

A CHRISTMAS STORY

A program designed for grades 3 and up



OBJECTIVES:

As a result of the students' visit to the Planetarium they will be able to:

1. State one reason why trees are a part of winter holiday traditions.
2. Name at least two possible explanations for the Christmas star.

PRE-VISIT ACTIVITIES:

1. Have small groups brainstorm to list all activities that are related to the Christmas season. Pick a common tradition such as gift-giving or the belief in Santa Claus. Why do we continue this tradition and where did it come from?
2. Have the class list examples of as many traditions or customs as they can for any time of the year. Explain the difference between traditions and superstition.

VOCABULARY:

The following words are used in A CHRISTMAS STORY. Some words may be new to your students.

astrology	Magi	supernova
Chanukah	meteor	symbol
comet	myth	tradition
custom	planetary conjunction	Winter Solstice
immortality	retrograde	Yule

CONCEPTS COVERED DURING THE PLANETARIUM VISIT:

- I. Many of today's holiday traditions are based on beliefs and practices of long ago.
 - A. The use and decorating of trees at Christmas time
 1. Early people observed how the sun's path in the sky varied with the seasons. They celebrated the Winter Solstice as a time and symbol of rebirth.
 2. Because evergreens lived through the winter, they represented immortality and were hung with offerings to the sun god for good fortune.
 3. There is a myth that Martin Luther hung candles on a tree on Christmas eve to represent the starry sky on the night of Christ's birth.

4. In 1841, Prince Albert decorated a tree in Windsor Castle making tree-decorating fashionable.
 5. The custom may have been brought to the United States during the American Revolution by homesick German mercenaries or immigrants.
 6. The lighting of candles is also a Hebrew custom called Chanukah or the festival of lights.
- B. The origin of Saint Nicholas
1. There is a story of a 4th century Turkish Saint Nicolas who secretly gave bags of gold to a poor nobleman so that his three daughters could marry.
 2. In 1822, Dr. Clement Moore wrote a poem called "A Visit From Saint Nicholas". The poem was published and then illustrated by cartoonist Thomas Nast who created the image of the jolly Santa Claus we are familiar with today.
- C. The giving of gifts in celebration of Christ's birth began with the three Wise Men bearing the gifts of frankincense, gold, and myrrh.
- II. The Christmas "Star"
- A. December 25th is unlikely to be the exact date of Christ's birth and the "star's" appearance.
1. Mistakes were made in the original planning of the Christian calendar.
 2. Before the year 320, December 25th was the "birthday of the sun", a Roman celebration of the Winter Solstice.
- B. Possible explanations for the star:
1. Meteor - ruled out because the star stayed in the sky for a long period of time.
 2. Comet - unlikely because comets were considered signs of evil or misfortune.
 3. Supernova - although people had recorded such events, there are no records of this happening during the right time period.
 4. Planetary conjunction - in 1604, Johann Kepler determined that there was a triple conjunction of the planets Jupiter and Saturn in the year 7 B.C., making this the most likely explanation.

Please note: Also included in the program is a brief look at the winter sky and the important constellations and stars visible in this season.

POST-VISIT ACTIVITIES:

1. Have small groups or individuals investigate the origins of traditions other than those celebrated at Christmas time. Let each group do a presentation to the class explaining their discoveries in a report, a play, a poster, a chart, etc.
2. Have students research the traditions that other cultures practice during the year. For example, the marking of the New Year is celebrated by numerous societies in many different ways. Let students explore the reasons behind the differences. Have students plan a class celebration from another culture, including foods, beliefs, symbols, costumes, and ceremonies.
3. Using a light source and a globe, model the orbit of the earth around the sun. Show how the tilt of the earth's axis affects the amount of light striking the planet. Many people think that the earth's seasons are caused by the distance the earth is from the sun. As you model the orbit, show when an equinox and solstice occur. For older students, you could also check almanacs to find out when the earth is farthest and closest to the sun, then compare these dates to the dates of the summer and winter solstice.