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By: Melissa Stewart

Fascinating stories of survival bring the historical significance of the Titanic to life.

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# Shipwrecks and Sunken Treasure

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Ever dreamed of exploring the ocean for a shipwreck? Imagine how exciting it would be to discover a hidden treasure.

Think that kind of thing only happens in the movies? Think again. In 1985, Robert Ballard led a team that discovered a sunken ship called *R.M.S. Titanic*.

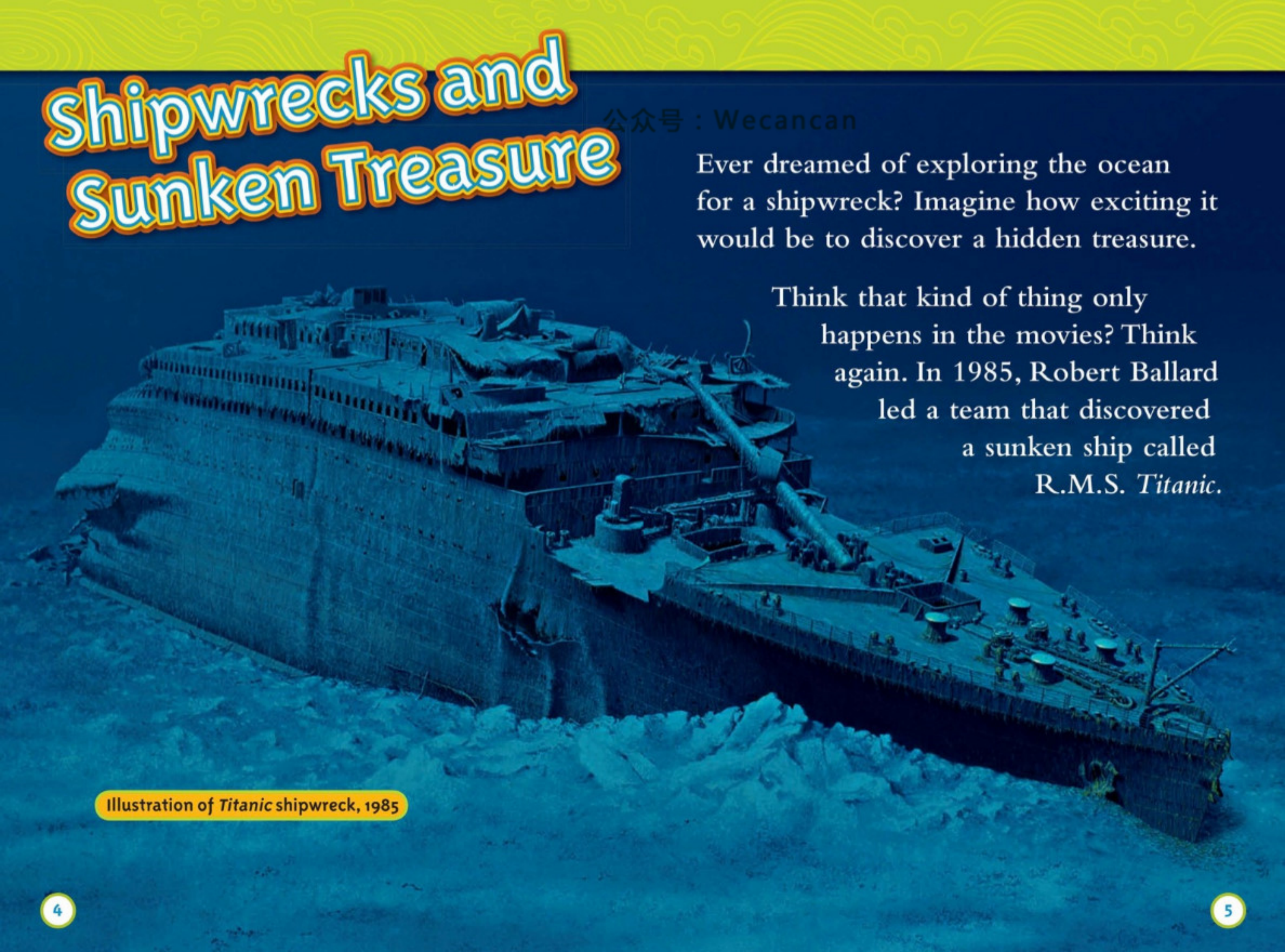
A detailed illustration of the Titanic shipwreck, showing the ship's hull and superstructure resting on the ocean floor. The scene is rendered in a monochromatic blue color scheme, with the ship's structure appearing as a dark, textured mass against the lighter blue of the seabed. The ship is oriented horizontally, with its bow pointing towards the right side of the frame. The seabed is depicted with various textures, suggesting a mix of sand, silt, and rocky patches. The overall atmosphere is somber and historical.

Illustration of *Titanic* shipwreck, 1985

Other people have found shipwrecks.  
But *Titanic* is special. It's one of the most famous ships of all time.

The whole world was excited about Ballard's discovery.



Robert Ballard and his crew celebrate on board their research ship, the *Knorr*, after they first spotted wreckage from *Titanic* in 1985.



Titanic's bow

### In His Own Words



“My team had been watching the ocean floor with an underwater camera for days—and all we'd seen was mud. Late one evening, our camera suddenly passed over a ship's boiler . . . and at that moment, we knew . . . we'd found it.”

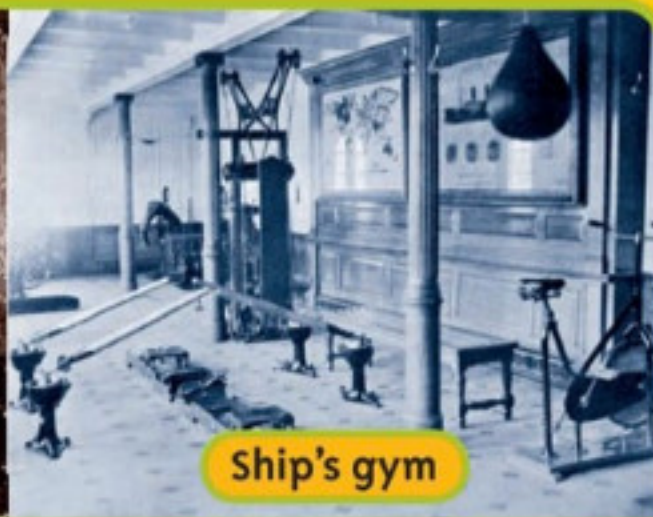
—Robert Ballard

# The Wonder Ship

What made *Titanic* so special? In 1912, it was the biggest ship ever built. That's why some people called it the "wonder ship."



First-class bedroom



Ship's gym



First-class café



Grand staircase

Other people called it a "floating palace." *Titanic* had every possible luxury—fine wood paneling, crystal and gold light fixtures, and a grand staircase with a skylight above it.

First-class passengers ate fancy meals and enjoyed the ship's gym and swimming pool.



