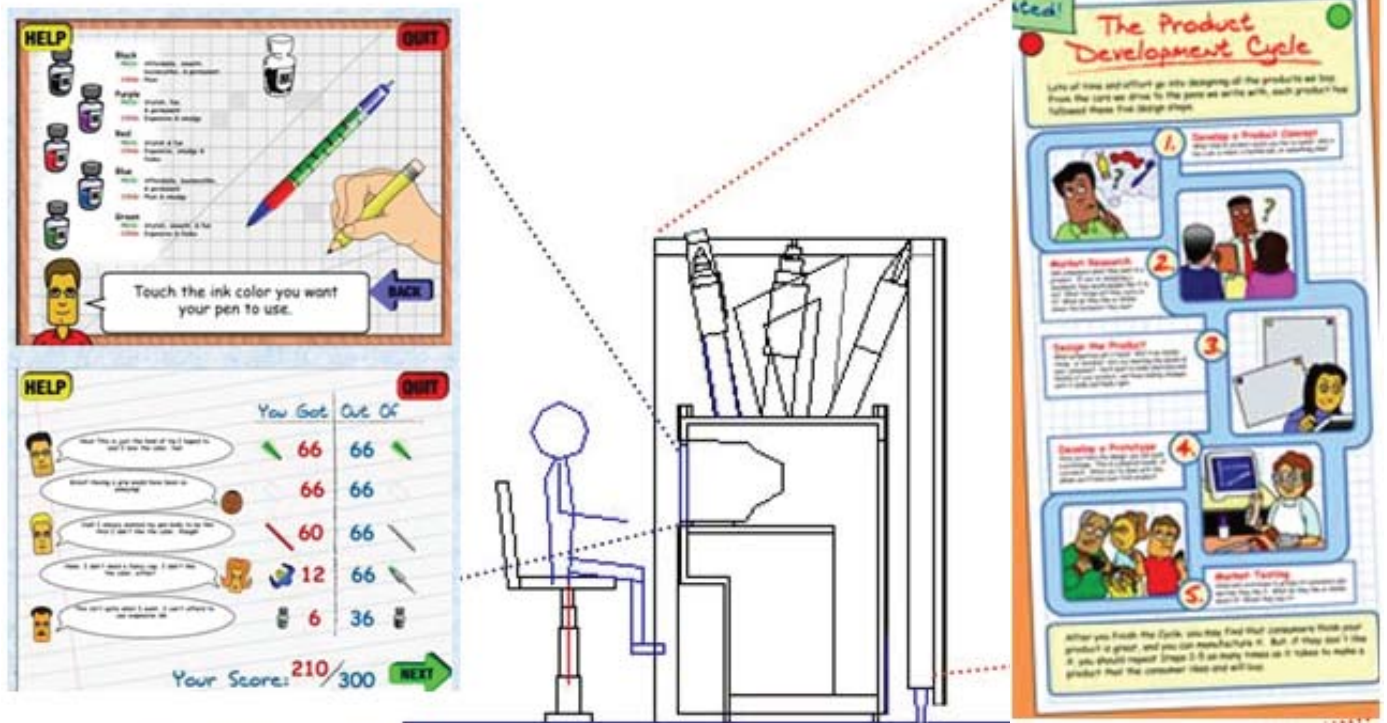
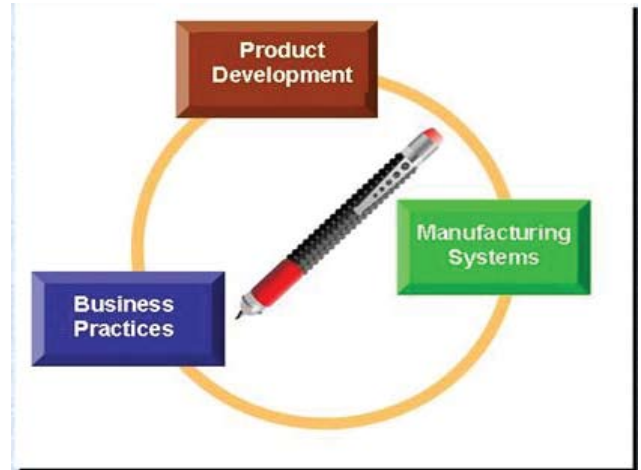


This work was part of an NSF funded exhibition project for the Ann Arbor Hands-On Museum (a children science museum in Ann Arbor, MI.). The exhibition project's goal was to present to K-12 children the processes that bring a consumer product to market. This project was planned to be implemented in three exhibits that focused on "product development", "manufacturing" and "marketing." I participated in the conceptual development of all these exhibits and primarily led a team that designed and built the first exhibit on the "product development." The first part of the exhibit project, "product development" exhibit was designed to present the educational content through the interactive designing of a daily use product, "pen." The exhibit kiosk was an oversized "mug" containing colorful and oversized pens in it and housed a computer screen where children interactively design "pens" in a computer game. This exhibit has still been on-view at the Ann Arbor Hands-On Museum for two years. (See the figure below for two photos of this exhibit.)

