



# Mission Meal

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## Problem and Research

### Key Problems

- Children don't have a nutritional balance of healthy to non-healthy food.
- They are skeptical about different varieties of food.
- They aren't eating the right kinds of food.
- They eat too much compared to how much activity they get.

### Common tactics used by parents

- Punishment for not eating food. (ex: "You can't leave the table until you finish.")
- Scare tactics. (ex: "Your bones will grow weak if you don't drink your milk.")
- Showing children that they like to eat it themselves. (ex: "Mmmm this is good!")
- Making the food more colorful.
- Preparing the food with the children.

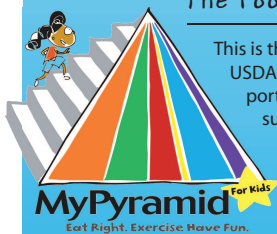
## Research Goals

### Our Goals

- To get children to try new food.
- To get children to become involved in obtaining the food.
- To get children to become involved in the preparation of food.
- To design a system for children ages 6-8.

## The Food Pyramid

This is the new food pyramid designed by USDA. Food is categorized by color while portion size is represented by area. As a subtle hint to children about the variety of food we tried to incorporate the idea of categorization by color.



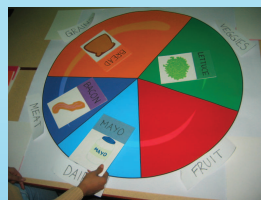
## Design and Implementation

Mission Meal consists of two components: an interactive system and a home activity.

The system is for use in the classroom and produces a recipe based on what food an individual child likes. We expect them to use the printed recipe at home.

### Interactive System

1. RFID tags are attached to various simple food items which are categorized according to their food groups. The child selects the food item(s) he likes and puts them on the color plate. The color plate has a RFID scanner beneath it which can identify the food items.



2. Once the child is finished, they will put the "Done" tag onto the color plate.

3. Now the display comes in. The display asks the child to choose a complex food (e.g. sandwich, pizza).

4. Based on the complex food, the system will add a compatible simple food item to the existing list of items. This added item is one that was not chosen by the child. We assumed that if the child did not choose an item, then either (s)he does not like it or has never tried it.

5. Based on the simple food items and the complex food, the system searches for the most well-matched recipe and prints it.

### Home Activity

We expect the child will take the recipe home and share it with their parent(s). We aimed to make the recipe kid-friendly and exciting to get the child more involved in the process of preparing meals. Hopefully during this process they will try a new food item.



## Usage

Two kids – Both children will get customized recipes of their own which they will then exchange. At home they will prepare the other child's recipe and bring it in to class.

One kid – The teacher can give an assignment such as show and tell or a report as an incentive for the child to make the recipe.

## Future Work

- The system has to be personalized for the child to prevent it from adding items that they are possibly allergic to or forbidden to eat. This would also have to take into consideration whether a child is vegetarian, vegan, etc.
- The design has to be interesting enough to hold the attention of children. This includes the display as well as the recipe. It is always possible the child will take the recipe but not use it. The way the system is incorporated into the classroom may be a way to solve this problem.
- The recipe should include the added food item in such a way that the child has a harder time noticing it or picking it out. The system may need specialized recipes in order to do this.

### References

- [http://mypyramid.gov/global\\_nav/media\\_resources.html](http://mypyramid.gov/global_nav/media_resources.html) (USDA)
- <http://www.flickr.com/photos/fortrel/89408633/> (Alexandre Lemieux)