



heartware

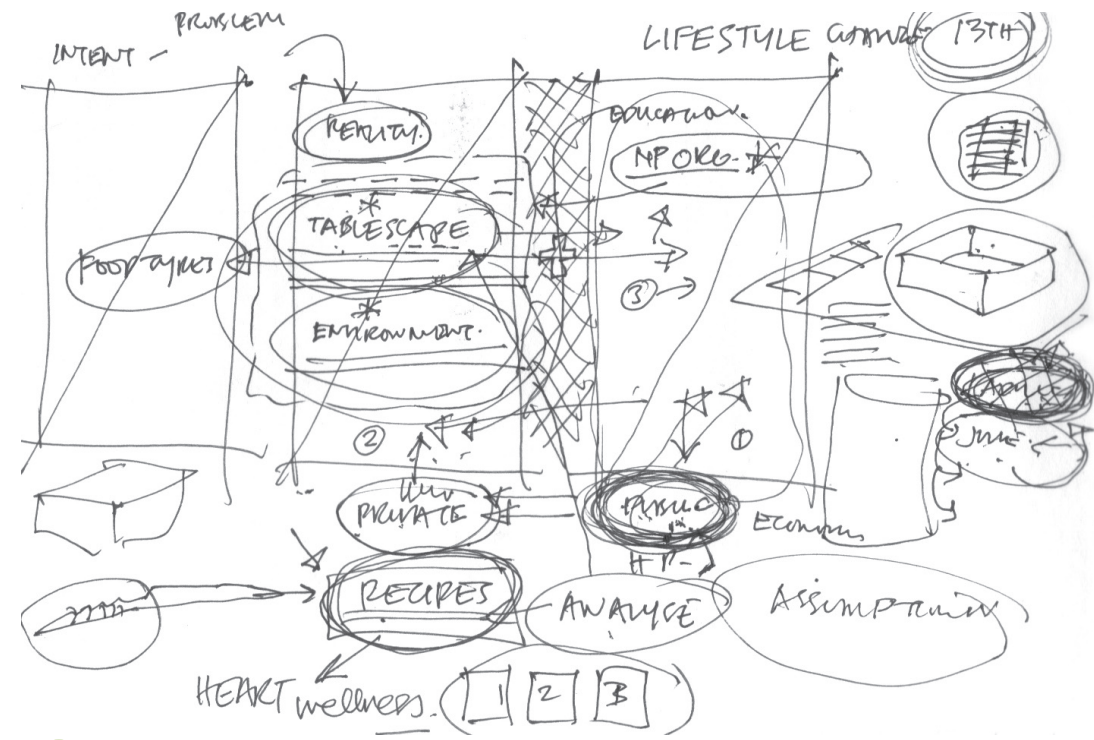
tools for heart-healthy habits

The technological evolution of our social environment has provided a landscape that encourages excessive eating habits and simultaneously eliminates the need for physical activity. As the weight of our nation effectively grows, so does our risk for the development of chronic illnesses such as heart disease, diabetes, cancer and stroke. In America today 64.5 percent of the population is overweight while 30.5 percent is obese. One way to fight these growing numbers is through prevention and education at an early age.

Heartware is an interactive system that encourages and educates about the practice of a heart-healthy diet and lifestyle among children. Its principles are based on the nutritional guidelines of the American Heart Association whose mission is to reduce disability and death from cardiovascular disease. Learning how to eat balanced and nutritious meals not only prevents obesity but also chronic disease. Heartware consists of three component parts that children use within the kitchen and dining areas of the home: portion-control tableware on an interactive table mat, an interactive cookbook with a weekly meal planner and a labeling system for stored foods.

