

- a. Equator
- b. Prime Meridian
- c. Latitude/longitude

2. Application to real life with GPS devices

3. Key Locations

- a. Belfast, Northern Ireland, shipyard (54.628448, -5.907019 or N 54° 37' 42" W 5° 54' 25")
- b. Southampton, England, embarkation port (50.902268, -1.422386 or N 50° 54' 54" W 1° 25' 20")
- c. Cherbourg, France, first port (50.895429, -1.403812 or N 50° 53' 43" W 1° 24' 13")
- d. Queenstown/Cobh, Ireland, second port (51.847304, -8.290970 or N 51° 50' 50" W 8° 17' 27")
- e. Pier 54, New York, New York, intended destination (40.741371, -74.009956 or N 40° 44' 29" W 74° 0' 36")
- f. Iceberg Reports
  - i. ice field stretching from N 46° to 31° 3' and from W 46° 18' to 50° 40'
  - ii. bergs, growlers and field ice in N 42° from W 49° to 51°
  - iii. icebergs and large quantities of field ice today in latitude W 41° 52'
  - iv. ice report in latitude N 42° to 41° 25', longitude W 49° to 50° 30'
- g. Cape Race, recipient of Morse Code messages (46.660506, -53.075180 or N 46° 39' 38" W 53° 4' 31")
- h. Impact (41.766667, -50.171809 or N 41° 46' 0" W 50° 10' 18")
- i. Distress Call (41.46, -50.087266 or N 41° 27' 36" W 50° 5' 14.15)
- j. Sinking (41.728333, -49.946944 or N 41° 43' 32" W 49° 56' 49' )
- k. Wreckage
  - i. Bow section (41.732500, -49.946944 or N 41° 43' 57" W 49° 56' 49')
  - ii. Stern section (41.726389, -49.948333 or N 41° 43' 35" W 49° 56' 54')
- l. Halifax, Nova Scotia, site of rescue efforts and burial sites (44.659305, -63.623039 or N 44° 39' 33" W 63° 37' 23")

III. The Tragedy

A. Iceberg Warnings

1. Sea Ice Formations

- a. Icebergs
- b. Pack Ice

2. Freezing Points

- a. Freshwater
- b. Saltwater

B. The Collision

C. The Distress Calls

D. The Lifeboats

- 1. The Survivors
- 2. The Fatalities

*Iceberg Right Ahead: Will You Sink or Float on our Titanic Journey?*

*Anica H. Weeks and Melani T. Blewett*

- E. Rescue and Recovery Efforts
  - 1. *SS Californian*
  - 2. *RMS Carpathia*
  - 3. *CS Mackay-Bennett*
- F. Reports from Survivors
  - 1. Eve Hart, age 7
  - 2. Jack Thayer, age 17
  - 3. Molly Brown, age 44
  - 4. Elizabeth Shutes, age 40
  - 5. The Caldwell Family
    - a. Albert Francis Caldwell, age 26
    - b. Sylvia Mae Harbaugh Caldwell, age 28
    - c. Alden Gates Caldwell, age 10 months
- IV. The Inquiry and Aftermath
  - A. The investigation
  - B. The original Guidelines prior to Sinking
  - C. The SOLAS changes
- V. Dr. Robert Ballard
  - A. Biography
  - B. The Discovery

*Iceberg Right Ahead: Will You Sink or Float on our Titanic Journey?*

Anica H. Weeks and Melani T. Blewett

**LESSON #1**            *“All Aboard”*

I. DEFINE OBJECTIVES AND CONTENT	
<b>LESSON OBJECTIVE</b>	Students will respond to the physical design of the ship and its impact on the separation/treatment of social classes by composing a blog entry in persona reacting to the grandeur of the ship.
<b>POINT TO PONDER</b>	Social class impacted the treatment of people on the <i>Titanic</i> .
<b>ESSENTIAL QUESTION</b>	Why are people consumed by tragedy?
<b>CONTENT</b> Outline the content you will teach in this lesson.	<ul style="list-style-type: none"> <li>I. The Birth of the Titanic                             <ul style="list-style-type: none"> <li>A. The Planning                                     <ul style="list-style-type: none"> <li>1. Bruce Ismay of White Star Line</li> <li>2. Lord William James Pirrie of Wolff Shipbuilders</li> </ul> </li> <li>B. The Design                                     <ul style="list-style-type: none"> <li>1. Thomas Andrews, designer</li> <li>2. Ship’s Dimensions</li> <li>4. The Budget   <ul style="list-style-type: none"> <li>a. J.P Morgan, the investor</li> <li>b. Exclusions</li> </ul> </li> <li>5. The Grandeur</li> </ul> </li> </ul> </li> <li>II. The Voyage                             <ul style="list-style-type: none"> <li>A. The Passengers                                     <ul style="list-style-type: none"> <li>1. First Class</li> <li>2. Second Class</li> <li>3. Third Class</li> </ul> </li> <li>D. The Map                                     <ul style="list-style-type: none"> <li>1. Map skills   <ul style="list-style-type: none"> <li>a. Equator</li> <li>b. Prime Meridian</li> <li>c. Latitude/longitude</li> </ul> </li> <li>2. Application to real life with GPS devices</li> <li>3. Key Locations   <ul style="list-style-type: none"> <li>a. Belfast, Northern Ireland (54.628448, -5.907019 or N 54° 37’ 42” W 5° 54’ 25”)</li> <li>b. Southampton, England (50.902268, -1.422386 or N 50° 54’ 54” W 1° 25’ 20”)</li> <li>c. Cherbourg, France (50.895429, -1.403812 or N 50° 53’ 43” W 1° 24’ 13”)</li> <li>d. Queenstown/Cobh, Ireland (51.847304, -8.290970)</li> </ul> </li> </ul> </li> </ul> </li> </ul>

*Iceberg Right Ahead: Will You Sink or Float on our Titanic Journey?*

*Anica H. Weeks and Melani T. Blewett*

	<p>or N 51° 50' 50" W 8° 17' 27")</p> <p>e. Pier 54, New York, New York (40.741371, -74.009956 or N 40° 44' 29" W 74° 0' 36')</p> <p>f. Iceberg Reports</p> <p>i. ice field stretching from N 46° to 31° 3' and from W 46° 18' to 50° 40'</p> <p>ii. bergs, growlers and field ice in N 42° from W 49° to 51°</p> <p>iii. icebergs and large quantities of field ice today in latitude W 41° 52'</p> <p>iv. ice report in latitude N 42° to 41° 25', longitude W 49° to 50° 30'</p> <p>g. Cape Race, recipient of Morse Code messages (46.660506, -53.075180 or N 46° 39' 38" W 53° 4' 31")</p> <p>h. Impact (41.766667, -50.171809 or N 41° 46' 0" W 50° 10' 18")</p> <p>i. Distress Call (41.46, -50.087266 or N 41° 27' 36" W 50° 5' 14.15)</p> <p>j. Sinking (41.728333, -49.946944 or N 41° 43' 32" W 49° 56' 49' )</p> <p>k. Wreckage</p> <p>i. Bow section (41.732500, -49.946944 or N 41° 43' 57" W 49° 56' 49')</p> <p>ii. Stern section (41.726389, -49.948333 or N 41° 43' 35" W 49° 56' 54')</p> <p>l. Halifax, Nova Scotia (44.659305, -63.623039 or N 44° 39' 33" W 63° 37' 23")</p>
--	--

