

Conic Section Project Menu

Option #1: *Design a suspension bridge*

- Must cross a waterway spanning 1.5 miles
- The minimum height needs to be at least 150' so ships can safely pass under the bridge
- The bridge will be of similar construction as the Golden Gate Bridge in San Francisco
 - Two towers close to the shores and one suspension between
 - Suspension touches the bridge midway between the towers
- Create a model (parabolic, elliptical or hyperbolic) of your suspension bridge
- Graph the model using Geogebra or Desmos
- Sketch the actual bridge on the print out
- Give the heights of five vertical support cables

Option #2: *Conics in Art and Architecture*

- Using models (elliptical, parabolic, hyperbolic), design either:
 - A stained glass image
 - An architectural structure (like a cathedral front, vaulted ceilings, amphitheater, etc)
- Print out the design and give details like color, landscape, etc.

Option #3: *Research a suspension bridge, gothic cathedral or other architectural structure that uses conics in its design.*

- In a research style paper, provide as much information as possible regarding your structure (works cited page must be included)
 - Name of the structure, location and purpose
 - Floor plan/design image or other illustrations (at least two)
 - Include names of designers and architects
 - Cost (if you can find it) of the construction
 - When the structure was finished (and how long it took to construct)
 - Did the structure survive any catastrophic events (war, earthquake, tsunami, etc)?
 - Has the building undergone any massive reconstruction? If so, what kind?