

Dear Board Members,

 We need to build this memorial for Galileo because of the major contributions he made to society and the average person. He perfected the telescope which opened doors to space travel and astronomy but that's not all he did.

 Galileo was born in Pisa on February 15, 1564 into the family of a musician who had made theories about music and how it worked. In 1581, Galileo was sent to become a doctor by his father, Vincenzo Galilei. He chose to not finish his degree in medicine in order to pursue his loving for science.

 Contary to popular belief, Galileo did not actually invent the telescope but perfected it from eyeglass lenses. However, this should not change our perspective on Galileo because there are plenty of other things he did for the common man as well.

 Something critical to everyone in the world is the clock which, again, Galileo did not invent but perfected. He got the idea for a pendulum to keep clocks running because one day, while he was sitting in church, he saw a lamp swaying from the draft the door let in when people entered the service. He noticed that it always hit the bottom of its swing after the same time period. He went home and tried this experiment on his own and it turned out to be a success. For this reason, the memorial clock will be pendulum driven.

This big clock will be twenty feet in diameter and will cost \$2 to 3 million but will be worth its price. It will be in the same area as the Leaning Tower of Pisa in the side of a hill constructed by workers so you can see it from the top of the tower. The hammer on the left represents the heavy object Galileo dropped off the Leaning Tower of Pisa and the feather the light one. Galileo performed this experiment to prove that no matter what the weight of an object is, it doesn't affect how fast it falls. The sun in the center and the earth on the hand represents Galileo's believing in a heliocentric solar system. The sun is off center because the Earth doesn't travel around the sun in a perfect circle.



## Cost Estimate



### Supplies and/or Materials:

Marble: 20 sq. feet for about \$200,000 (Source: [www.stonefinder.com](http://www.stonefinder.com))

Clock Workings: around \$250,000 (Source: Raritan Township Memorial Clock Fund Committee, Clerk's Office, One Raritan Avenue, Flemington, NJ 08822-1799)

Plants and Grass:\$100 for grass seed and decoration flowers

Total:\$450,100

### Labor:

Stone Mason:\$50 an hour with 20 men for 6 months (based on an 8 hour day)

\$1,040,000

Clock Worker:\$50 an hour with 3 men for 1 year \$312,000

Landscapers:\$40 an hour with 4 men for 1 year \$332,800

Transportation Cost: Comes with marble cost.

Total:\$ 1,684,800

**Overall: \$2,134,900**

## Bibliography

Encyclopedia 1: Smith, Mark. *Galileo*. **World Book**. Vol. 8. 1999. Pg. 11-12

Encyclopedia 2: Grilliparzer, Ford. *Galileo Galilei*. **World Book**. Vol. 6. 1998. Pg. 180-183



Book With one Author (Primary Source): Sobel, Dava. **Galileo's Daughter**. Published in the USA by Walker Publishing Company Inc. in 1999

Web Site: J J O'connor and E F Robertson. **Galileo Galilei**. *Mathematicians of the Day*. April 2003. The MacTutor History of Mathematicians archive.

Site Name: <http://www-gap.dcs.st-and.ac.uk/~history/index.html>



**Grade 6**  
**Social Studies Task 6-5 (2003)**

**SS2a – Identify the cultural contributions of individuals, groups and societies.**

**The Task:**

You are the curator of a museum and have been asked to design a three-dimensional memorial for a historical event or a person which/who has had an impact on the world. To obtain funding for your proposal, you must prepare a presentation for the museum board (your class) discussing your selection and describing your memorial to the board. You must include facts about the geographical and historical importance of the event or person and show the board a drawing or model of the memorial, which includes a cost estimate. Your presentation to the board must include:

- Written proposal
- Multimedia presentation

**Circumstances of Performance:**

The student work is produced under the following conditions:

- |   |  |
|---|--|
| <input checked="" type="checkbox"/> alone                 | <input type="checkbox"/> in a group                          |
| <input checked="" type="checkbox"/> in class              | <input checked="" type="checkbox"/> as homework              |
| <input checked="" type="checkbox"/> with teacher feedback | <input type="checkbox"/> with peer feedback                  |
| <input type="checkbox"/> timed                            | <input checked="" type="checkbox"/> extended project         |
| <input type="checkbox"/> no opportunity for revision      | <input checked="" type="checkbox"/> opportunity for revision |

**What the work shows:**

**SS2a – Culture:** *Identify the cultural contributions of individuals, groups and societies.*

The student produced a written proposal that:

- Uses and evaluates primary sources.
  - Presents concrete examples and details containing background information about the impact of the selected individual on the world.
  - Uses standard written English.
  - Demonstrates clarity of ideas in the written proposal and the three-dimensional model.
  - Includes a cost estimate.
- A. The student uses primary sources and includes a detailed bibliography written in correct APA format to identify cultural contributions of Galileo.
- B. The proposal contains numerous concrete examples and details that clearly identify the cultural contributions of Galileo and his impact on the world. The student states that Galileo made "...major contributions to society and the average person."

- C. The student uses standard written English to clearly identify the contributions of Galileo.
- D. The student writes clearly and summarizes concisely a large amount of information about Galileo. The model displays concrete examples reflecting background information, i.e. the hammer and the feather, demonstrating an understanding of Galileo's contributions. Placing a pendulum on the model would have tied it closer to the information presented in the proposal.
- E. The cost estimate is neat and professional in appearance. Sources are given for verification of prices.

**SS4b – Space and Place:** *Describe how geographic factors have influenced historical events, patterns of change and daily life.*

- F. The student's proposal to locate the memorial in view of the Leaning Tower of Pisa demonstrates that the student understands the importance of the geographic location and Galileo's dropping of the feather and the hammer.