## Titanic Terms

**LUXURY:** Something that offers pleasure or comfort, but isn't necessary; often difficult or expensive to get



### Titanic Terms

**BOW:** The front end of a ship

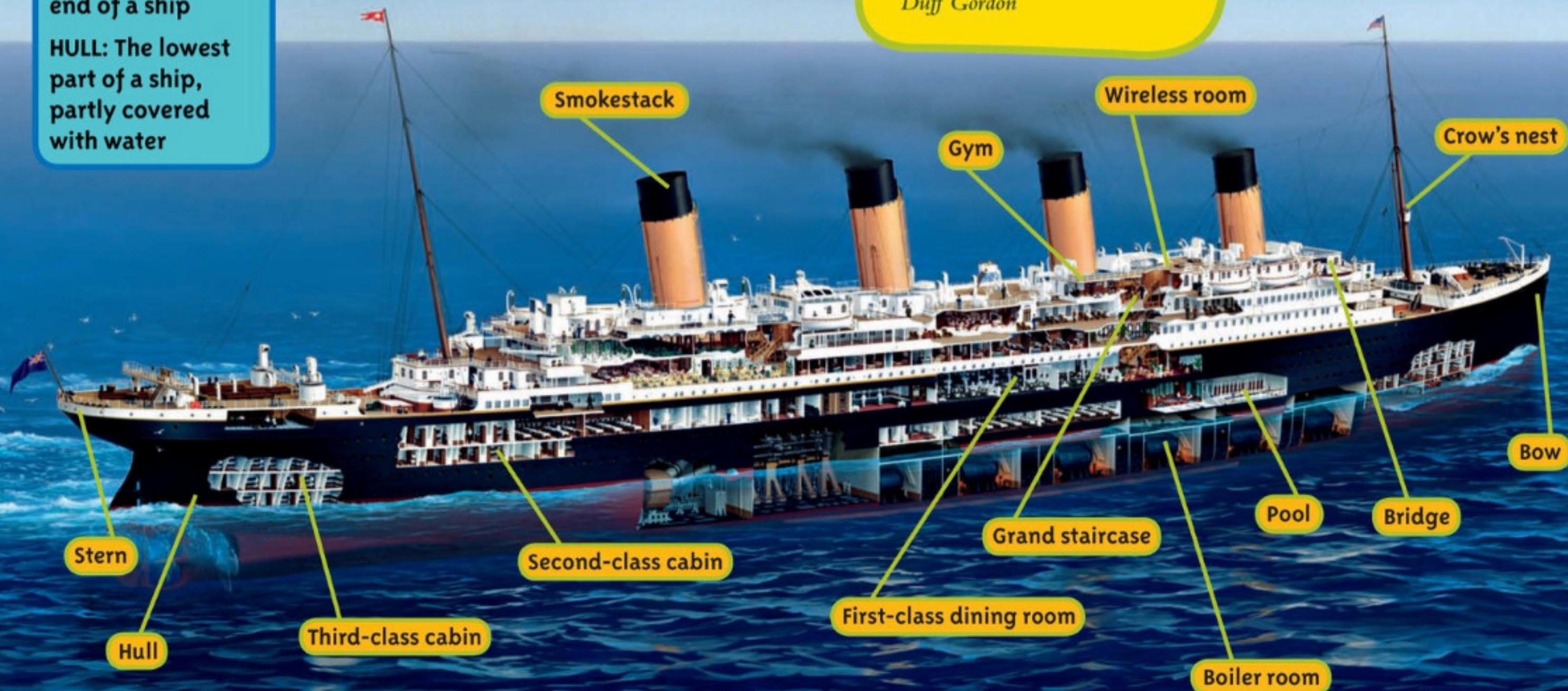
**STERN:** The back end of a ship

**HULL:** The lowest part of a ship, partly covered with water

*Titanic* had nine decks, or levels, with separate areas for first-class, second-class, and third-class passengers.

“My pretty little cabin with its electric heater and pink curtains delighted me. Its beautiful lace quilt, and pink cushions, and photographs all around—it all looked so homey.”

—First-class passenger Lady Duff Gordon



# 10

## Cool Things About Titanic

1



Titanic was almost as long as three football fields.

6



Each day, the passengers and crew used 14,000 gallons of drinking water.

7



Smoke and steam made by Titanic's boilers escaped through three stacks. Builders added a fourth stack because they thought it made the ship look better.

3



Titanic's engines used more than 800 tons of coal each day. The ship's top speed was 24 knots (27 miles an hour).

8



Titanic could carry 3,547 passengers and crew. About 2,200 people traveled on its first voyage.

9



Some passengers paid about \$99,000 in today's money to travel aboard Titanic.

2



Including the four smokestacks, the ship was as tall as a 17-story building.

4



Titanic was one of the first ships to have a telephone system and electric lights in all the rooms.

5



The ship had four elevators, a heated swimming pool, a gym, two libraries, and two barber shops.

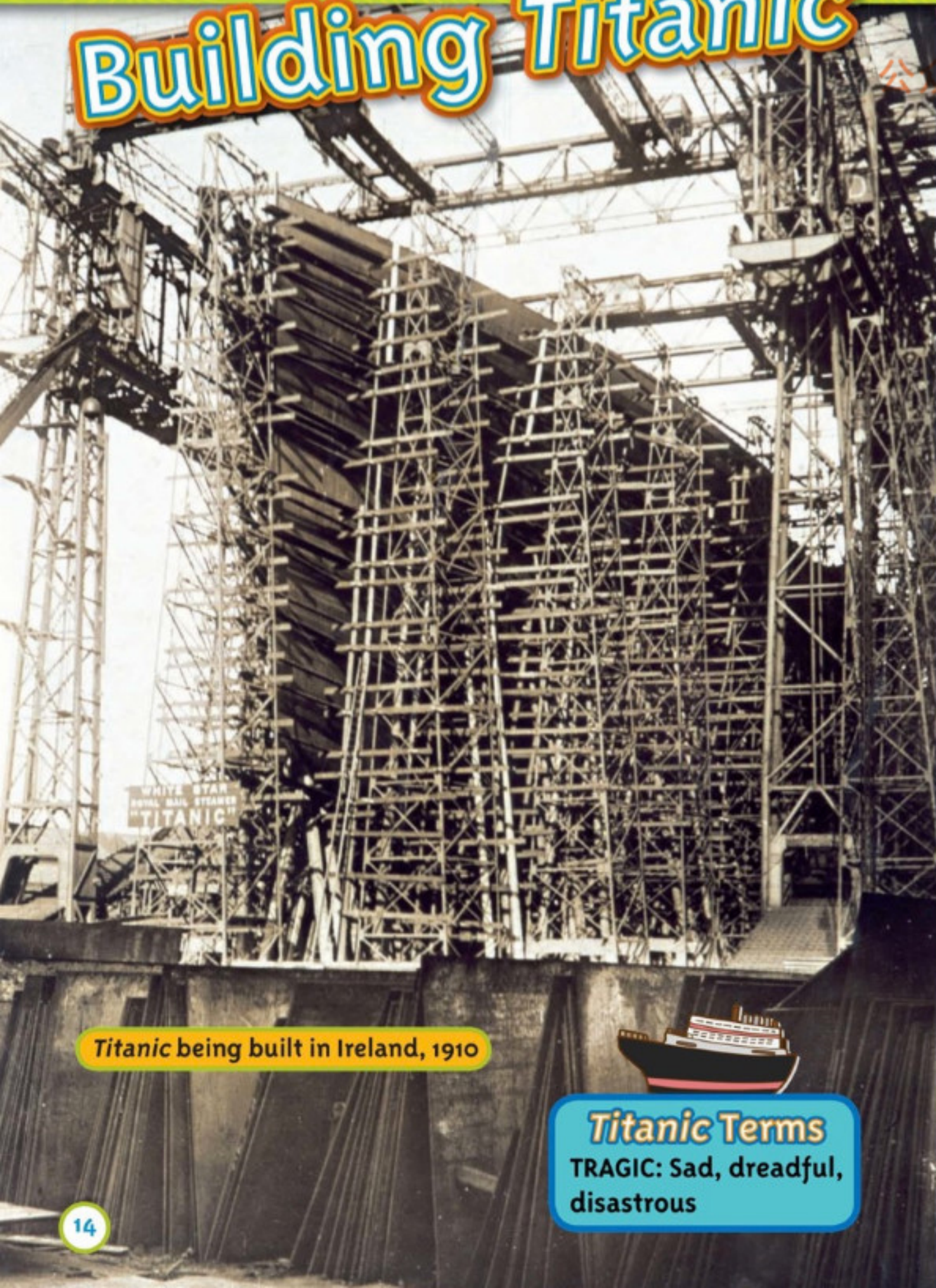
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To feed the passengers and crew, Titanic had 86,000 pounds of meat, 40,000 eggs, 40 tons of potatoes, 7,000 heads of lettuce, 3,500 pounds of onions, 36,000 apples, and 1,000 loaves of bread on board.

