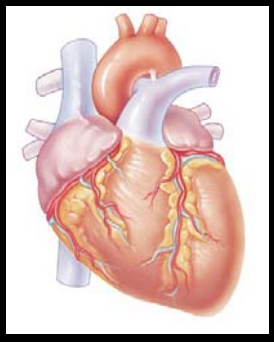
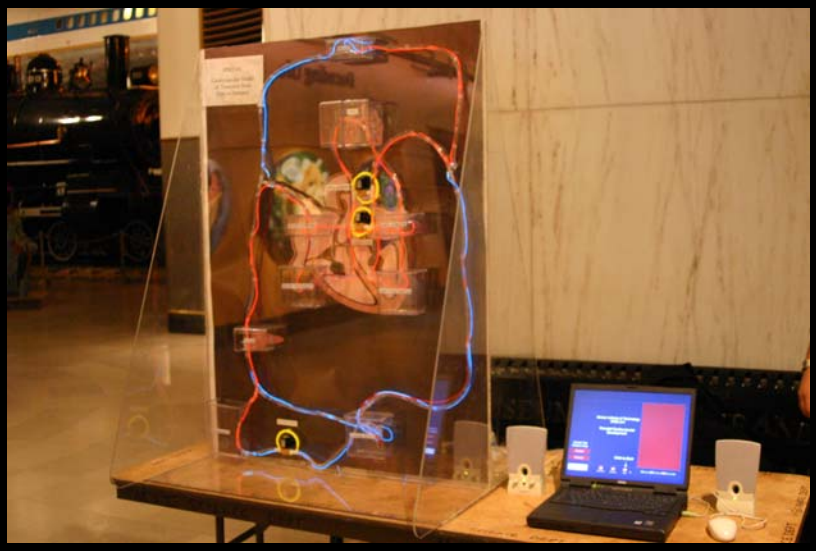


Developing a Prototype Cardiovascular Display for the Prenatal-to-Newborn Blood Flow System

PROTOTYPE EVALUATION

Once the prototype was completed it was taken to the museum for public viewing. Surveys were conducted and feedback was collected in order to determine what changes should be made to the prototype. This survey included a short section asking questions about the visitors themselves and four questions about the exhibit. The questions were:

1. What would you say this exhibit is about? (The purpose of this question is to ensure that our exhibit is understandable and that the main points are made clear)
2. Do you think other visitors will understand and enjoy using this exhibit? (The purpose of this question is to gauge the visitors understanding as well as enjoyment of the exhibit, it is phrased in such a way so as to not make the visitor feel bad about saying no)
3. Do you have any thoughts about how we could improve this exhibit? (This question allowed visitors to give us the ideas and suggestions as to what they would like to see)
4. Any other comments? (Opens the floor for any additional information)



RESULTS

Those surveyed included 10 females and 9 males. They ranged in age from 6 to 60, 4 were first time visitors, and 6 had a background in science. The primary obstacle was that the participants had difficulty linking the model with the accompanying Flash presentation. Most of those surveyed also felt that the presentation was too long and should be condensed. With the gathered suggestions our IPRO team brainstormed solutions, and each of the issues was addressed by the respective subgroups. Currently, the prototype is undergoing final testing at the museum to obtain feedback about the improvements.

FUTURE PLANS

The final step in our process is that the product, our prototype, will be handed over to the Museum of Science and Industry (MSI). The MSI will modify and develop the prototype as necessary in order to create a permanent exhibit. Through our work these last two semesters, we have developed a cohesive relationship with the MSI. Because of their satisfaction with our prototype, the MSI has extended their relationship with IIT. This has resulted in the creation of a new IPRO that will focus on creating another exhibit for the museum.

Faculty Advisor:

Dr. Paul Fagette

Student Group Members:

Jenn Barta, Ryan George
Grace Lin, Armando Perez, Sean Pitroda,
Archita Shrivastava, Michael Sloan, Suruchi Thakore,
Christopher Tuthill, Anand Vankawala, Kedari Vasu,
Michael Wright, David Zaboli

Other Assistance Received By:

Patricia Ward- MSI contact

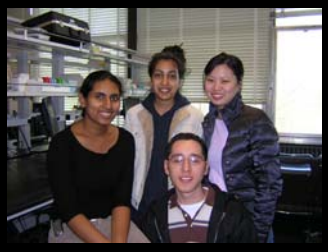
Objectives:

The aim of IPRO 341 was to present current scientific and engineering concepts to better educate the public on the relationships between physiology, pathology, and medical technology.

Last semester the IPRO worked with the Museum of Science and Industry (MSI) to develop a working prototype of a cardio-vascular display of blood flow from a pre to postnatal system for the public. The team produced a bench-top working model as well as a computer-based display. This spring, the IPRO team's objective was to develop and refine both the model and computer display. Also, the team's goal was to obtain feedback from the public by testing the prototype at MSI.

The IPRO team was divided into 4 subgroups: the narrative group, the technology group, the animation group, and the model group.

The narrative group's assignment was to revise last semester's computer presentation text.



Narrative group: Grace Lin, Armando Perez, Archita Shrivastava, Kedari Vasu

The animation group's assignment was to search for pictures to be incorporated into the computer presentation.

Animation group: Sean Pitroda, Anand Vankawala, and David Zaboli

The technology group's assignment was to reformat the computer presentation from last semester and then to revise the presentation after feedback was received from the public.

Technology group:
Michael Sloan and Michael Wright

The model group's assignment was to redesign the model in order to better portray the change in fetal to adult circulation.

Model group: Jenn Barta, Ryan George, Grace Lin, Armando Perez, Suruchi Thakore, and Chris Tuthill.