research & system development

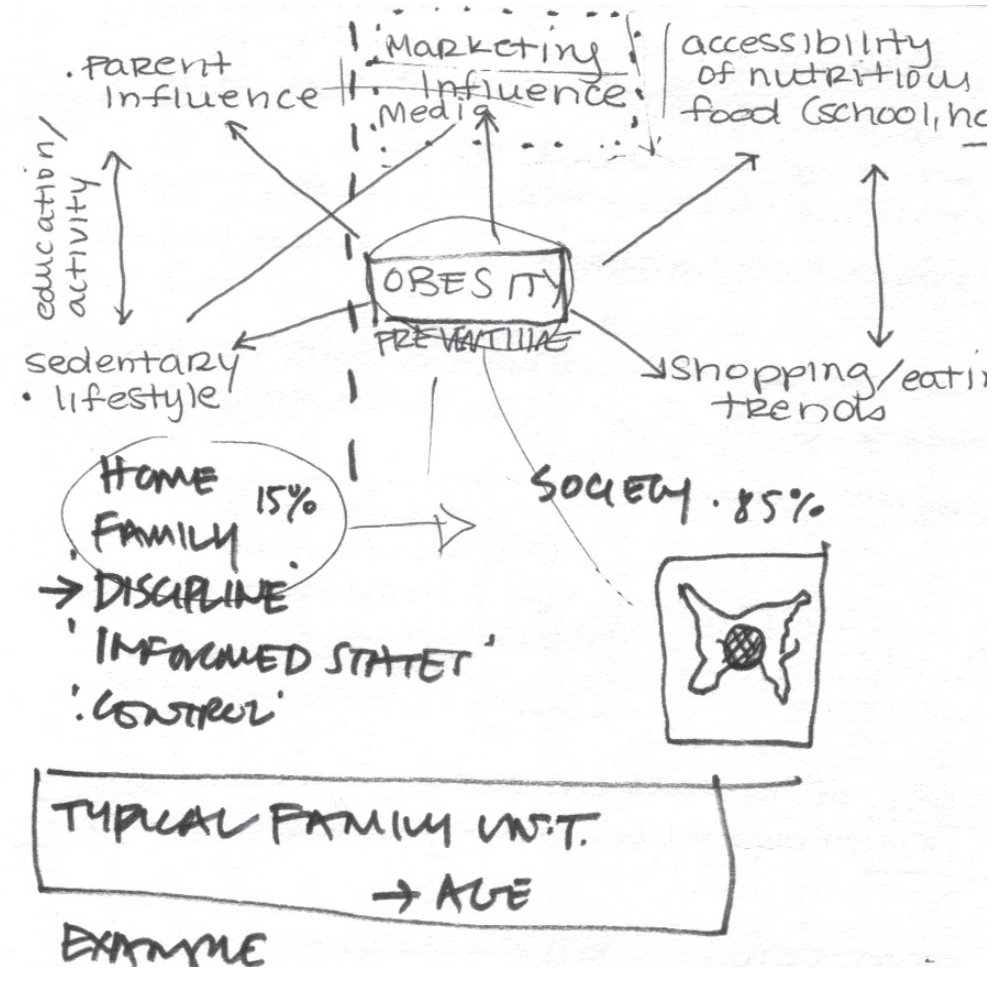
The first half of my project was deeply rooted in research. I read books, magazines, newspapers and medical journals to educate myself about food, nutrition, eating and shopping trends, social influences and governmental policies. I spent much of my time reading, writing and collecting research. I thoroughly studied medical research done by the American Heart Association and based the parameters of my project around this information. I conducted interviews with the Vice President of the New York branch of the AHA to receive advice and updated information. I also worked with the Director of Child Marketing to study the AHA's methods for working with children.



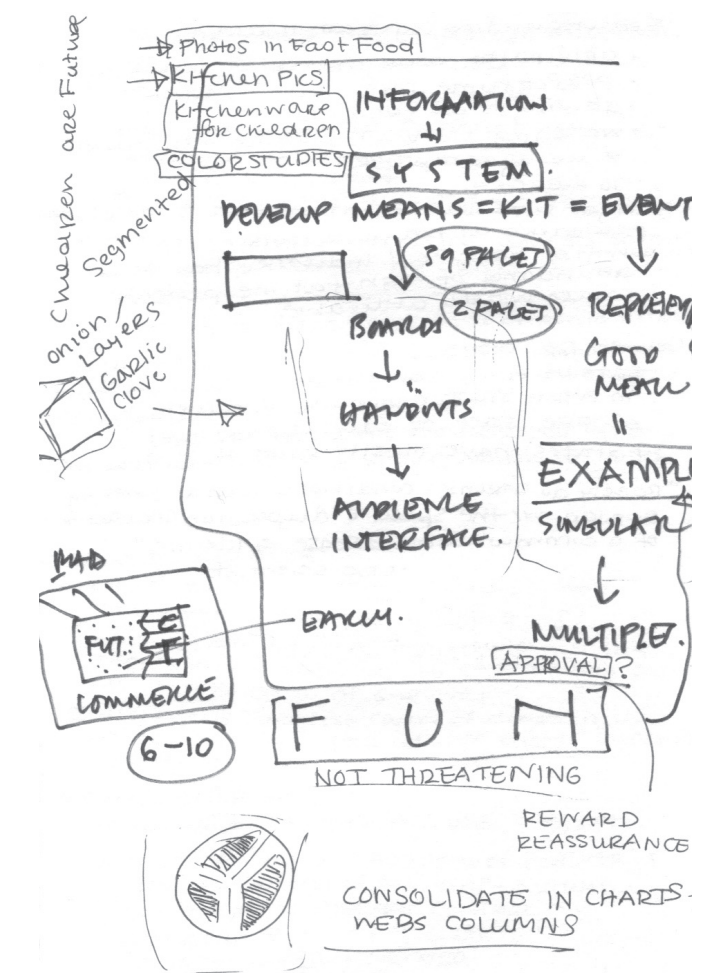
3 Informational diagram of project's potential components and how they should relate.