# Building Titanic

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Titanic being built in Ireland, 1910



## Titanic Terms

TRAGIC: Sad, dreadful, disastrous

*Titanic's* tragic story began in 1907. That's when J. Bruce Ismay of the British shipping company White Star Line and William J. Pirrie of Harland and Wolff shipyards decided to build three huge ships. One of those ships was *Titanic*.

In 1909, Thomas Andrews began work on *Titanic* in Belfast, Ireland. The ship was finished on March 31, 1912.

In early April, *Titanic* arrived in Southampton, England. Then a 900-person crew took a week to prepare for the ship's first voyage.



J. Bruce Ismay,  
Chairman, White Star Line



Lord William J. Pirrie,  
Chairman, Harland  
and Wolff



Thomas Andrews, Managing  
Director, Harland and Wolff

# Bon Voyage



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Col. John Jacob Astor, IV,  
real estate millionaire  
from New York



Benjamin Guggenheim,  
who made his fortune in  
the mining business



Isidor Straus, owner of  
Macy's department store

When *Titanic* left England on April 10, 1912, it had an impressive list of passengers. White Star Line's chairman, J. Bruce Ismay, and *Titanic* builder Thomas Andrews were on board. So were some of the richest people in the world.

The ship also carried many middle-class passengers and poor immigrants who hoped for a better life in America.



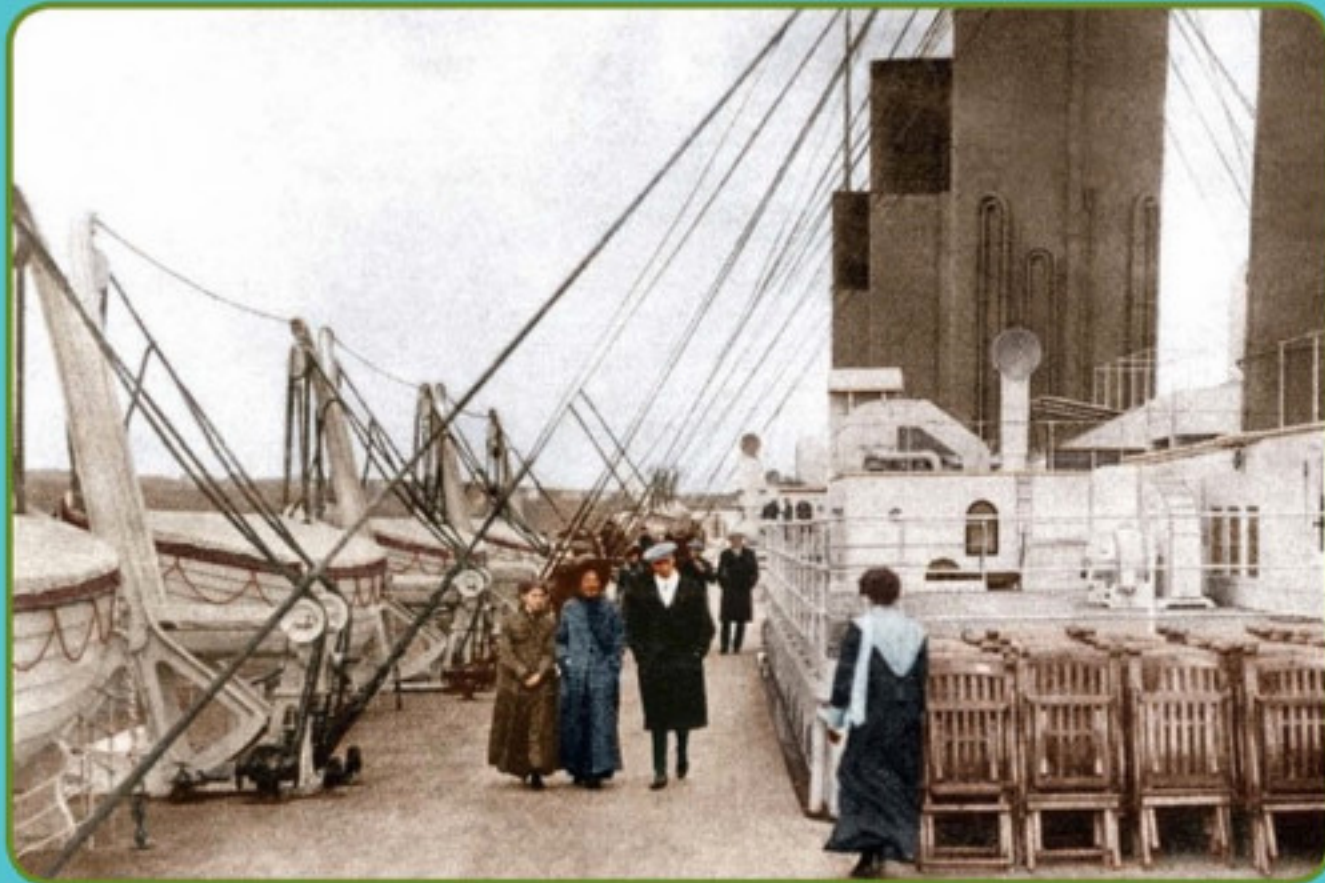
## Titanic Terms

**IMMIGRANTS:** People who leave one country to settle in another country



For the first few days of the trip, passengers felt like they were on vacation. They spent their time strolling around the deck, playing cards, and enjoying the ship's fine food and other luxuries.

But all that changed on Sunday, April 14, 1912. That's when *Titanic* entered an area of the North Atlantic Ocean known as Iceberg Alley.



Passengers strolling the deck of *Titanic*

weird  
but  
true

Most of an iceberg's bulk is located below the ocean's surface. That makes it hard for sailors to know how big the icy chunk really is.



### **Titanic Terms**

**ICEBERG:** A large mass of ice floating in the sea

# Tragedy at Sea

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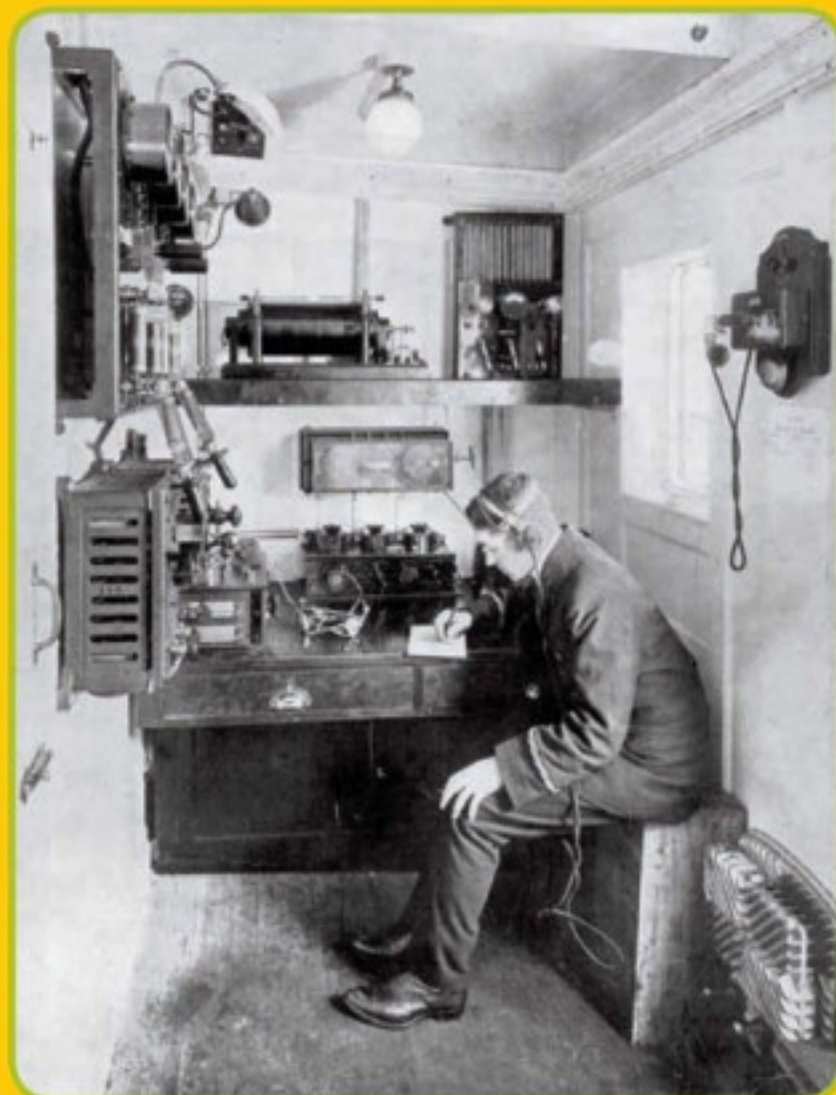
As *Titanic* cruised across the wavy water at top speed, it received nine ice warnings from other ships. But wireless operators Jack Phillips and Harold Bride were busy sending and receiving messages from passengers. They didn't deliver all the warnings to the bridge.