Project
**EXHIB IT KIOSK ON "PRODUCT DEVELOPMENT: A PEN"
 FOR THE ANN ARBOR HANDS-ON MUSEUM**

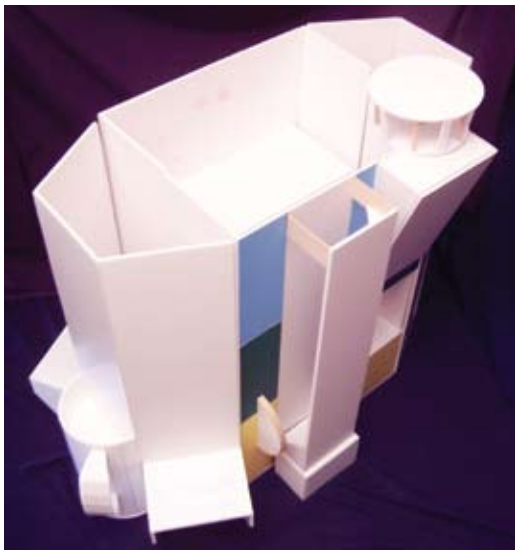
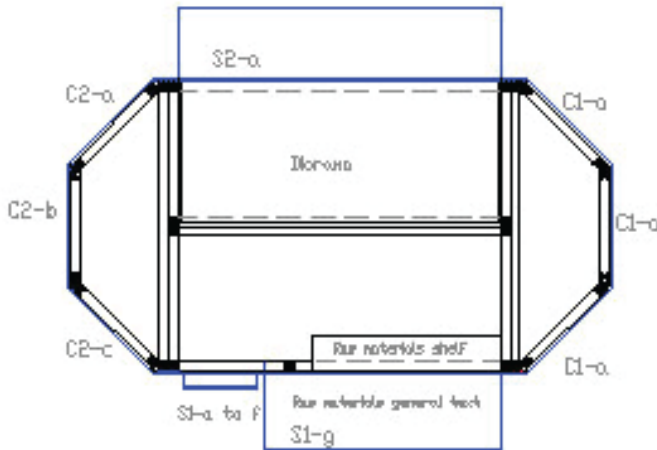
Role: Exhibit Design-Built Team Leader



The second part of the NSF funded Exhibit Kiosk project was planned to present the mechanical engineering manufacturing processes of a product cycle. to K-12 children. The exhibit consisted of two components: a computer game station and exhibit kiosk. The computer game was designed to walk through users in an animated factory environment and let them interactively participate in assembly line process. The game intended to facilitate users understand the logic of assembling separately produced pieces. The other component, exhibit kiosk consisted of panels presenting concepts "natural resources and materials," "safety," "factory environment, and hands-on "pen assembly" table. My role in the team to lead the concept development and physical and graphical design of the exhibit kiosk

Project
EXHIBIT KIOSK ON "MANUFACTURING SYSTEMS: A PEN" FOR THE ANN ARBOR HANDS-ON MUSEUM

Role: Exhibit Design-Built Team Leader



Infographic titled 'FROM PLANET TO FACTORY...FROM FACTORY TO PRODUCT...FROM PLANET TO...'. It details the manufacturing process of a pen, divided into 'Metal Fabrication' and 'Plastic Fabrication'.
Metal Fabrication: Shows the process from 'Ore' to 'Ingot' to 'Metal pen pieces'. It includes an 'Environmental impact' section with 'Amount of one mined per year' and 'Common locations in US'. It also shows 'Source Mining > Ore', 'Extracting Metal Ingots', and 'Cold forming copper tubes for pen bodies'.
Plastic Fabrication: Shows the process from 'Oil' to 'Plastic pellets' to 'Plastic pen parts'. It includes a 'Recycling' section showing 'Crude oil is sent to a refinery, & heated in a fractionating tower > d for some' and 'ted to 1 through 1ter-to the pellets'.
Assembly: Shows 'Making pen body tubes: Ingots rolled into sheets. Sheets cold-formed into tubes. Seam are welded to make a tube' and 'Fractionation & further processing: polyethylene pellets'.