- STATISTICS**
 - INCOME
 - OCCUPATION
 - COMMUTE
 - FAMILIES
- SCHOOL LUNCH**
 - Statistics
 - lunch program 38%
 - breakfast 11% program
- SHOPPING/EATING TRENDS**
 - shopping for groceries
 - buying trends
- MARKETING/ADS TO CHILDREN**
 - fast food
 - high sugar
 - time of ads
- CHILD OBESITY**
 - Statistics
 - research
- NUTRITION**
 - RATIOS
 - proportion
 - food groups
- PARENT/CHILD relationship**

- (Quality) of School Meal - what do they serve
- accessibility to quality food
- what changes need to be made?
- control bad habits
 - eating
 - sedentary lifestyle
 - media
- AWARENESS



2 Identifying systematic causes of childhood obesity

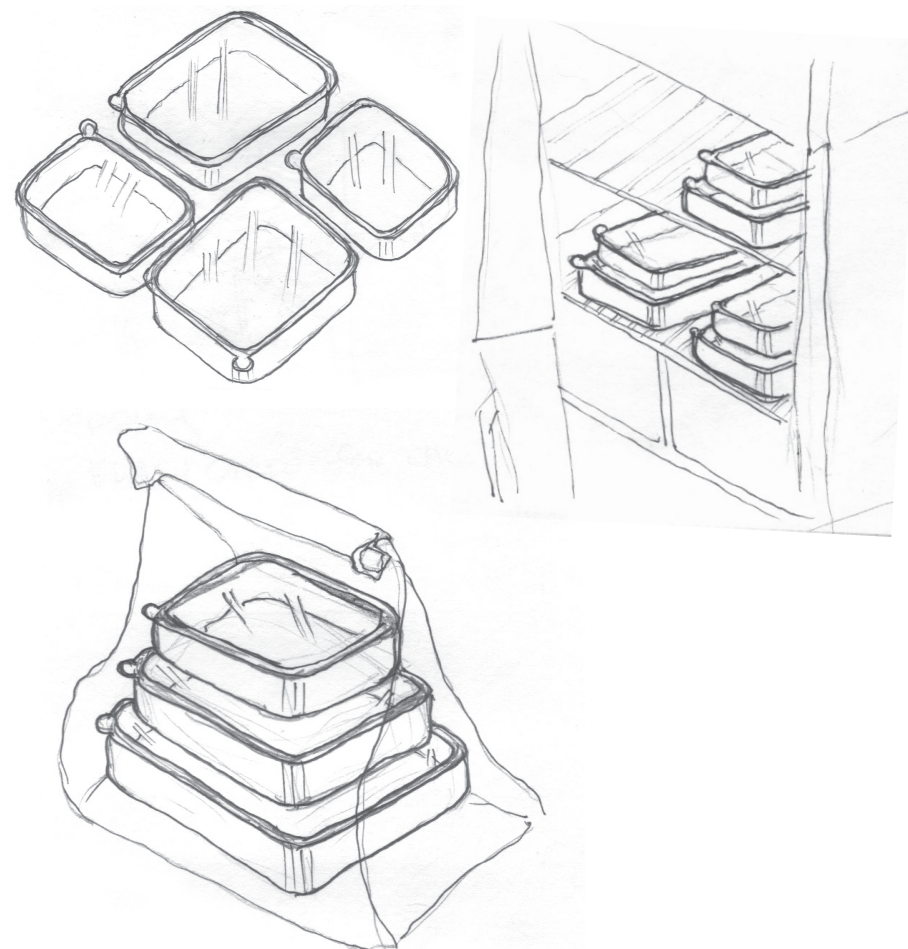


4 Design for the project's system: how and what components are related.

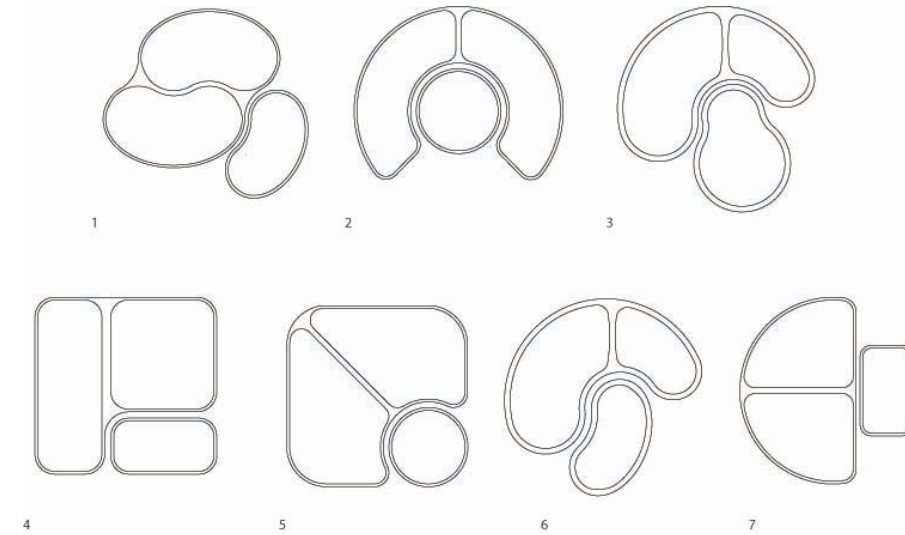
1 Outline of required areas of research

product development