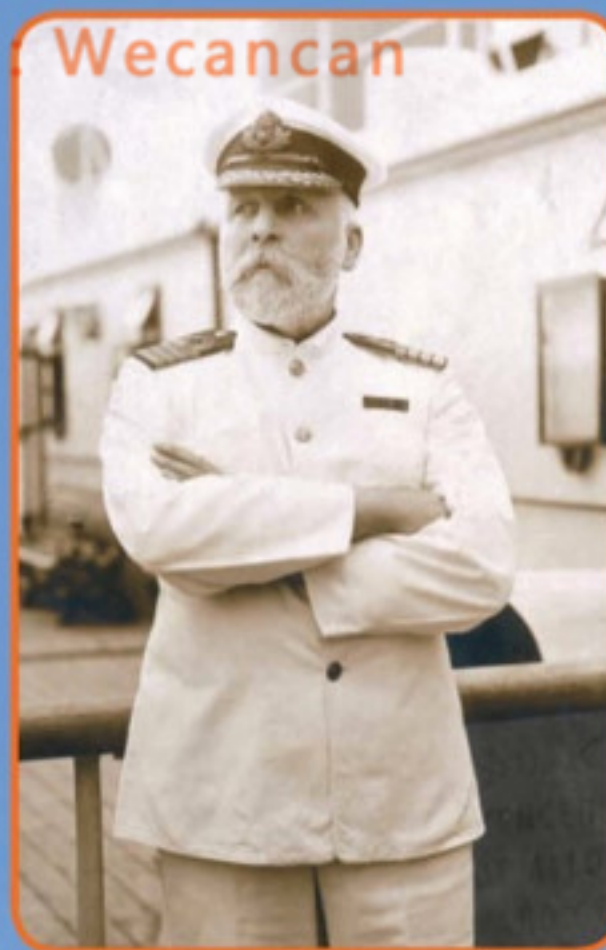
## Titanic Terms

**BRIDGE:** A ship's control center. *Titanic* was steered and navigated from its bridge.

**WIRELESS:** An early form of radio that relayed messages through a coded series of beeps.



Wireless room similar to the one on *Titanic*



Captain Edward J. Smith seemed to ignore the messages he did receive during the day. Before dinner, he finally changed the ship's course to the south. But he didn't slow down.

Captain Smith had a long, successful career at sea. Commanding *Titanic* was supposed to be his last assignment before retiring. But he went down with his ship.



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After sunset, stars shone brightly in the moonless sky. The air was bitterly cold, and the water was glassy smooth.

Just before midnight, Frederick Fleet, one of the ship's lookouts, spotted a large, dark object in the water.

**weird  
but  
true**

Many people believed *Titanic* was unsinkable, but the builders never made that claim.

He rang the alarm bell three times and shouted, "Iceberg right ahead."

First Officer William Murdoch reacted quickly. He ordered the crew to reverse the engines and turn the boat left, away from the iceberg. Then he pulled a switch to close the bulkheads.

But it was too late.



### ***Titanic* Terms**

**BULKHEADS:** Walls meant to slow or prevent flooding by separating *Titanic's* hull into 16 separate compartments

Most of the passengers were asleep. They didn't even feel the iceberg scrape the side of the ship. But the damage was done.

Captain Smith and Thomas Andrews rushed below decks. When Andrews saw how much seawater was gushing into the ship, he estimated *Titanic* would sink in less than two hours.

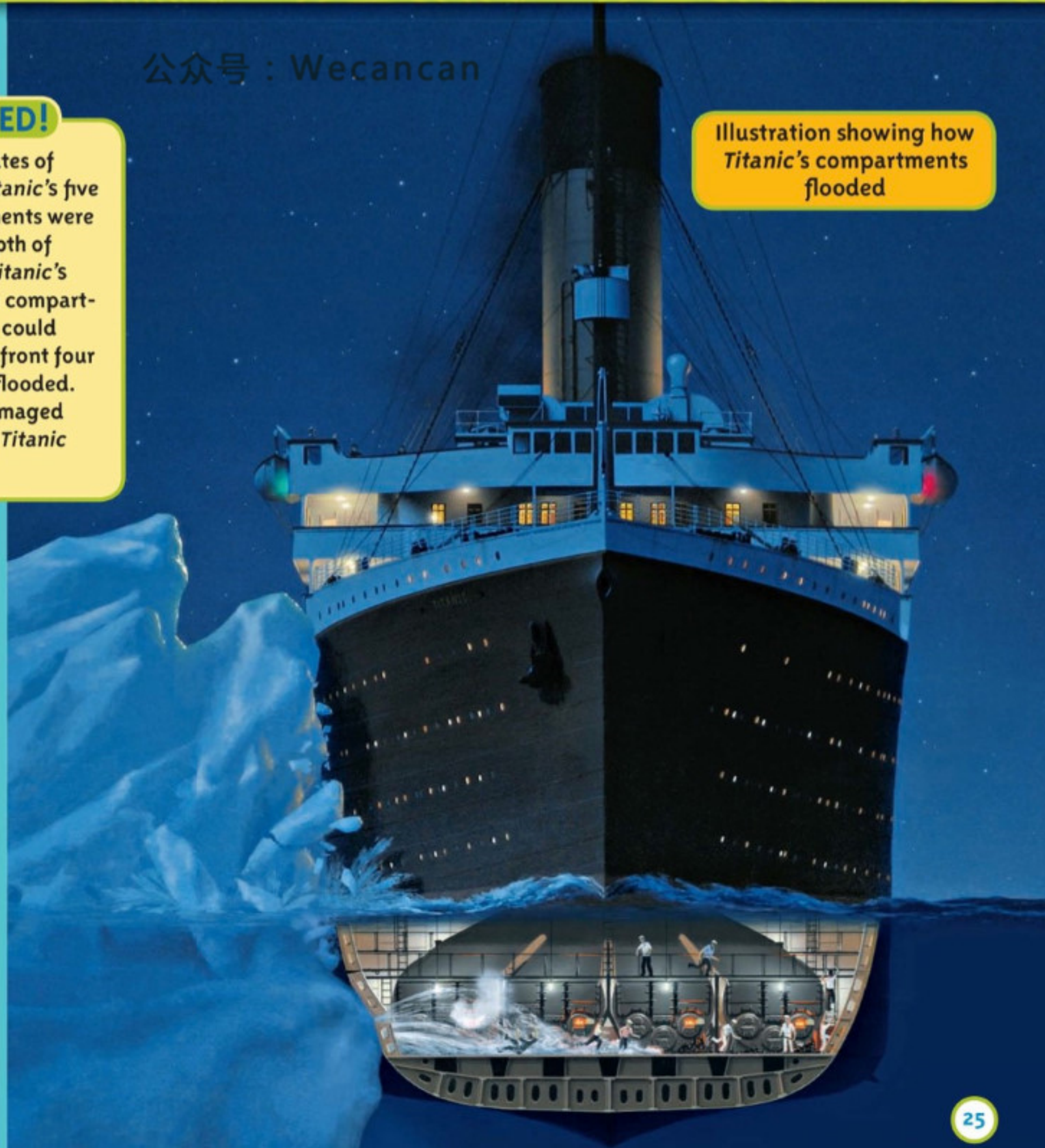
### DOOMED!