**II. PRE-PLANNING**

<p>What will students UNDERSTAND as a result of this lesson? How does this connect to the Essential Question?</p>	<ul style="list-style-type: none"> <li>● The design of the ship created a class system.</li> <li>● Classes were treated differently on the ship.</li> <li>● Classes are treated differently today.</li> <li>● The ship's size and grandeur were unparalleled in its day.</li> <li>● Latitude and Longitude are important on paper maps, but they are critical to GPS systems.</li> </ul> <p>*Why are people consumed by tragedy? As the students develop an understanding of the ship's size, this will lead them to the understanding of the number of people who were impacted by the tragedy.</p>
---	--



*Iceberg Right Ahead: Will You Sink or Float on our Titanic Journey?*

*Anica H. Weeks and Melani T. Blewett*

What will students be able to DO as a result of this lesson?	<ul style="list-style-type: none"><li>● Mark points on a map using Latitude/Longitude</li><li>● Measure the length/breadth of the ship</li><li>● Compose an entry from the viewpoint of a passenger</li></ul>
--	---

**III. PLANNING**

<p><b>HOOK</b> Describe how you will grab students' attention at the beginning of the lesson. <b>BE CREATIVE.</b></p>	<p><b>TIME:</b> 12 minutes</p> <ul style="list-style-type: none"><li>● Teachers will welcome students aboard the <i>Titanic</i> surrounded by ship-themed decorations and the sound of a ship's horn</li><li>● As students arrive, teachers will distribute envelopes with three boarding passes enclosed. Students will interact with the boarding passes to select a persona for the week. Students will consider the possibilities of different lives and the interactions of those lives with the Titanic. Once students make a selection, the stateroom/class will be given.</li></ul> <p>Materials:</p> <ul style="list-style-type: none"><li>○ Boarding Passes (in groups of 3) with brief descriptions of person's life and reason for being aboard</li><li>○ Envelopes</li><li>○ List of fake names/ticket numbers with actual class category</li></ul> <p>Teachers and students will introduce themselves. During the introductions, students will be asked to state one thing that they think they already know about the Titanic. (to establish pre-existing/background knowledge)</p> <ul style="list-style-type: none"><li>● Students will watch the Video Clip (2 minutes 34 seconds) : <u>Rose DeWitt Bukater approaches the docked <i>Titanic</i> (from the 1997 film "Titanic")</u></li></ul> <p><i>Students should note the differences in treatment of passengers as Rose DeWitt Bukater and Cal Hockley board and the health screening being performed on lower class passengers</i></p> <p>Teachers will introduce the clip: "As you watch this brief clip from James Cameron's 1997 blockbuster hit <i>Titanic</i>, watch for details of action and dialogue."</p> <p>After the clip, teachers will ask</p> <ul style="list-style-type: none"><li>● What is the reaction of Rose? What is the reaction of Cal?</li><li>● What activity is visible in the clip?</li><li>● How are passengers treated differently?</li></ul>
---	---

*Iceberg Right Ahead: Will You Sink or Float on our Titanic Journey?*

Anica H. Weeks and Melani T. Blewett

**INSTRUCTION**

Explain Step-by-step what you will do in this lesson. Be explicit about ties to Points to Ponder, Essential Question, and Interactions here. Include ALL support and teaching materials with your unit.

**TIME:** 40 minutes

- Teachers will post links on the camp weebly site for students to easily access the cruise booking site
- Teachers will invite students to book a cruise. Teachers will distribute the Cruise Booking forms and explain the expectations of the role playing exercise.
- Students will use online booking sites to role play booking a cruise by completing a Cruise Booking form.

[www.bestpricecruises.com](http://www.bestpricecruises.com)

[www.cruisebrothers.com](http://www.cruisebrothers.com)

[www.vacationstogo.com](http://www.vacationstogo.com)

(Multiple sites will be offered to increase variety and reduce overloading a particular site.)

- Teachers will format the class chart to organize student information.
- Students will add information to chart.
- Teachers and students will discuss the completed class chart to guide generalizations (comparing cruise lines and prices to see differences between accommodations)
  - How do cruise lines differentiate between classes of staterooms?
    - How do cruise lines differ from one another?
    - How does one's socio-economic status determine the ability to book a cruise or stateroom category?
    - How did these factors impact the passengers of the *Titanic*?
- Teachers will transition by asking students to consider the cabin categories of characters portrayed in the "Hook" video clip. Teachers will guide students to recognize differences between classes (Rose and Cal vs. the lower class passenger being checked head lice). "How were passengers treated differently once on board? Let's learn about the design of the ship."
- The students will interact with history to learn about the birth of the *Titanic*.
  - Using Internet research, available text resources, and expert/jigsaw technique, answer key questions about the *Titanic*; links to suggested websites will be posted on our camp website (as listed in annotated bibliography); specific questions on index cards to divide among participants.
    - Who is Bruce Ismay? Who is Lord Pirrie?
    - What was goal in constructing the *Titanic*?
    - Who is Thomas Andrews?
    - What was unique about *Titanic* in its day?
    - Which amenities were available for various classes of

*Iceberg Right Ahead: Will You Sink or Float on our Titanic Journey?*

Anica H. Weeks and Melani T. Blewett

passengers? (save links for use in ThingLink Museum exhibit)

- Where was the *Titanic* constructed? (Mark the North Atlantic grid map with a push pin to indicate the location of Belfast.)

- How were the plans of the ship modified? Why?

- How did passengers' experiences differ according to their social class?

Teachers will direct students to move outside to create a visual representation of the ship's size.

- Students will interact with measurement; collaborate to measure the length/breadth of ship for students to realize the physical magnitude of the ship. Using two 100-foot measuring tapes to measure (882 ½ feet long; 92 5/12 feet wide), place construction flags to mark starting and ending points for students to visualize the size of the ship.

Materials

- Two 100-foot measuring tapes
- construction flags

Teachers will redirect students back to classroom to review the planning, design, and construction of ship. The design will support the social class separation.

- Students will visit [websites](#) to review [plans](#) of the ship. The size will connect them with the idea that the more people impacted by a tragedy the more we seem to be consumed by it.

- Teachers will ask, "Why is society still interested in the *Titanic* today?"

- Students and teachers will discuss historical tragedies and society's continuing interest

- Generalizations: The larger the number of victims, the greater interest society will have.

- Society seeks to identify someone/something to blame.

Teachers will reveal the goal of building an improved flotation device.

- Students will predict which materials will best float with the weight of 65 marbles (to represent the capacity of the *Titanic's* lifeboats). Today, students will have an opportunity to email a boat expert to ask questions that might influence the final selections on Day 2. Students will defend their predictions in an exchange with a teacher.

