Project 2
Novel Food Product

Project 2- New Product Design

- Ready-to-eat food product
- Marketed to college students
- One serving = 200-300 calories
- Made with >80% whole food as raw ingredients
- Retail cost <$5/serving
- Make product
- Sensory evaluation
- Report, poster, and product samples

Design Constraints

Must reach one of these requirements for macronutrients:

Nutrient	Unit of measure	Product Goal	Goal as Percent Daily Value (%DV)	Daily Value (DV)*
Total Fat	Gram (g)	≤3.25	≤5	65
With Saturated Fat	Gram (g)	≤1	≤5	20
Dietary Fiber	Gram (g)	≥5	≥20	25
Refined Sugar	Gram (g)	<1		

*Based on a 2000 kilocalorie Intake; for Adults and Children 4 or More Years of Age.

Design Constraints

Your product should address at least two micronutrients recommendations without fortification:

Nutrient	Unit of measure	Product Goal	Goal as Percent Daily Value (%DV)	Daily Value (DV)*
Vitamin A	International Unit (IU)	≥1000	≥20	5,000
Vitamin C	Milligrams (mg)	≥12	≥20	60
Calcium	Milligrams (mg)	≥200	≥20	1,000
Iron	Milligrams (mg)	≥3.6	≥20	18

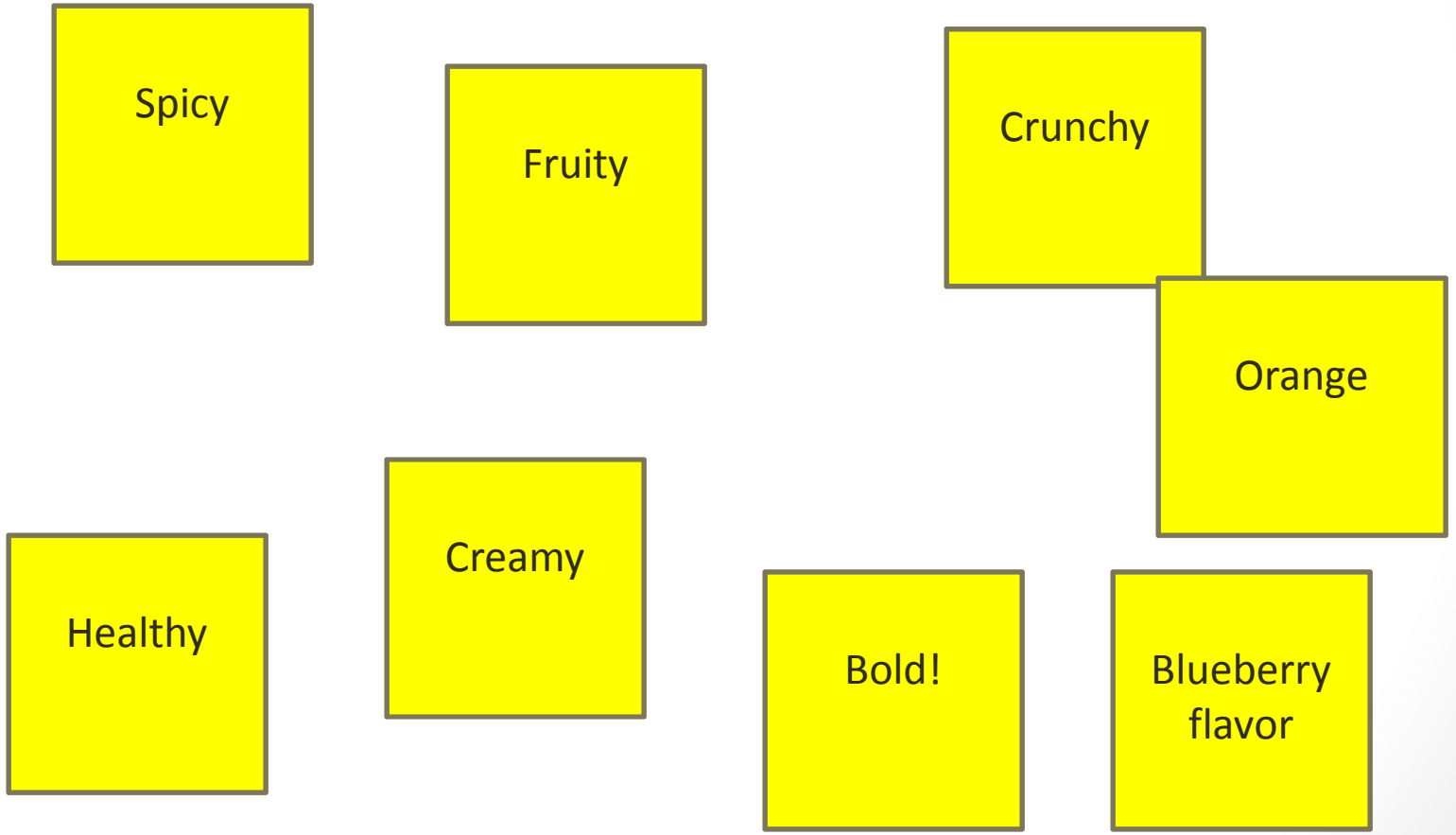
*Based on a 2000 kilocalorie Intake; for Adults and Children 4 or More Years of Age.