Within ten minutes of the collision, *Titanic's* five front compartments were flooded to a depth of fourteen feet. *Titanic's* hull had sixteen compartments. The ship could float if only the front four compartments flooded. But with five damaged compartments, *Titanic* was doomed.

Illustration showing how *Titanic's* compartments flooded

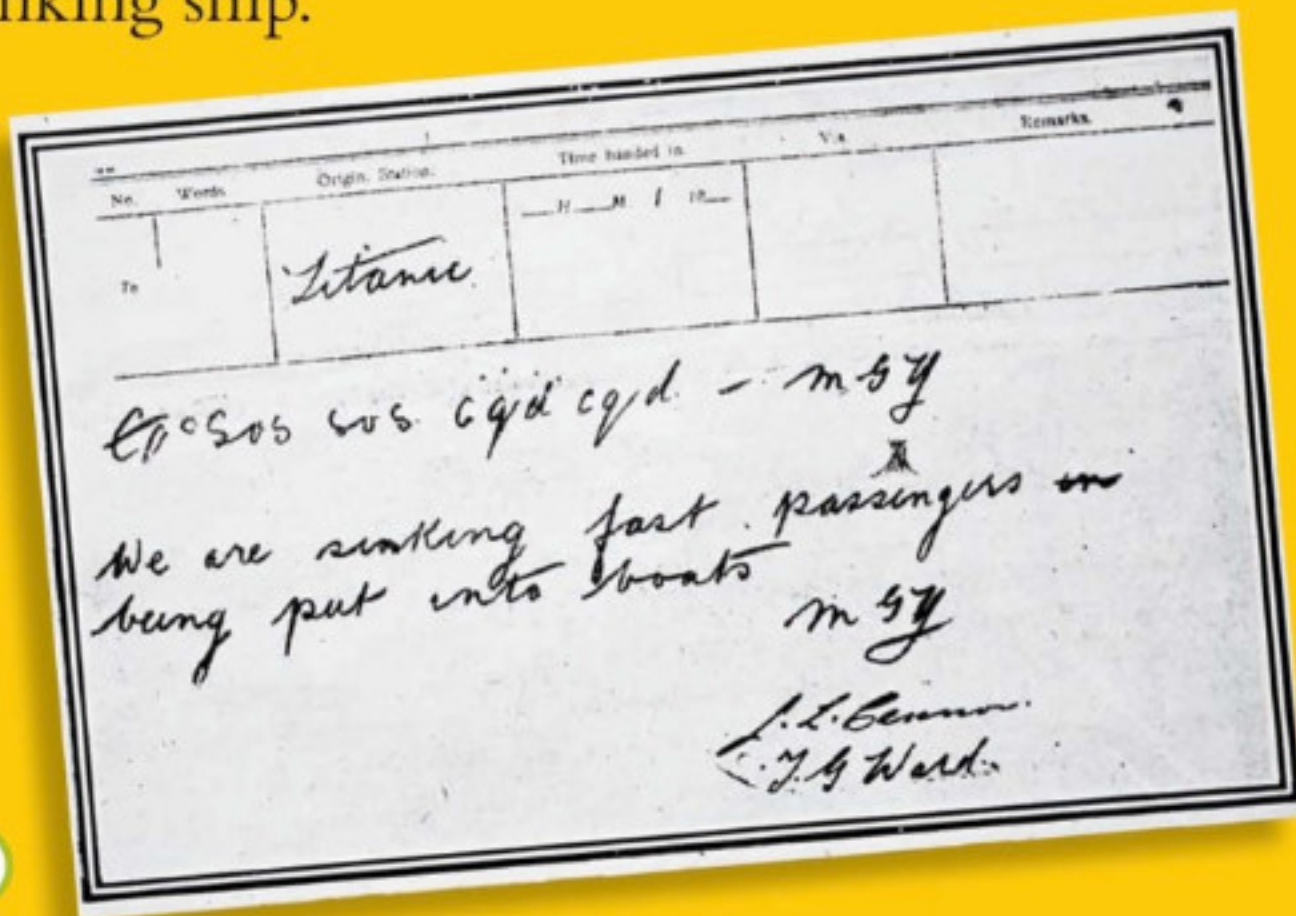
**weird  
but  
true**

If *Titanic* had hit the iceberg straight on, it might not have sunk. And even if it had sunk, there would have been time for other ships to rescue the people on board.



Captain Smith knew that *Titanic* had enough lifeboats for 1,178 people—only about half the number of passengers and crew on board. Many people would die if a rescue ship didn't arrive in time.

He rushed to the ship's wireless room and ordered Phillips and Bride to send out distress calls. The first ship to respond was the *Carpathia*, but it was 58 miles away. It would need four hours to reach the sinking ship.