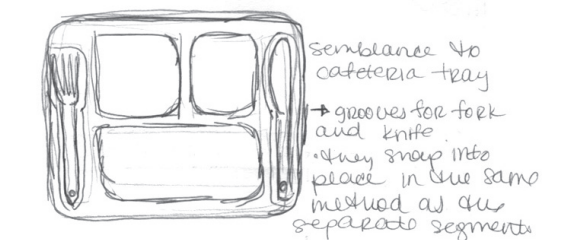
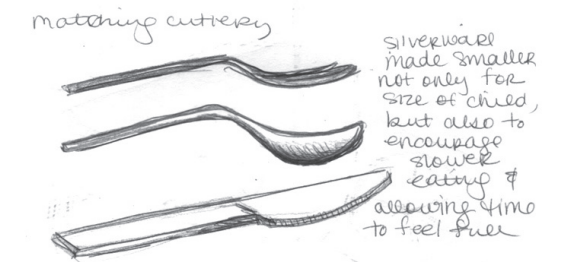
I used writing and charts to clarify my ideas and goals. My primary goal was to educate children about proper nutrition through the practice of eating right. I wanted to create a product that could exist within the child's everyday life that would assist them in making healthy choices. I decided that the most effective setting to incorporate a product like this was in the home and started developing a tableware concept that promoted the idea of portion control. I studied the AHA's serving size guidelines and determined the proper serving of each category of food for each meal. The size and shape of the dishes worked to give the user a visual cue as to what the proper serving size is. I then began developing supplemental pieces for the tabletop set: a cookbook and a storage labeling system.