- Corrugated cardboard, single-ply cardboard, styrofoam, tin foil, cling wrap, plastic bottles

*Iceberg Right Ahead: Will You Sink or Float on our Titanic Journey?*

*Anica H. Weeks and Melani T. Blewett*

<p><b>ASSESSMENT</b> (Performance Task) What will the students DO to demonstrate that they have mastered the content? Be specific and include actual assessment with unit materials.</p>	<p><b>TIME:</b> 15 minutes</p> <p>Students will:</p> <ul style="list-style-type: none"><li>● copy itinerary/category/price for cruise<ul style="list-style-type: none"><li>○ a booking form for a current cruise for each participant</li><li>○ Class-generated chart classifying/comparing cruise prices (chart paper)</li><li>○ Discussion Rubric/Checklist</li></ul></li><li>● blog entry as adopted persona from the <i>Titanic's</i> journey Guiding questions: What is your reaction to seeing the ship for the first time? Based on your social class for your persona, where might your accommodations be? How much interaction might you have with fellow passengers? What was your boarding experience?<ul style="list-style-type: none"><li>○ website blog page</li><li>○ rubric</li></ul></li><li>● participate in a discussion<ul style="list-style-type: none"><li>○ how does society continue to differentiate between social classes today? What experiences have you had in which you've seen or experienced discrimination between social classes? How do people get treated differently based on wealth/income? Consider several settings. sports venues, cruise ships, hotels, airplanes, schools What do these have in common? (money buys better accommodations) In what ways has society moved beyond discrimination?</li></ul></li></ul>
--	--

DOES THE ASSESSMENT ALLOW YOU TO DETERMINE WHETHER OR NOT THE STUDENTS HAVE MET YOUR STATED LESSON OBJECTIVE? **YES** OR NO

**ASSESSMENT AND INSTRUCTIONAL MATERIALS**

*Insert ALL materials here including Assessments and Instructional Materials.*

*Explicitly LIST any additional files for this lesson. Be sure that ALL materials have been submitted for this lesson.*

*Iceberg Right Ahead: Will You Sink or Float on our Titanic Journey?*  
Anica H. Weeks and Melani T. Blewett



WHITE STAR LINE	Ticket No. _____
Passenger Ticket per Steamship R.M.S. _____	
Passenger Name: _____	
Age: _____ From: _____	
Accompanied by: _____	
_____	
Class: 1st <input type="checkbox"/> 2nd <input type="checkbox"/> 3rd <input type="checkbox"/> Cabin # _____	
Traveling to: _____	
Reason: _____	
_____	
_____	
Passenger Fact: _____	
_____	
_____	

*Iceberg Right Ahead: Will You Sink or Float on our Titanic Journey?*  
 Anica H. Weeks and Melani T. Blewett



**CRUISE BOOKING FORM**

Passenger Name: \_\_\_\_\_ Age: \_\_\_\_\_

Travel Interests: \_\_\_\_\_

Travel History: \_\_\_\_\_

\_\_\_\_\_

Number in Traveling Party \_\_\_\_\_ adults \_\_\_\_\_ children

Dates of Travel \_\_\_\_\_

- Cruiseline Interests     Azamara     Carnival     Costa     Celebrity  
 Cunard     Disney     Holland America     MSC     Norwegian  
 Oceania     Princess     Royal Caribbean     Seabourn     Silversea

Viking River Cruises

Ship Interest? \_\_\_\_\_

Destination/Region \_\_\_\_\_

Itinerary/Ports of Call


Price List (per passenger)

Cabin Category	1 <sup>st</sup> and 2 <sup>nd</sup> passenger	3 <sup>rd</sup> and 4 <sup>th</sup> passenger
Inside Cabin		
Outside Cabin (window)		
Balcony		
Suite		

*Iceberg Right Ahead: Will You Sink or Float on our Titanic Journey?*  
Anica H. Weeks and Melani T. Blewett

Discussion Rubric: Day One (Cruise Booking Activity and Discussion)

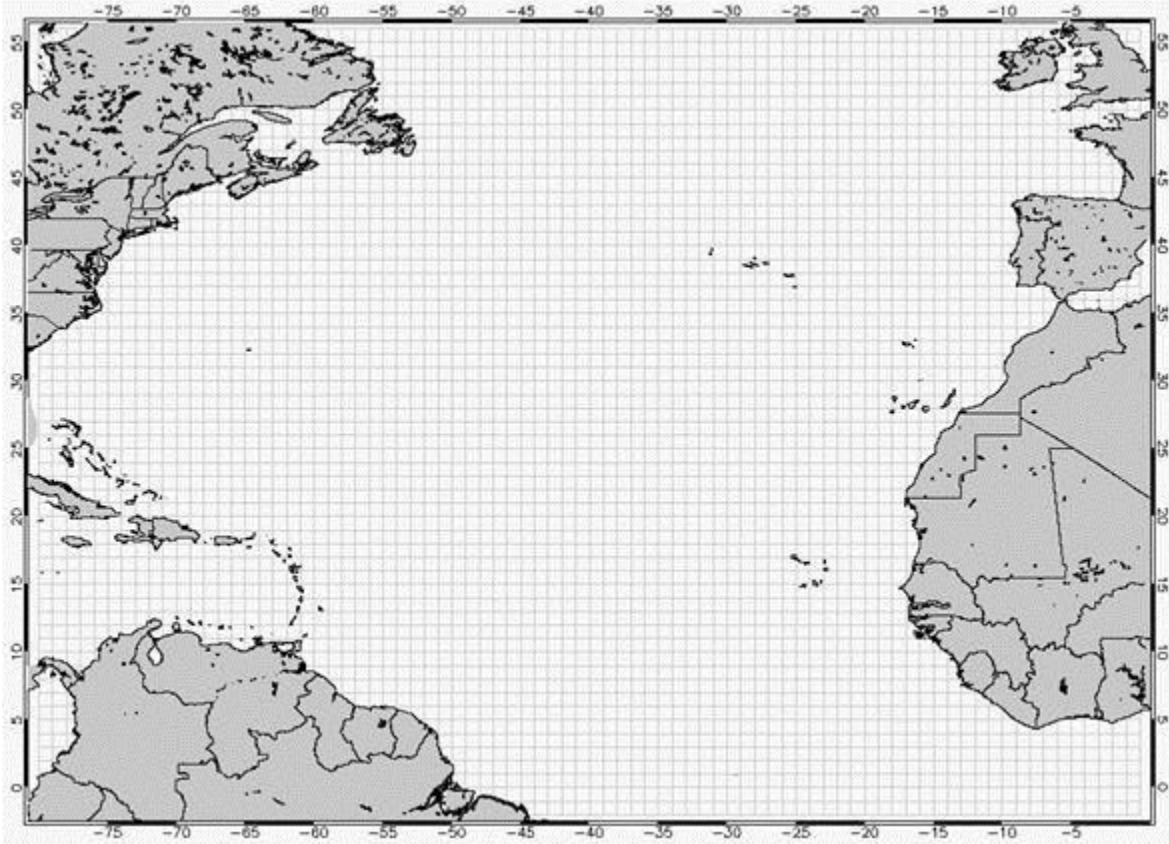
What has researching a cruise taught us about differences between cruise lines and cabin categories?