公共

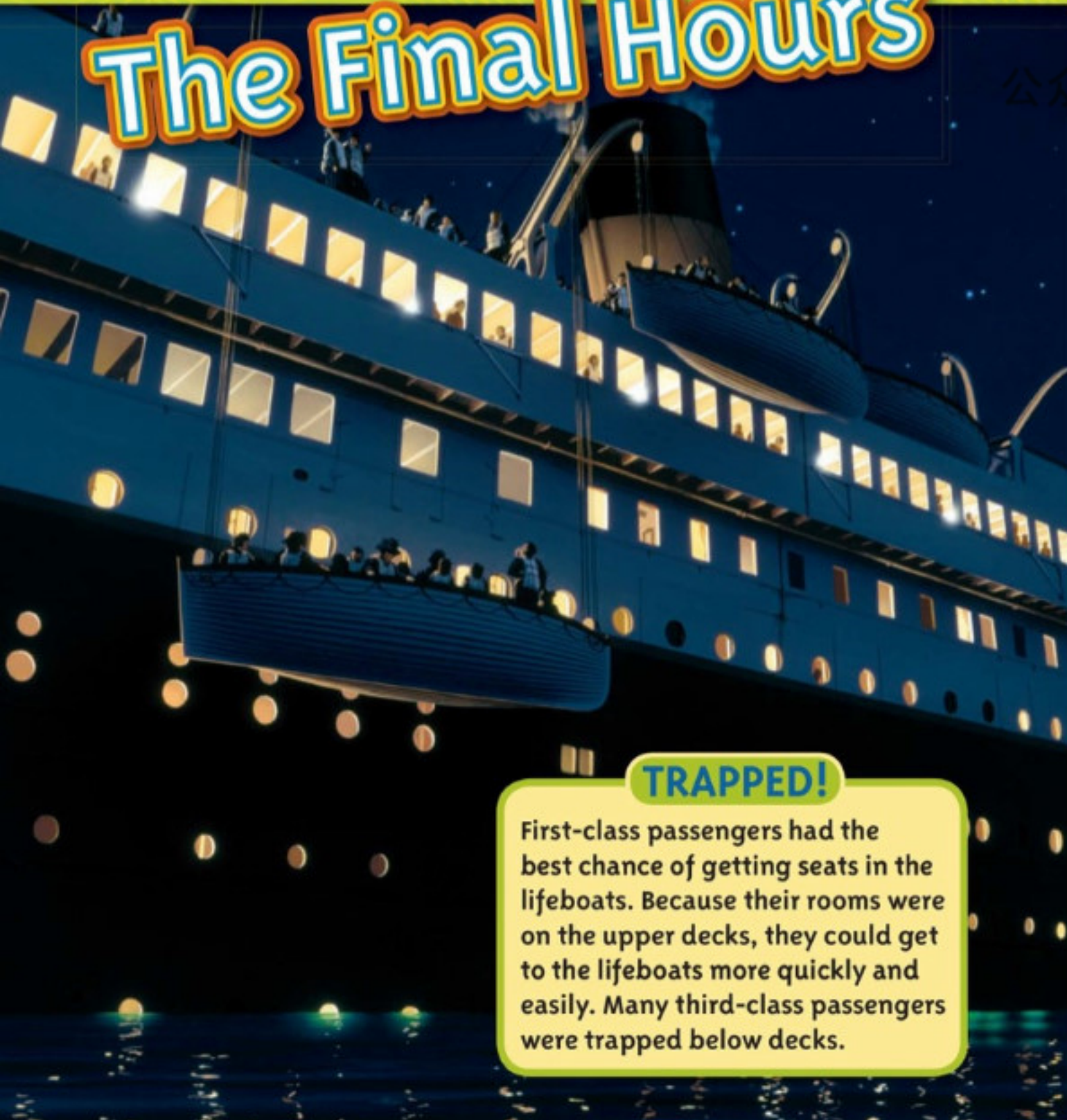


*Titanic*'s crew fired rockets to get the attention of a ship they could see about ten miles away. But it never answered.

**weird  
but  
true**

The original plans for *Titanic* included 64 lifeboats. But the builders put in only 20, so first-class passengers would have more room to stroll around on deck.

# The Final Hours



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## TRAPPED!

First-class passengers had the best chance of getting seats in the lifeboats. Because their rooms were on the upper decks, they could get to the lifeboats more quickly and easily. Many third-class passengers were trapped below decks.

## In Her Own Words



“We have been living together for many years, and where you go, I go. We started together and if need be, we’ll finish together.”

—Ida Straus, overheard speaking to her husband when she decided to die with him rather than board a lifeboat

The lifeboats were ready by 12:25 a.m., but many people didn’t want to board them.

Climbing into the boats was scary. Many passengers couldn’t believe that the wonder ship would soon be gone.

The crew worried that they wouldn’t have time to lower all the lifeboats, so some boats went down less than half full.

12:25 A.M.

People begin boarding lifeboats, using the code of the sea: “women and children first.”

12:45 A.M.

The first lifeboat is lowered into the water. Only 28 of the 65 seats are filled.

1:15 A.M.

As *Titanic*’s bow sinks, the stern rises out of the water. Lifeboats now leave the ship more fully loaded.

2:05 A.M.

The last lifeboat launches.

2:17 A.M.

People in lifeboats hear a loud crash as everything aboard *Titanic* tumbles toward the bow.

When the last lifeboat launched, more than 1,500 people were stranded on the sinking ship.

As *Titanic's* stern tilted upward, hundreds of victims fell into the icy water. Others held on until the ship slipped below the waves.

People in the lifeboats were haunted by the victims' desperate screams for help. Then the sounds slowly faded.

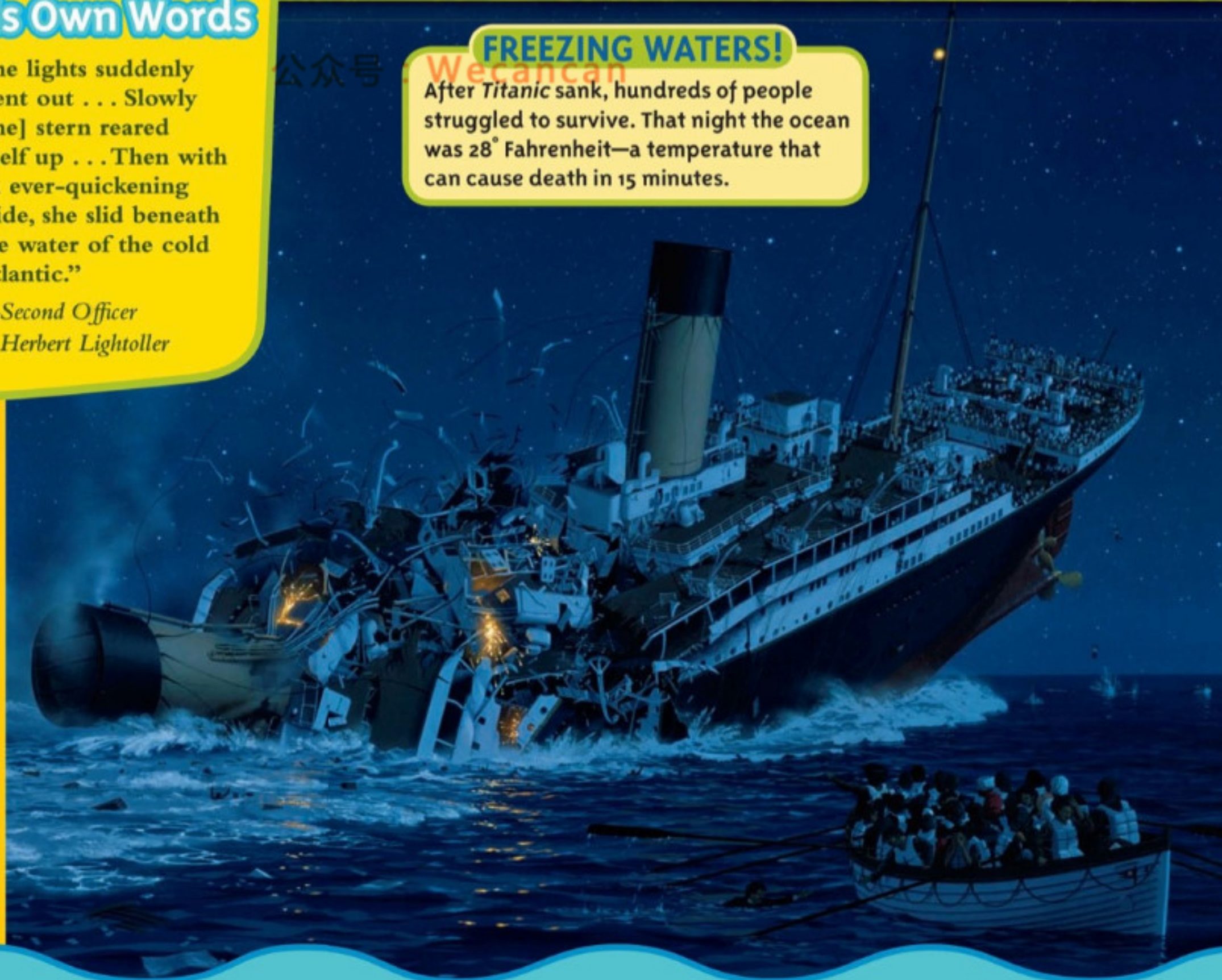
## In His Own Words

“The lights suddenly went out . . . Slowly [the] stern reared itself up . . . Then with an ever-quickenning glide, she slid beneath the water of the cold Atlantic.”

—Second Officer  
Herbert Lightoller

## FREEZING WATERS!

After *Titanic* sank, hundreds of people struggled to survive. That night the ocean was 28° Fahrenheit—a temperature that can cause death in 15 minutes.



**2:18 A.M.**

The ship's lights go out, the ship breaks into two pieces, and the entire bow sinks.

**2:20 A.M.**

The stern sinks, leaving hundreds of people in the frigid water.

