

Rapid Prototyping Project Scenario

Essential Question (EQ): How can we translate artistic ideas into a manufactured product?

You are part of a local trophy and specialty items manufacturing company. You are looking to add to your collection and appeal to potential customers in the greater Utica, NY area. The CEO has asked each team to develop a concept for a coin, pendant or other token to highlight local Social or historical events. Highlights can include tributes to events, people, or organizations. The scenes or images on the token should be recognizable to an appropriate audience.

Your team will develop a design for the front and back of a coin, token or pendant. Your product will need to be able to fit inside a box for shipping and marketing purposes and, therefore, cannot exceed 5.5" x 3.5" x 2.25". This is the maximum allowable size of material from which the packaging will be made. You will also need to propose the final product's material and determine the final piece's weight.

You will determine a design for the front and back of your product, develop a virtual model of your design using 3D modeling software and then print a prototype of your product using the company's 3D Printers. Your team will write a spec sheet about the token that includes important 3D model pictures of your design, important dimensions, final material, final mass, package requirements and anything else important to the manufacturing and shipping of your product.

You will present your final prototype to the CEO. To do so, you and your team will prepare a poster presentation detailing the social and/or historical significance of your product's design and the process used to create the prototype. Your CEO will also need your design portfolio, which documents your work throughout the process.

Deliverables include:

- Prototype coin, pendant, token or trophy
- Design poster that includes your design process, rationale for your design, and proposed material and final weight estimates.
- Design Portfolio
- Design spec sheet
- Professional notebook