Participant	Contributed Prices to class chart	Contributed a generalization	Asked a question to provoke thinking	Transferred new knowledge to blog as persona	Differentiated between 1912 and today

Facilitator's Notes from Discussion:

*Iceberg Right Ahead: Will You Sink or Float on our Titanic Journey?*  
Anica H. Weeks and Melani T. Blewett

*North Atlantic Ocean (for Latitude/Longitude activities/Key Locations)*





## *Iceberg Right Ahead: Will You Sink or Float on our Titanic Journey?*

*Anica H. Weeks and Melani T. Blewett*

### COMPLETION OF DAILY BLOG POSTING

**RUBRIC:**

	4	3	2	1
<i>Historical Accuracy</i>	<i>All historical information appeared to be accurate and in chronological order</i>	<i>Almost all historical information appeared to be accurate and in chronological order</i>	<i>Some of the historical information appeared to be accurate and in chronological order</i>	<i>Very little of the historical information appeared to be accurate and in chronological order</i>
<i>Role</i>	<i>Point of view/ perspectives are consistently in character</i>	<i>Point of view/ perspectives are mostly in character</i>	<i>Point of view/ perspectives are sometimes in character</i>	<i>Point of view/ perspectives are rarely in character</i>
<i>Knowledge Gained</i>	<i>Expressed several examples in which character perceived events/circumstances differently than other characters with explanations of why</i>	<i>Included two examples in which character perceived events/circumstances differently than other characters with explanations of why</i>	<i>Included one example in which character perceived events/circumstances differently than other characters with explanations of why</i>	<i>Did not include examples in which character perceived events/circumstances differently than other characters with explanations of why</i>
<i>Use of Technology</i>	<i>Posted blog entry correctly; replied to a classmate with thoughtful and in-character response</i>	<i>Posted blog entry correctly; replied to a classmate, but slipped out of character</i>	<i>Posted blog entry correctly; replied to a classmate without using character</i>	<i>Posted blog entry correctly, but did not respond to a classmate</i>

*Iceberg Right Ahead: Will You Sink or Float on our Titanic Journey?*

Anica H. Weeks and Melani T. Blewett

**LESSON #2** "NTIM: Not That It Matters"

I. DEFINE OBJECTIVES AND CONTENT	
<b>LESSON OBJECTIVE</b>	<p>Students will experiment with buoyancy to create a flotation device that will hold a maximum weight without sinking.</p> <p>Students will reflect on impacts of new technology and the limitations of communication in the time period of the Titanic.</p> <p>Students will compare Morse code to modern texting.</p> <p>Students will listen to Morse code traffic (using Internet site and signal generator).</p>
<b>POINT TO PONDER</b>	<p>"There is no such thing as an omen. Destiny does not send us heralds. She is too wise or too cruel for that." --<i>Oscar Wilde</i></p>
<b>ESSENTIAL QUESTION</b>	<p>How does physics serve to improve our understanding of natural forces?</p>
<p><b>CONTENT</b> Outline the content you will teach in this lesson.</p>	<ul style="list-style-type: none"> <li>I. The Birth of the Titanic</li> <li>B. The Design                             <ul style="list-style-type: none"> <li>3. Modern Advancements in Technology                                     <ul style="list-style-type: none"> <li>a. The Watertight compartments   <ul style="list-style-type: none"> <li>i. buoyancy-the ability or tendency to float in water or air or some other fluid.</li> <li>ii. weight- force of gravity</li> <li>iii. density-the degree of compactness of a substance.</li> <li>iv. force- push or pull upon an object resulting from the object's <i>interaction</i> with another object</li> <li>v. equilibrium- both forces are equal</li> <li>vi. surface area- the amount of an object's surface that touches the water</li> <li>vii. Archimedes' principle-the upward force exerted on an object floating in liquid is equal to the weight of the fluid displaced by the object</li> <li>viii. displacement -the volume of liquid pushed aside by a submerged (or partially-submerged) object</li> </ul> </li> <li>b. The Marconi Room   <ul style="list-style-type: none"> <li>i. Guglielmo Marconi's radio</li> <li>ii. Samuel Morse's code</li> </ul> </li> </ul> </li> </ul> </li> </ul> <li>II. The Voyage                             <ul style="list-style-type: none"> <li>B. The Departure</li> </ul> </li>

*Iceberg Right Ahead: Will You Sink or Float on our Titanic Journey?*

Anica H. Weeks and Melani T. Blewett

	<ol style="list-style-type: none"> <li>1. Close call with the SS <i>City of New York</i></li> <li>2. Other Superstitions</li> </ol> <p>C. The Crew</p> <ol style="list-style-type: none"> <li>1. Captain Edward J. Smith</li> <li>2. Radio operators, Harold Bride and Jack Phillips</li> <li>3. Second Officer, Charles Lightoller</li> <li>4. Lookouts, Frederick Fleet and Reginald Lee</li> </ol>
--	---

**II. PRE-PLANNING**

<p>What will students UNDERSTAND as a result of this lesson? How does this connect to the Essential Question?</p>	<ul style="list-style-type: none"> <li>● The superstitions of sailors led to many myths about the <i>Titanic's</i> voyage.</li> <li>● The limitations of Morse Code and telegraphy contributed to the ineffectiveness of communication in 1912.</li> <li>● The properties of buoyancy are why things float.</li> </ul> <p>How does physics serve to improve our understanding of natural forces? Students will make informed choices of construction materials for their flotation devices.</p>
<p>What will students be able to DO as a result of this lesson?</p>	<ul style="list-style-type: none"> <li>● generate a Morse Code message</li> <li>● create signals with a radio frequency signal generator</li> <li>● begin designing a flotation device</li> </ul>

**III. PLANNING**

<p>HOOK Describe how you will grab students' attention at the beginning of the lesson. BE CREATIVE.</p>	<p>TIME:10 min. Facilitators will distribute photocopies of selected reading and assigned questions. The students will read excerpts (using jigsaw/share) from Morgan Robertson's <a href="#"><i>Futility: The Wreck of the Titan</i></a>. This will provide the background knowledge of the superstitions that evolved prior to the voyage of the <i>Titanic</i>.</p> <ul style="list-style-type: none"> <li>● After reading, what events did you find in the text that you think compare to the realities of the <i>Titanic</i> voyage?</li> <li>● Chapter 1: Description of the ship</li> <li>● Chapter 7: The collision with the iceberg</li> </ul> <p>Guiding questions listed below (in instructional materials)</p>
---	--

*Iceberg Right Ahead: Will You Sink or Float on our Titanic Journey?*

Anica H. Weeks and Melani T. Blewett

**INSTRUCTION**

Explain Step-by-step what you will do in this lesson. Be explicit about ties to Points to Ponder, Essential Question, and Interactions here. Include ALL support and teaching materials with your unit.