**3:00 A.M.**

A few lifeboats search for survivors. They rescue 13 people.

**3:30 A.M.**

The survivors see rockets firing in the distance. The *Carpathia* is coming!

# They Survived!

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A lifeboat approaching *Carpathia*

Many people in the lifeboats were wearing their pajamas. After spending hours in the freezing cold, the *Carpathia* was a welcome sight.



*Carpathia*'s Captain Arthur Rostron



Survivors on board *Carpathia*

*Carpathia*'s crew had plenty of clothes, blankets, and warm food ready for the survivors. They quickly helped the freezing people out of the little lifeboats.

By 9:00 a.m. on Monday, April 15, 1912, *Carpathia* was headed for New York with 705 survivors.

## NEVER AGAIN!

After the *Titanic* tragedy, all ships had to have enough lifeboats for everyone on board. A new International Ice Patrol began tracking icebergs and warning nearby ships.





### A Real Heroine

One of *Titanic's* most famous survivors was first-class passenger **Margaret Brown**. She earned the name "Unsinkable Molly Brown" for helping people board lifeboats and insisting that her lifeboat try to rescue people in the water. She may have also taken a turn rowing her lifeboat toward *Carpathia*.

### A Careful Observer

First-class passenger **Jack Thayer** was 17 years old—too old to be allowed on a lifeboat. He jumped into the water as *Titanic* sank and scrambled onto an overturned lifeboat. In 1940, Thayer wrote a vivid description of his *Titanic* experience. Robert Ballard used some of Thayer's details to find the sunken ship.

### A Hard Worker

Wireless operator **Harold Bride** stayed at his post until the last second. After jumping off the sinking ship, he managed to climb onto the same overturned lifeboat as Jack Thayer. Even though his feet were badly frostbitten, he later helped *Carpathia's* wireless operator send out survivor lists and personal messages.



### The Final Survivor

Third-class passenger **Millvina Dean** was the youngest person aboard *Titanic*. The tiny three-month-old, her two-year-old brother, and her mom were loaded into a lifeboat, but her father went down with the ship. Millvina was the last remaining *Titanic* survivor. She died in 2009.

White Star Line flag



### Who Died?

#### FIRST CLASS

Total: 329  
 Number who survived: 199  
 Number who died: 130  
**40 percent died**

#### SECOND CLASS

Total: 285  
 Number who survived: 119  
 Number who died: 166  
**58 percent died**

#### THIRD CLASS

Total: 715  
 Number who survived: 179  
 Number who died: 536  
**75 percent died**

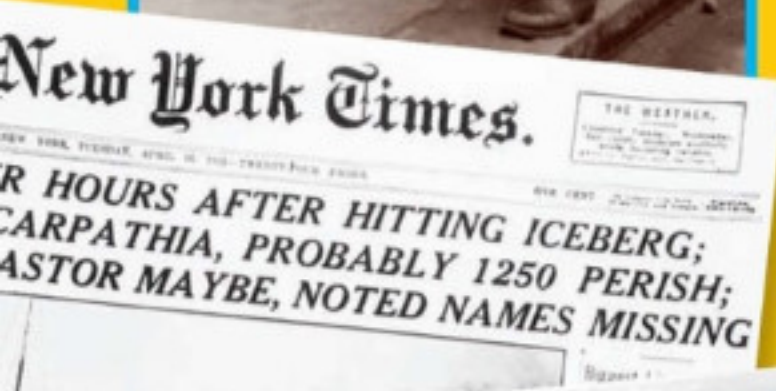
#### THE CREW

Total: 899  
 Number who survived: 214  
 Number who died: 685  
**76 percent died**

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News of the disaster spread quickly. No one could believe it. The ship people said was unsinkable had vanished below the waves. And more than 1,500 passengers and crew had suffered a terrible death.

The *Titanic's* tragic ending made the wonder ship even more famous. Over the years, dozens of books, films, songs, and musicals have retold the shocking story. Even though the ship is long gone, our fascination with it lives on.



The 1997 film *Titanic* is the most successful movie of all time. In two years, it earned nearly \$2 billion and won 11 Oscars, including best picture and best director.

# 10 Real Reasons for the Titanic Tragedy

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A hulking iceberg in the middle of the North Atlantic always gets blamed for sinking *Titanic*. But it's not the only reason so many people lost their lives that night.



Illustration of water pouring onto the grand staircase

38

- 1** *Titanic*'s builders removed some of the ship's lifeboats, so first-class passengers would have more room on deck. That decision left more than 1,000 people trapped on board the sinking ship.
- 2** The builders lowered *Titanic*'s bulkheads to make more room for the grand staircase and other fancy features. If the bulkheads had been higher, the ship would have sunk more slowly.
- 3** *Titanic*'s bow was stronger than the sides of the hull. If the ship had hit the iceberg head on, it might not have sunk.
- 4** When *Titanic* scraped against the iceberg, the nail-like rivets used to attach the ship's metal sides to the frame broke. As the hull split open, seawater poured into the ship.
- 5** *Titanic*'s original launch date was March 20, 1912. If the ship had left then, the iceberg probably wouldn't have been in its path.
- 6** The sea was unusually calm on April 14, 1912. Waves would have made the iceberg easier to spot.
- 7** *Titanic*'s crew couldn't find the ship's binoculars, so lookout Frederick Fleet was searching for icebergs with just his eyes.
- 8** Jack Phillips and Harold Bride worked for the company that owned the wireless equipment. If they had worked for the shipping company, they would have known messages about icebergs were more important.
- 9** Captain Smith delayed his decision to change the ship's course. If he had given the order sooner, the ship would not have been heading in the direction of the iceberg.
- 10** The *Californian* was just ten miles away. If its wireless radio hadn't been turned off for the night, the ship could have saved people before *Titanic* sank.

39

# Search and Discovery

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For more than 70 years, no human eyes saw *Titanic*. Many people tried to find the ship, but they failed.

All that changed in 1985. That's when Robert Ballard used *Argo*—a new kind of underwater vehicle—to locate the trail of broken pieces that fell out of *Titanic* as it sank. Then he followed this trail of remains to the ship.

In 1986, Ballard visited the sunken ship in a tiny submarine. It landed on *Titanic*'s deck and sent a robot named *J.J.* inside to look around.

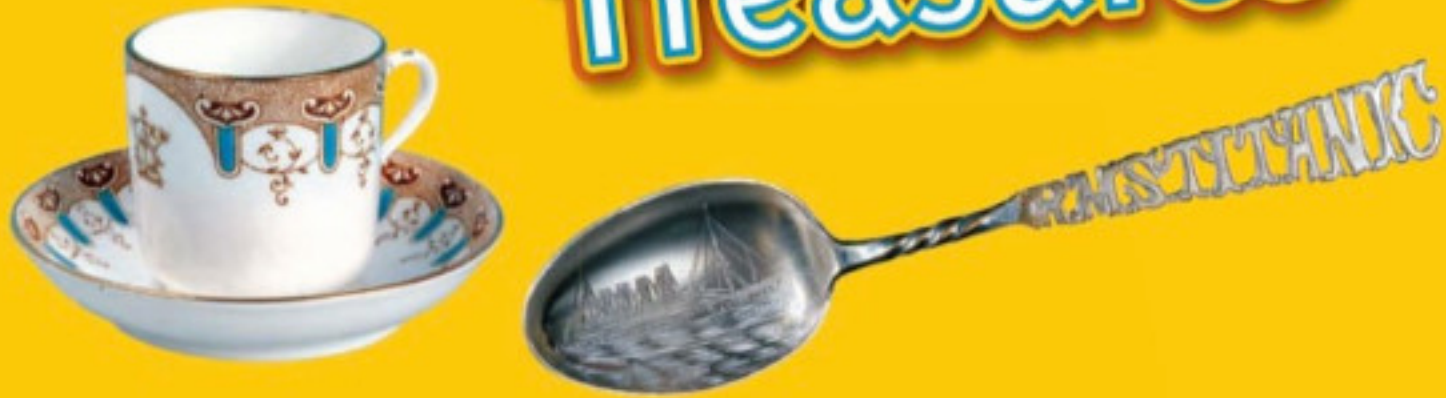
weird  
but  
true

*Titanic* was found more than 13 miles from its last reported location. No wonder people had such a hard time finding it!