1 Ideation sketches for transportable food storage containers.

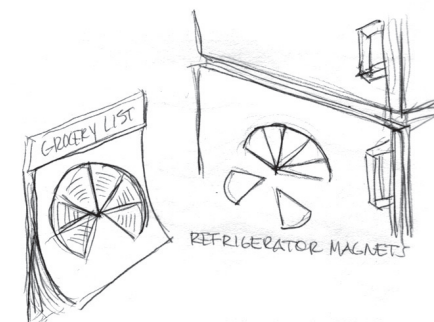


3 Shape studies for the portion control dinnerware.

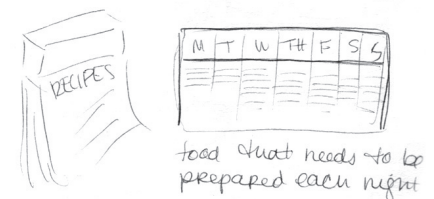


4 Exploring the option of additional built-in cutlery components for the place setting "tray".

KITCHEN ACCESSORIES



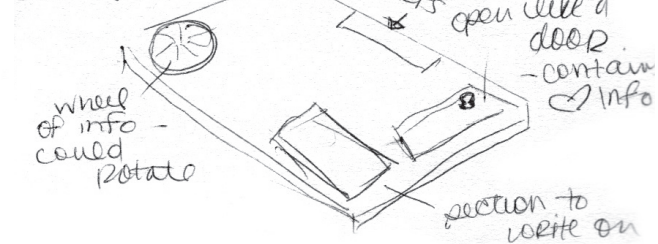
quick and easy recipe guide with schedule for the week



food that needs to be prepared each night

perhaps not in the form of a book but some other shape or 3-D object that is interactive

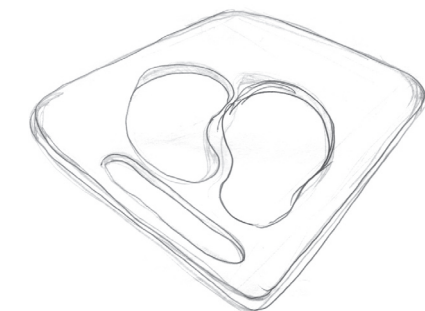
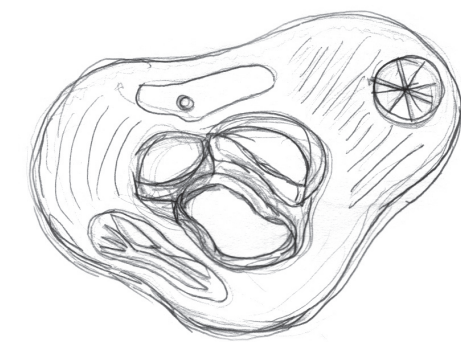
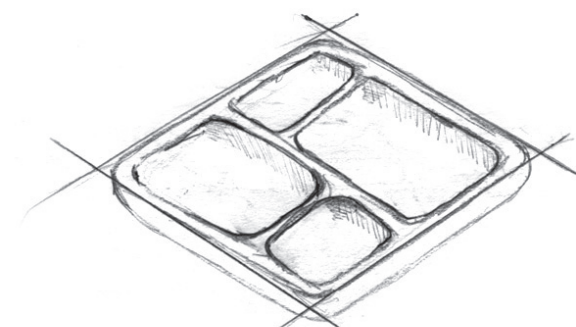
triviagame