**TIME:** 50 min

- Teachers will distribute copies of an excerpt from Dr. Ballard's *Exploring the Titanic*.
- Students will **interact** with history to learn about the departure and the crew.
- Students will read an excerpt from Dr. Robert Ballard's *Exploring the Titanic* to learn about the close call with the SS *City of New York*.
- Students will read and discuss [quote from Captain Smith](#)
- Students will research using the Internet to determine the validity of the claim that the *Titanic* was unsinkable
  - Teachers will facilitate and assist as students evaluate websites to determine the truth of this superstition
- Teachers and students will discuss the superstition ideas. This will be the segue for the Point to Ponder.
- Teachers will prompt students to consider the value of cell phones and texting to modern communication.
  - "If an impending disaster were to happen today, how would it be communicated, and how quickly?"
- Students will **interact** with the newest technology of the era; Marconi's radio and Morse's code. They will create messages from their persona's point of view.
  - radio frequency signal generator

Facilitators will demonstrate Morse code keying. Students will **interact** with the keyer.

- [Morse Code Translator site](#)
- [Morse Code alphabet handout](#)
- [Morse Code abbreviations](#)
- telegram forms with [price list](#)
- worksheet
- mini-display board with background information

Teachers will facilitate a discussion of the purpose of the Marconi Radio Room for the *Titanic*.

"For whom were the radio operators working? Why were messages being sent? Which messages had priority? When a problem arises, how does this create a conflict? What problem arose for the *Titanic*?"

- Teachers will post the link to the Thinglink on the unit Weebly site. Teachers will talk through the elements of the Thinglink and how it was created.
- Students will explore qualities of Buoyancy. Students will interact with Thinglink to learn these qualities as they are learning the process of how to generate a Thinglink through teacher demonstration.

<http://www.thinglink.com/scene/499994188176162816>

- Teachers will emphasize the density equation.

*Iceberg Right Ahead: Will You Sink or Float on our Titanic Journey?*

Anica H. Weeks and Melani T. Blewett

	<ul style="list-style-type: none"> <li>• Students will construct models with Legos to demonstrate understanding of differences in density. Student models are to demonstrate their understanding of how density impacts buoyancy so that two models will have differing results in a buoyancy test. Students will experiment with buoyancy using a tub of water with clear sides. Students will observe changes in water levels to measure the buoyancy of various materials.             <ul style="list-style-type: none"> <li>• What is the relationship between weight and buoyancy?</li> <li>• What is the relationship between surface area and buoyancy?</li> </ul> </li> <li>Material: Legos, graduated measuring cups/cylinders, water, tub of water, towels, vis-à-vis markers</li> <li>• They will finalize their material selections and interact with these materials in order to begin the design of their flotation device. This will reflect the application of what they learned from the Thinglink connecting their thoughts about physics. Students may revisit the Thinglink as a resource to support ideas and changes in design. Students will review responses from the boat expert. Students will experiment with materials using the tub of water.</li> </ul> <p>“How did the Titanic maintain its buoyancy?”</p>
<p>ASSESSMENT (Performance Task) What will the students DO to demonstrate that they have mastered the content? Be specific and include actual assessment with unit materials.</p>	<p>TIME: 10 min.</p> <ul style="list-style-type: none"> <li>• original Morse Code message with calculated charge             <ul style="list-style-type: none"> <li>○ message form for each participant</li> <li>○ price list</li> </ul> </li> <li>• blog entry as adopted persona from the <i>Titanic’s</i> journey             <ul style="list-style-type: none"> <li>○ website blog page</li> <li>○ rubric (from day 1)</li> </ul> </li> </ul> <p>Guiding questions: From the perspective of your adopted persona, consider the use of Marconi radiograms. Would you have been able to send one? In the context of your blog, compose a message (Marconi radiogram or postcard) to a friend or family member about your adventure thus far. Reflect on which areas of the ship might you have visited today? What superstitions might you have encountered? What was your experience of leaving the port of Southampton?</p> <ul style="list-style-type: none"> <li>• evaluate progress toward flotation device             <ul style="list-style-type: none"> <li>○ Did students adjust their material selections?</li> <li>○ Did students use academic vocabulary when defending choices and changes?</li> </ul> </li> </ul>

DOES THE ASSESSMENT ALLOW YOU TO DETERMINE WHETHER OR NOT THE

*Iceberg Right Ahead: Will You Sink or Float on our Titanic Journey?*

Anica H. Weeks and Melani T. Blewett

STUDENTS HAVE MET YOUR STATED LESSON OBJECTIVE? **YES** OR NO

**ASSESSMENT AND INSTRUCTIONAL MATERIALS**

*Insert ALL materials here including Assessments and Instructional Materials.*

*Explicitly LIST any additional files for this lesson. Be sure that ALL materials have been submitted for this lesson.*

Hook for Day 2

Excerpts from Morgan Robertson's *The Wreck of the Titan: Questions*

1. Number the paragraphs for the excerpt you have been assigned.

For those with Chapter 1:

1. Mark/underline/highlight any references to  
Size  
Grandeur  
Greatness  
Superiority
2. Circle any similarities you recognize from the *Titanic*.
3. Many claim this novella predicted the Titanic disaster. Do you see any disparities to disprove this? Mark these with an asterisk (\*).
4. Be prepared to discuss the content of your chapter with those assigned to Chapter 7.

For those with Chapter 7:

1. Mark/underline/highlight the references to the impact with iceberg. Be prepared to read this portion aloud to the group.
2. Circle any similarities you recognize from the *Titanic*.
3. Many claim this novella predicted the Titanic disaster. Do you see any disparities to disprove this? Mark these with an asterisk (\*).
4. Be prepared to discuss the content of your chapter with those assigned to Chapter 7.

*Iceberg Right Ahead: Will You Sink or Float on our Titanic Journey?*  
Anica H. Weeks and Melani T. Blewett

Evaluation: Development of Flotation Device

Element	Measure	Comment
Adjusted materials to improve device	Y N	
Adjusted design to improve device	Y N	
Successfully floated with weight of 10 bagged marbles	Y N	Additional marbles? _____
Used academic vocabulary to discuss concepts and explain choices	Y N	

Student Evaluation of Flotation Devices:

Predict which flotation device will support the most weight? Why do you believe this?

Choose one project created by one of your peers. Discuss at least one quality of the project that you like.

Which project do you think is the most creative? Why?

*Iceberg Right Ahead: Will You Sink or Float on our Titanic Journey?*  
 Anica H. Weeks and Melani T. Blewett

**Marconi-gram Form**

From No. 1 - 100. - 17.11.11.

Sent date \_\_\_\_\_

**The Marconi International Marine Communications Company, Ltd.**

WATERGATE HOUSE, YORK BUILDINGS, ADELPHI, LONDON, W.C.

No. \_\_\_\_\_ OFFICE \_\_\_\_\_ 20 \_\_\_\_\_

Prefix	Code	Words	CHARGES TO PAY	
Office of Origin			Marconi Charge	...
Service Instructions:			Other Line Charge	...
			Delivery Charge	...
			TOTAL	...
			Office sent to	Time sent
				By whom sent

READ THE CONDITIONS PRINTED ON THE BACK OF THE FORM.

