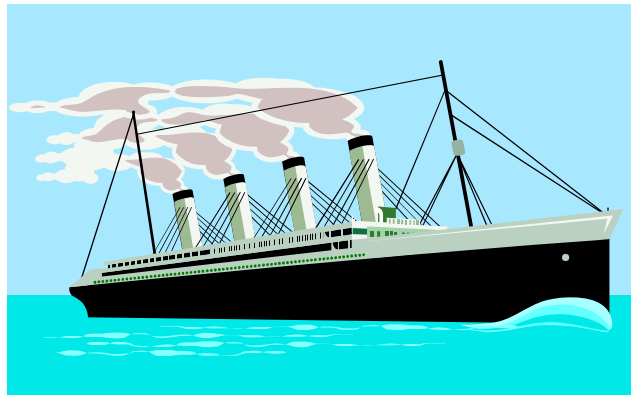


Teacher Idea Kit for

Night of the Titanic



**A Space Science Program
For Grades 5 – 9**

Presented by

**ABBITT
PLANETARIUM**



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Night of the Titanic

Suggested for Grades 5 – 9

Objectives

After visiting the planetarium for Night of the Titanic, the student should be able to:

1. Explain why the Titanic sank.
2. Discuss the impact of the Titanic disaster on the use of ocean-going vessels and how those impacts continue to shape ocean voyages today.
3. Discuss how climate change impacted the Titanic and how it impacts ocean travel today.

State Standards of Learning Objectives

This planetarium presentation meets the following Virginia State SOL's:

Science: 5.6, 6.5, ES.10

Vocabulary

climate: The overall pattern of weather in a general region.

Earth : The third planet from the Sun. The only world known to harbor life.

Global climate change: Changes in weather patterns affecting the entire Earth.

iceberg: A large floating mass of ice. The majority of an iceberg is located below the water line. Only a small portion of the ice mass is visible from the surface.

Titanic: One of the largest passenger vessels ever built. Owned and operated by the White Star Lines. The Titanic struck an iceberg on its maiden voyage and sank.

International Ice Patrol: An international weather organization charged with alerting ocean-going vessels to the presence of icebergs within standard shipping lanes.

calving: The breaking of a chunk of ice off a glacier, forming an iceberg

year: The time for the Earth to complete one revolution around the Sun.

tilt: An incline or angle from the vertical.

North: One of the four compass directions. If you are facing the North Star, you are facing North.

Spring: One of the four seasons. It is characterized by a gradual warming of temperatures and the beginning of new growth of plants.

Background Material for Night of the Titanic

The Titanic disaster continues to be an event which resonates in people's minds and hearts. The tragic loss of so many lives leaves us wondering if it could have been prevented. The vast ship has long been touted as "unsinkable," but was that a description used during the period? What exactly happened on that fateful maiden voyage? What caused this most famous disaster? And what impact has it had on ocean voyages?

Students may be surprised to discover that global climate change is not merely a modern

catchphrase – the idea has been around for an extremely long time, and is indeed a fact of life on our ever-changing planet. Changes in the Earth’s climate during the early 1900s contributed to the sinking of the Titanic, as did simple human errors and random occurrences. We will investigate the final days of the Titanic, and discuss the many factors that went into the loss of the ship, and how that loss impelled changes that continue to help keep ships safe today.

In this program, the student will learn about the Titanic, and how global climate change contributed to the sinking of the ill-fated vessel. This program is appropriate for fifth through ninth graders, and includes many exciting aspects using the digital planetarium projector to explore the skies above the Titanic and immerses the students with a full-dome movie to explore the Titanic disaster itself. A question and answer period is included, time permitting, to address specific questions from the students.

Concepts Covered During the Planetarium Visit

1. The Titanic disaster was a result of a confluence of numerous events, including at least one related to global climate change on the Earth during the early 1900s.
2. The loss of the Titanic sparked numerous changes to operation of ocean-going vessels designed to reduce the loss of the life in the event of a similar disaster. These include require radio rooms onboard ships to be manned 24 hours a day, the establishment of the International Ice Patrol, and improvements in the rules regarding the number of lifeboats required on ocean-going vessels.
3. Climate change on a global scale has occurred throughout the history of the Earth, and continues to occur today.

Pre-Visit Activities

We recommend that you conduct at least one of these activities with the class before your visit to the planetarium theater. Be sure to raise questions that can be left unanswered until the discussion period in the show.

1. Discuss the Titanic, and what students know about the disaster from books and movies. How much of this do they think is accurate?
2. Study the changes which Earth has undergone in its 5 billion year history. Concentrate on times when major extinctions have occurred. What happened to Earth’s climate during those times?

Post-Visit Activities

We recommend that you conduct at least one of these activities with your class following their visit to the planetarium theater.

1. Watch a movie about the Titanic, like James Cameron’s “Titanic.” How accurate is the portrayal of the actual disaster?

2. Using archival data for your area, chart the average temperature over time for your region. Do you see any trends? Do you think this is indicative of a more global temperature trend?

3. Research the International Ice Patrol and the work that it does. How do we track icebergs in the modern era? Can you find any instances of iceberg-related crashes since the Titanic?

Recommended Books and Web Sites

Planisphere: A planisphere is a device used to find objects in the sky. It shows the user a picture of the night sky at the precise day and time in question. Planispheres can be purchased online as well as in the VLM Gift Store.

The Sky Observer's Guide: A Golden Guide by R. Newton Mayall, Margaret Mayall and Jerome Wyckoff, Golden Press, New York.

SpaceWeather:SpaceWeather.com

Jet Propulsion Laboratory Homepage: <http://www.jpl.nasa.gov>

Astronomical Museum: <http://boas3.bo.astro.it/dip/Museum/MuseumHome.html>

NASA: <http://nasa.gov>

The National Radio Astronomy Observatory: <http://www.nrao.edu/>

Virginia Living Museum Astronomy: <http://www.thevlm.org>