Robert Ballard called *J.J.* a “swimming eyeball.”

# Titanic Treasures

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When Robert Ballard announced *Titanic's* location in 1986, people began to visit the site. They all wanted to see the wonder ship. And many wanted to take pieces of it home. People have removed more than 6,000 items from *Titanic*.



shoe

Human bodies and clothing decay quickly in seawater, but shoes don't. A shoe marks a *Titanic* victim's final resting place.

## WHAT DO YOU THINK?

Robert Ballard thinks people should leave *Titanic* alone. He says that taking things—dishes, lamps, pieces of the ship—is like robbing a grave.



Rusticles cover a first-class cabin of *Titanic*.

Over time, visitors have damaged *Titanic*. So have tiny ocean creatures. Reddish brown rusticles now cover most of the ship. They form as bacteria and fungi dine on iron and steel.



## Titanic Terms

**RUSTICLES:** A form of rust- and metal-eating bacteria and fungi



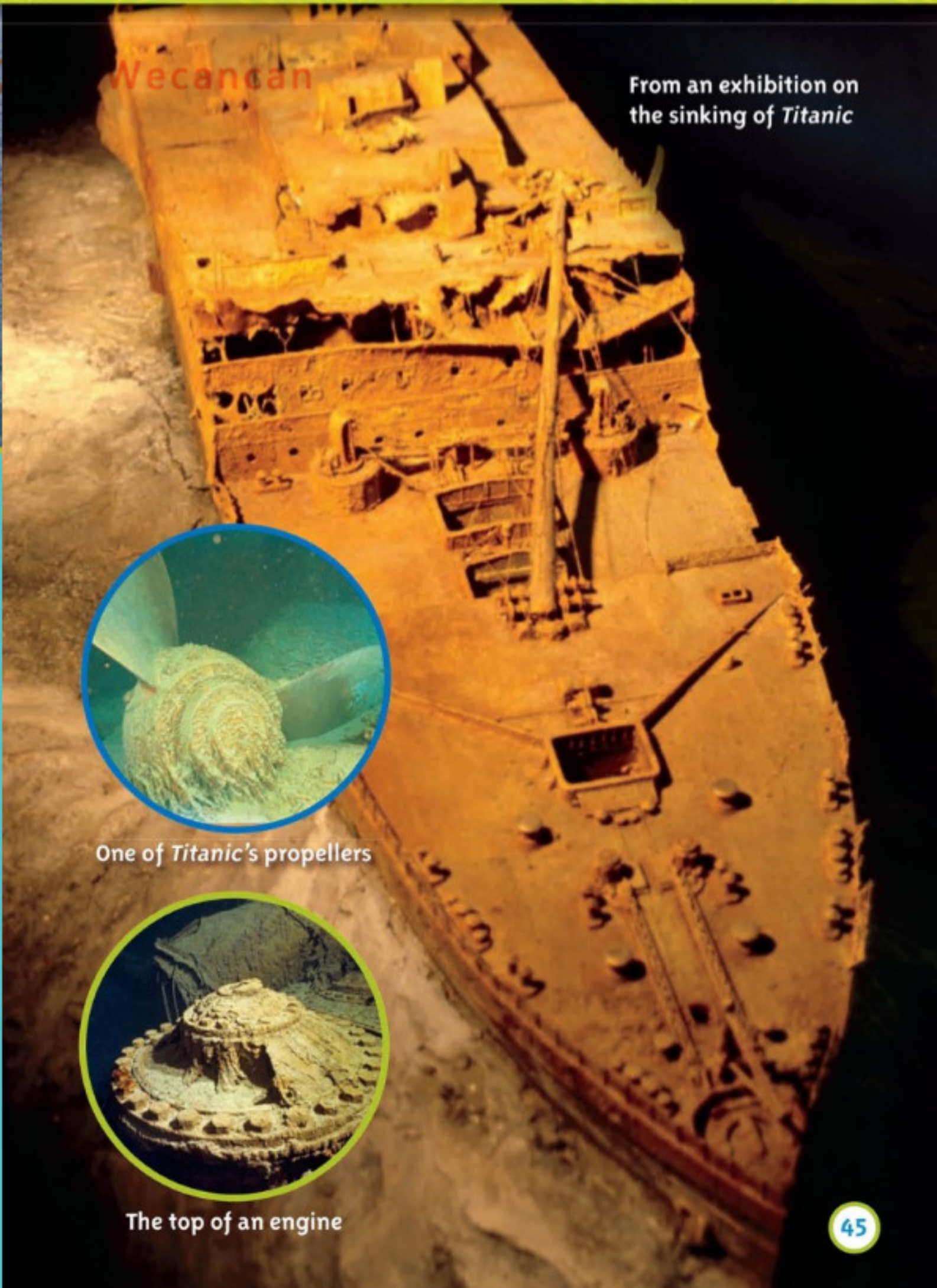
Submarines like this one were used to survey the *Titanic* wreck for the 3-D model.

### WHY?

Why do scientists want to make a detailed computer model of *Titanic*? Because someday that's all that will be left of the wonder ship.

In 2010, scientists spent 20 days photographing and filming every inch of *Titanic*, including its huge trail of broken pieces. The images will be used to create a 3-D model of the site.

You'll probably never visit *Titanic* in person, but soon, you'll be able to explore the shipwreck virtually from the comfort of your living room. How cool is that?



From an exhibition on the sinking of *Titanic*

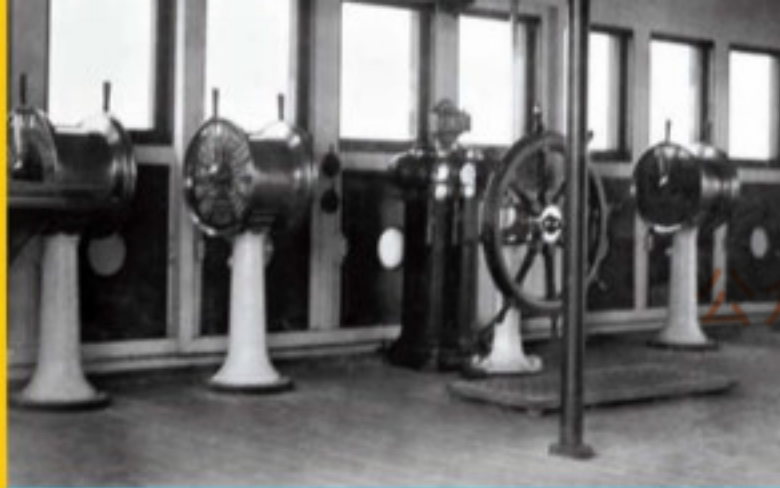


One of *Titanic*'s propellers



The top of an engine

# Glossary



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**BOW:** The front end of a ship



**BULKHEADS:** Walls meant to slow or prevent flooding by separating *Titanic's* hull into 16 separate compartments



**ICEBERG:** A large mass of ice floating in the sea



**HULL:** The lowest part of a ship, partly covered with water



**IMMIGRANTS:** People who leave one country to settle in another country



**LUXURY:** Something that offers pleasure or comfort, but isn't necessary; often difficult or expensive to get



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**RUSTICLES:** A form of rust- and metal-eating bacteria and fungi



**STERN:** The back end of a ship



**WIRELESS:** An early form of radio that relayed messages through a coded series of beeps