To:


**PLEASE ASK FOR OFFICIAL RECEIPT.**



Code Addresses registered only with Cable Companies are not available for messages through British Post Office Stations.



*Iceberg Right Ahead: Will You Sink or Float on our Titanic Journey?*  
Anica H. Weeks and Melani T. Blewett

*Handout for students*

**Morse Code Alphabet**

A	•-	N	-•	0	-----
B	-•••	O	---	1	•-----
C	-•-•	P	•-••	2	••-----
D	-••	Q	-•-•	3	•••-----
E	•	R	•-•	4	••••-
F	••-•	S	•••	5	•••••
G	-••	T	-	6	-••••
H	••••	U	••-	7	-••••
I	••	V	•••-	8	•••••
J	•-••	W	•-•-	9	•••••
K	-•-•	X	-•-•	.	•-•-•-
L	•-••	Y	-•-•	,	-•••-
M	--	Z	--••	?	•••••

*Posted for students*

## ***CHARGES FOR MARCONIGRAMS***

***12 shillings and sixpence for the first 10 words, and 9 pence per word thereafter***

*Iceberg Right Ahead: Will You Sink or Float on our Titanic Journey?*  
Anica H. Weeks and Melani T. Blewett

**Morse Code Worksheet:**

Language Arts

War Survival

Name \_\_\_\_\_

## Morse Code

Today, we commonly use telephones when we want to transmit a message over a long distance. However, before the use of telephones, other means of communication were utilized. Messages were often sent on paper. More urgent messages may have been sent by Morse code.

Morse code is a system of dashes and dots. Each combination of dashes and dots represents a different letter in the alphabet. Samuel Morse developed this language in 1835 to send messages over long distances with a telegraph machine. Morse code is still commonly used in emergencies by people today when telephone services are interrupted or unavailable.

You can use a flashlight, a whistle, a buzzer, or a light reflective mirror to transmit a Morse code message. Use the code to create a message for a friend. Then use one of the suggested methods for transmission to send your message. Challenge your friend to decode your message.

International Morse Code			
Letters			
A	● ■	H	● ● ● ●
B	■ ● ● ●	I	● ●
C	■ ● ■ ●	J	● ■ ■ ■
D	■ ● ●	K	■ ● ■
E	●	L	● ■ ● ●
F	● ● ■ ●	M	■ ■
G	■ ■ ●	N	■ ●
		O	■ ■ ■
		P	● ■ ■ ●
		Q	■ ■ ● ■
		R	● ■ ●
		S	● ● ●
		T	■
		U	● ● ■
		V	● ● ● ■
		W	● ■ ■
		X	■ ● ● ■
		Y	■ ● ■ ■
		Z	■ ■ ● ●

Numerals	
1	● ■ ■ ■ ■
2	● ● ■ ■ ■
3	● ● ● ■ ■
4	● ● ● ● ■
5	● ● ● ● ●
6	■ ● ● ● ●
7	■ ■ ● ● ●
8	■ ■ ■ ● ●
9	■ ■ ■ ■ ●
0	■ ■ ■ ■ ■

**Answer:**

What are some of the benefits of Morse code? \_\_\_\_\_

What are some of the drawbacks of Morse code? \_\_\_\_\_

*Iceberg Right Ahead: Will You Sink or Float on our Titanic Journey?*  
Anica H. Weeks and Melani T. Blewett

**LESSON #3**  
"TROUBLE ON THE HORIZON"

I. DEFINE OBJECTIVES AND CONTENT	
<b>LESSON OBJECTIVE</b>	Students will experiment with and modify the design of their flotation device. Students will track the voyage of the <i>Titanic</i> , along with the iceberg warnings, on a map.
<b>POINT TO PONDER</b>	Ignorance is bliss.
<b>ESSENTIAL QUESTION</b>	How does physics serve to improve our understanding of natural forces?
<b>CONTENT</b> Outline the content you will teach in this lesson.	<ul style="list-style-type: none"> <li>II. The Voyage</li> <li style="padding-left: 20px;">C. The Crew               <ul style="list-style-type: none"> <li>3. Second Officer, Charles Lightoller</li> <li>4. Lookouts, Frederick Fleet and Reginald Lee</li> </ul> </li> <li>III. The Tragedy               <ul style="list-style-type: none"> <li>A. Iceberg Warnings                   <ul style="list-style-type: none"> <li>1. Sea Ice Formations                       <ul style="list-style-type: none"> <li>a. Icebergs</li> <li>b. Pack Ice</li> </ul> </li> <li>2. Freezing Points                       <ul style="list-style-type: none"> <li>a. Freshwater</li> <li>b. Saltwater</li> </ul> </li> </ul> </li> <li>B. The Collision                   <ul style="list-style-type: none"> <li>1. How did the collision and damage change the buoyancy of the ship?</li> <li>2. How did the ship's design contribute to the disaster?</li> <li>3. How could a change in the design have lessened impact of the disaster?</li> <li>4. How could the human reaction to the disaster have lessened the number of lives lost?</li> </ul> </li> <li>C. The Distress Calls</li> <li>D. The Lifeboats                   <ul style="list-style-type: none"> <li>1. The Survivors</li> <li>2. The Fatalities</li> </ul> </li> </ul> </li> </ul>

*Iceberg Right Ahead: Will You Sink or Float on our Titanic Journey?*

Anica H. Weeks and Melani T. Blewett

II. PRE-PLANNING	
<p>What will students UNDERSTAND as a result of this lesson? How does this connect to the Essential Question?</p>	<ul style="list-style-type: none"> <li>● Icebergs are buoyant.</li> <li>● Icebergs exhibit different formations.</li> <li>● Icebergs and pack ice are dangerous to ships.</li> <li>● The properties of buoyancy explain why things float.</li> </ul> <p>How does physics serve to improve our understanding of natural forces? Students will modify their flotation devices based on their understanding of buoyancy. Students will test the effectiveness of their flotation devices and modify designs to improve effectiveness. Students will utilize academic vocabulary to explain their adjustments while interacting with peers and teachers.</p>
<p>What will students be able to DO as a result of this lesson?</p>	<ul style="list-style-type: none"> <li>● demonstrate experimentation and modification through the scientific method</li> <li>● explain changes in design based on new understanding</li> <li>● explain changes in design using correct academic vocabulary</li> <li>● test theories using flotation devices and bagged marbles in the tub of water</li> <li>● improve design based on results of testing</li> </ul>

III. PLANNING	
<p><b>HOOK</b> Describe how you will grab students' attention at the beginning of the lesson. <b>BE CREATIVE.</b></p>	<p><b>TIME: 5 min.</b> The students will observe the angles of the ship's deck at different times of the sinking. Using plywood, supported by two 6-foot ladders, and a protractor, facilitators will increase the angle of the plywood and allow students to carefully stand on the angled board to experience the effect of standing on a sloping deck as the angles increased during the sinking.</p>
<p><b>INSTRUCTION</b> Explain Step-by-step what you will do in this lesson. Be explicit about ties to Points to Ponder, Essential Question, and Interactions here.</p>	<p><b>TIME: 55 min.</b></p> <ul style="list-style-type: none"> <li>● The teacher will display the Google Earth tour of the Titanic journey to introduce the variations among icebergs.</li> <li>● Students will <b>interact</b> with history to learn about the ignored ice warnings, the collision, and the sinking.             <ul style="list-style-type: none"> <li>○ Students will mark the coordinates of the ice warnings, the collision, the wreckage, and Cape Race using push pins on a map of the North Atlantic (the map used on Day 1).</li> <li>○ Teachers will demonstrate the flexibility of steel plates and</li> </ul> </li> </ul>

*Iceberg Right Ahead: Will You Sink or Float on our Titanic Journey?*

*Anica H. Weeks and Melani T. Blewett*

Include ALL support and teaching materials with your unit.