wheel of info - could potato

section to write on

2 Sketching out the main components of the heartware system.

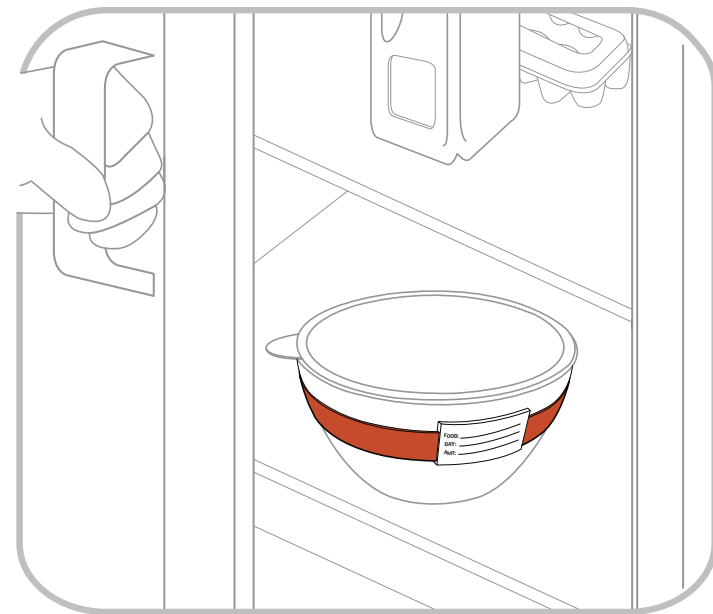
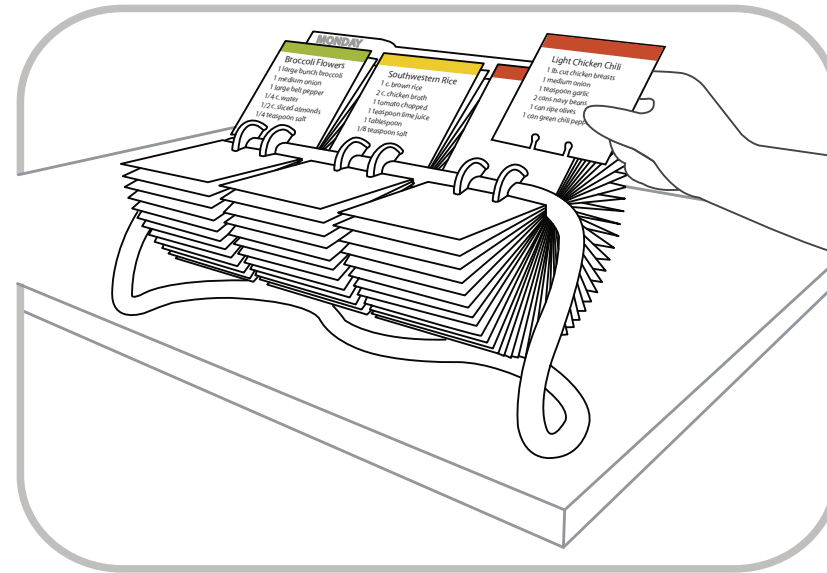


5 Design sketches for the shape and size of the tabletop place setting.

final product

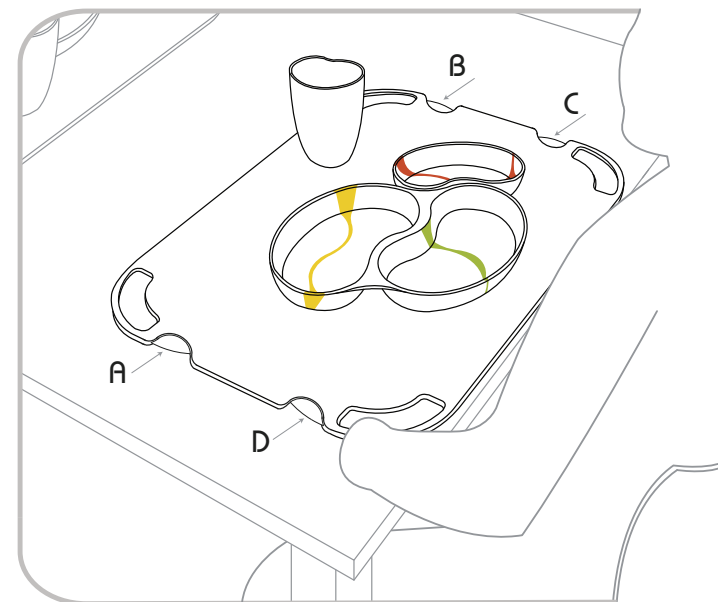
1) recipe roller

This standing cookbook is designed to sit on the kitchen counter. The recipe cards rotate around the central fixture and are removable and adjustable to enable the user to create weekly meal plans. This interactive recipe holder is meant to become a part of the kitchen environment and avoid being shelved with unused cookbooks.



2) storage labels

These elastic plastic bands are meant to encourage advanced food preparation. They come in three different sizes and are completely removable and reusable. Each label contains room for information about food content, the day in which it will be used and the amount.



3) tabletop setting & activity cards

This interactive tablemat (above) easily fits into the dining environment and encourages the young user to learn about heart healthy living through a series of activity cards (seen below). These cards include trivia and problem solving in topics on nutrition, physical activity and the heart's anatomy. Clues in Card A will lead the child to an answer in Card B, etc. All of the cards are removable through a disk that screws on the back of the tablemat. The activities come in a variety of levels getting more difficult as the child gets older.