- rivets using stacked plastic cups and a tub of water.
- Teachers will demonstrate the failure of the water tight compartments using an ice tray and a tub of water.
- Students will explore the [characteristics](#) of [ice formations](#) to explain how the ship interacted with the natural environment. Students will explore the characteristics icebergs as related to buoyancy. Students will understand the differing characteristics and vocabulary of ice formations as would the lookout officers.
- Teachers will demonstrate the SOS, CQD, and other Morse code traffic signals to recreate the experience of the radio operators.
- Students will create a distress code. Their codes will reflect their evaluation of a more conspicuous warning, one incapable of being ignored. Students will ponder how the ignorance of passengers and other ships impacted the urgency of the sinking.
  - radio frequency signal generator
  - [Morse Code Translator site](#)
  - [Morse Code alphabet handout](#)
  - [Morse Code abbreviations](#)

Guiding questions: Would a short or long signal be more recognizable? Would differentiation between letters be an improvement or a detriment to a unique signal? Would repeating letters help?

Teachers will direct students to work on their interactive museum.

- Teachers will remind students to refer back to the Thinglink presentation for support. Teachers will circulate to assist, question, and provide feedback to students as they begin their virtual museum exhibits.
- Students will interact with technology by creating Thinglink museum exhibit. Their exhibits will reflect their understanding of the Titanic's voyage, its passengers, and how an unsinkable ship sank. Students will use the Internet to find links to pictures, video, and historical facts about the *Titanic*. The teacher demonstration of the Thinglink exposed students to the process. Students will locate and link a variety of resources to create the experience of visiting a *Titanic* museum exhibit. Students will be given the rubric to guide their creations.

Students will continue **interacting** with their design and testing of flotation device. Students will continue to assess and modify their designs by testing with increasing weight to determine the buoyancy of their flotation devices in a tub of water. Students may revisit the Thinglink on buoyancy and email exchanges with the boat expert to improve their designs.

## Iceberg Right Ahead: Will You Sink or Float on our Titanic Journey?

Anica H. Weeks and Melani T. Blewett

<p><b>ASSESSMENT</b> (Performance Task) What will the students DO to demonstrate that they have mastered the content? Be specific and include actual assessment with unit materials.</p>	<p><b>TIME:</b> 10 min. <b>Students will:</b></p> <ul style="list-style-type: none"> <li>● share and evaluate distress codes (using the Guiding Questions)</li> <li>● blog entry as adopted persona (website blog page/rubric)</li> </ul> <p>Guiding questions: Based on your persona (age, gender, social class) and the posted percentages of survivors with each group, predict your likelihood of survival. Discuss your interaction with other passengers and crew as you learn that the ship has hit an iceberg.</p> <p><b>Teachers will:</b></p> <ul style="list-style-type: none"> <li>● evaluate student progress on interactive Thinglink museum exhibit</li> <li>● evaluate progress on flotation device (rubric from day 2)</li> </ul>
--	--

DOES THE ASSESSMENT ALLOW YOU TO DETERMINE WHETHER OR NOT THE STUDENTS HAVE MET YOUR STATED LESSON OBJECTIVE? **YES** OR NO

### ASSESSMENT AND INSTRUCTIONAL MATERIALS

*Insert ALL materials here including Assessments and Instructional Materials.*

*Explicitly LIST any additional files for this lesson. Be sure that ALL materials have been submitted for this lesson.*

Rubric: THINGLINK Interactive Museum Exhibit

	4	3	2	1
Content	Covers topic in-depth with details and examples. Subject knowledge is excellent.	Includes essential knowledge about the topic. Subject knowledge appears to be strong.	Includes basic information the topic but there are 1-2 factual errors.	Content is nominal OR there are several factual errors.
Main Image	Selected a thought-provoking image to engage visitors.	Image is relevant to topic and interests visitors.	Image is about topic, but it has no unique interest to draw visitors.	Image is not on topic.
Use of Video(s)	Includes 2 or more video links appropriate to the topic.	Includes 1 video link appropriate to the topic.	Includes 1 video link, but the connectedness of the material questionable.	Neglects to include video link.
Use of Photo link(s)	Includes 2 or more links to photos appropriate to the topic.	Includes 1 photo link appropriate to the topic.	Includes 1 photo link, but the connectedness of the material is questionable.	Neglects to include a photo link.
Use of Websites	Includes 2 or more links to appropriate websites for visitors to discover more information.	Includes 1 link to an appropriate website for visitors to discover more information.	Includes 1 link to a website, but the connectedness of the material is questionable.	Neglects to include a website link.
Use of Textboxes	Includes 2 or more links to appropriate websites for visitors to discover more information.	Includes 1 text box to provide information visitors.	Includes 1 text box, but the connectedness to the material is questionable.	Neglects to include a textbox.
Completeness	Product covers a wide variety of the content to engage visitors in multiple curriculum areas reflect in this unit.	Product covers a few aspects of the content to engage visitors in more than one curriculum area covered in this unit.	Product covers limited aspects of the content and uses only one curriculum area covered in this unit.	Product covers very little of the content and has little or no connection to curricular areas covered in this unit.

*Iceberg Right Ahead: Will You Sink or Float on our Titanic Journey?*

*Anica H. Weeks and Melani T. Blewett*

**LESSON #4: "Pride Goes Before the Fall"**

I. DEFINE OBJECTIVES AND CONTENT	
LESSON OBJECTIVE	Students will appraise the significance of the Titanic's tragedy in history and in modern times. Students will experiment, modify and finalize the design of their flotation device.
POINT TO PONDER	Human arrogance leads to failure.
ESSENTIAL QUESTION	What has society learned from disasters?
CONTENT Outline the content you will teach in this lesson.	<ul style="list-style-type: none"><li>III. The Tragedy<ul style="list-style-type: none"><li>E. Rescue and Recovery Efforts<ul style="list-style-type: none"><li>1. <i>SS Californian</i></li><li>2. <i>RMS Carpathia</i></li><li>3. <i>CS Mackay-Bennett</i></li></ul></li><li>F. Reports from Survivors<ul style="list-style-type: none"><li>1. Eve Hart, age 7 (<a href="#">youtube video</a>)</li><li>2. Jack Thayer, age 17 <i>Exploring the Titanic</i>, text</li><li>3. Molly Brown, age 44 <i>Heroine of the Titanic</i>, text</li><li>4. Elizabeth Shutes, age 40 <a href="#">Eyewitness to History</a>, site</li><li>5. The Caldwell Family <i>A Rare Titanic Family</i>, text<ul style="list-style-type: none"><li>a. Albert Francis Caldwell, age 26</li><li>b. Sylvia Mae Harbaugh Caldwell, age 28</li><li>c. Alden Gates Caldwell, age 10 months</li></ul></li></ul></li></ul></li><li>IV. The Inquiry and Aftermath<ul style="list-style-type: none"><li>A. The investigation</li><li>B. The original Guidelines prior to Sinking</li><li>C. The Safety Of Life At Sea (SOLAS) changes</li></ul></li><li>V. Dr. Robert Ballard<ul style="list-style-type: none"><li>A. Biography</li><li>B. The Discovery</li></ul></li></ul>

*Iceberg Right Ahead: Will You Sink or Float on our Titanic Journey?*

Anica H. Weeks and Melani T. Blewett

II. PRE-PLANNING	
<p>What will students UNDERSTAND as a result of this lesson? How does this connect to the Essential Question?</p>	<ul style="list-style-type: none"> <li>● The sinking of the <i>Titanic</i> impacted maritime regulations</li> <li>● The Safety of Life at Sea Convention redefined safety guidelines as a result of the <i>Titanic</i> disaster.</li> <li>● Modern application of latitude/longitude goes beyond paper maps into the technology of GPS devices.</li> </ul> <p>What has society learned from disasters? The students will have an awareness that, after tragedy, change must occur in order to prevent the same mistakes from taking place again. Students will discuss how human input contributed to the demise of the <i>Titanic</i> and the tremendous loss of life.</p>
<p>What will students be able to DO as a result of this lesson?</p>	<ul style="list-style-type: none"> <li>● Student will predict which flotation device will hold the most marbles based on their understanding of buoyancy.</li> <li>● Students will explain the maritime regulation changes that occurred due to the impact of the tragedy.</li> <li>● Students will use handheld GPS units (9 devices from A. Weeks) to locate concealed containers in order to learn the ultimate fate of their persona</li> <li>● Students will finalize their thoughts on the outcome of their personas.</li> <li>● Students will debate the issue of the preserving or removing the artifacts from their resting place.</li> </ul>

III. PLANNING	
<p><b>HOOK</b> Describe how you will grab students' attention at the beginning of the lesson. <b>BE CREATIVE.</b></p>	<p><b>TIME:</b> 12 min. Read Ismay's quote (posted in the classroom) regarding the intentional limitation of lifeboats. The teachers will lead the students into a discussion by asking "Whom would you blame?" Students will watch a <a href="#">video clip</a> of the discovery of the <i>Titanic</i> to see how the ship looks today.</p>
<p><b>INSTRUCTION</b> Explain Step-by-step what you will do in this lesson. Be explicit about ties to Points to</p>	<p><b>TIME:</b> 40 min.</p> <ul style="list-style-type: none"> <li>● The teacher will use the link to the <a href="#">International Maritime Organization</a> to share documents related to SOLAS, including the original guidelines prior to the sinking, the inquiry, and the changes made as a result.</li> <li>● Students will <b>interact</b> with history to learn about the inquiry,</li> </ul>



*Iceberg Right Ahead: Will You Sink or Float on our Titanic Journey?*

*Anica H. Weeks and Melani T. Blewett*

<p>Ponder, Essential Question, and Interactions here. Include ALL support and teaching materials with your unit.</p>	<p>the investigation, and the aftermath of the tragedy. This will connect the student to the question of what society has learned from disasters. This will also lead to the pondering over Ismay's arrogance of the ship's beauty and how that led to the number fatalities. (Quote from Ismay, as included in Content Research which will be posted in the classroom)</p> <ul style="list-style-type: none"> <li>● Students will learn about recent research into Titanic. Current news articles and research will be reviewed as handouts. (<a href="#">Article 1</a>, <a href="#">Article 2</a>, <a href="#">Article 3</a>, <a href="#">Article 4</a>)</li> <li>● The teachers will share a <a href="#">video clip</a> to introduce Dr. Robert Ballard and his views of the artifacts discovered. They will also view Dr. Melinda Ratchford's <a href="#">video response</a>. The comparison of the two will present the topic for the debate.</li> <li>● Students will debate the ethics of taking artifacts from the site.             <ul style="list-style-type: none"> <li>○ News articles will be provided for the students to use to support their positions and rebuttals.</li> </ul> </li> <li>● Teachers will project a <a href="#">news link</a> to transition discussion from artifacts to individual passenger stories.</li> <li>● Students will jigsaw/share survivors' stories.</li> </ul> <p>Short Thursday Session:</p> <ul style="list-style-type: none"> <li>● Teachers will distribute preloaded GPSr units.</li> <li>● Students will <b>interact</b> with technology through Geocaching to discover the fate of their persona. Using latitude/longitude with GPSr devices demonstrates the modern use of maps and coordinates.</li> </ul> <p>Afternoon session with parents:</p> <ul style="list-style-type: none"> <li>● Students will share their Thinglink museums.</li> <li>● Students will demonstrate their flotation devices.</li> <li>● Time permitting, students will share their blogs.</li> </ul>
<p>ASSESSMENT (Performance Task) What will the students DO to demonstrate that they have mastered the content? Be specific and include actual assessment with unit materials.</p>	<p>TIME: 20 min. Students will:</p> <ul style="list-style-type: none"> <li>● share Thinglink museums (rubric from day 3) – for parents</li> <li>● demonstrate flotation device (rubric from day 2) – for parents</li> <li>● blog final thoughts about the voyage, their newly discovered passenger identities, their passengers' fates (rubric from day 1) – in Thursday's PM session</li> <li>● participate in a debate about the ethics of removing artifacts from the site of the wreck – in Thursday's PM session</li> </ul>

DOES THE ASSESSMENT ALLOW YOU TO DETERMINE WHETHER OR NOT THE STUDENTS HAVE MET YOUR STATED LESSON OBJECTIVE? **YES** OR NO

*Iceberg Right Ahead: Will You Sink or Float on our Titanic Journey?*

*Anica H. Weeks and Melani T. Blewett*

**ASSESSMENT AND INSTRUCTIONAL MATERIALS**

*Insert ALL materials here including Assessments and Instructional Materials.*

*Explicitly LIST any additional files for this lesson. Be sure that ALL materials have been submitted for this lesson.*

Rubric for student participation in debate

Student Name	Point 1	Point 2	Point 3	Rebuttal 1	Rebuttal 2

A successful student will contribute three points about the significance of the *Titanic* and its artifacts in history and modern times and offer at least one rebuttal argument in response to a peer.