Project 2 Lab Outline

Week	Topic
Lab 6 (10/05)	Project 2 Introduction and Product Idea Brainstorming
Lab 7 (10/19)	Market Analysis and Product Idea Refinement (SWOT Analysis)
Lab 8 (10/26)	Initial Product Formulation/Nutrition and Kitchen Lab Safety
Lab 9 (11/01)	Kitchen Production Lab 1
Lab 10 (11/08)	Kitchen Production Lab 2 and Sensory Testing (11/09)
Lab 11 (11/16)	Evaluating Sensory Testing Data, Refining Formulation
Lab 12 (12/06)	Kitchen Production Lab 3
Lab 13 (12/07)	Poster Symposium

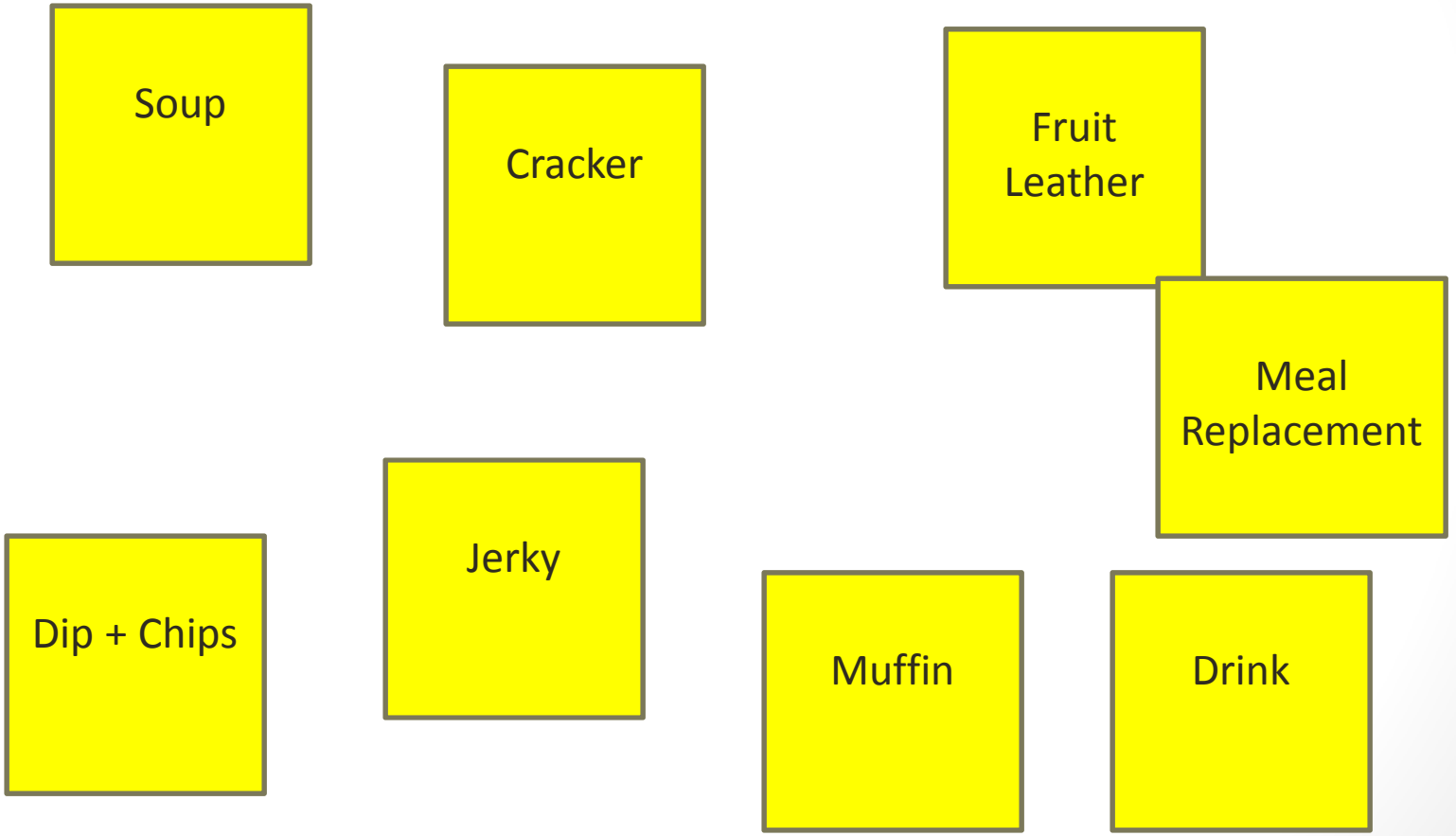
Exercise 1: Product Characteristics

5 minutes



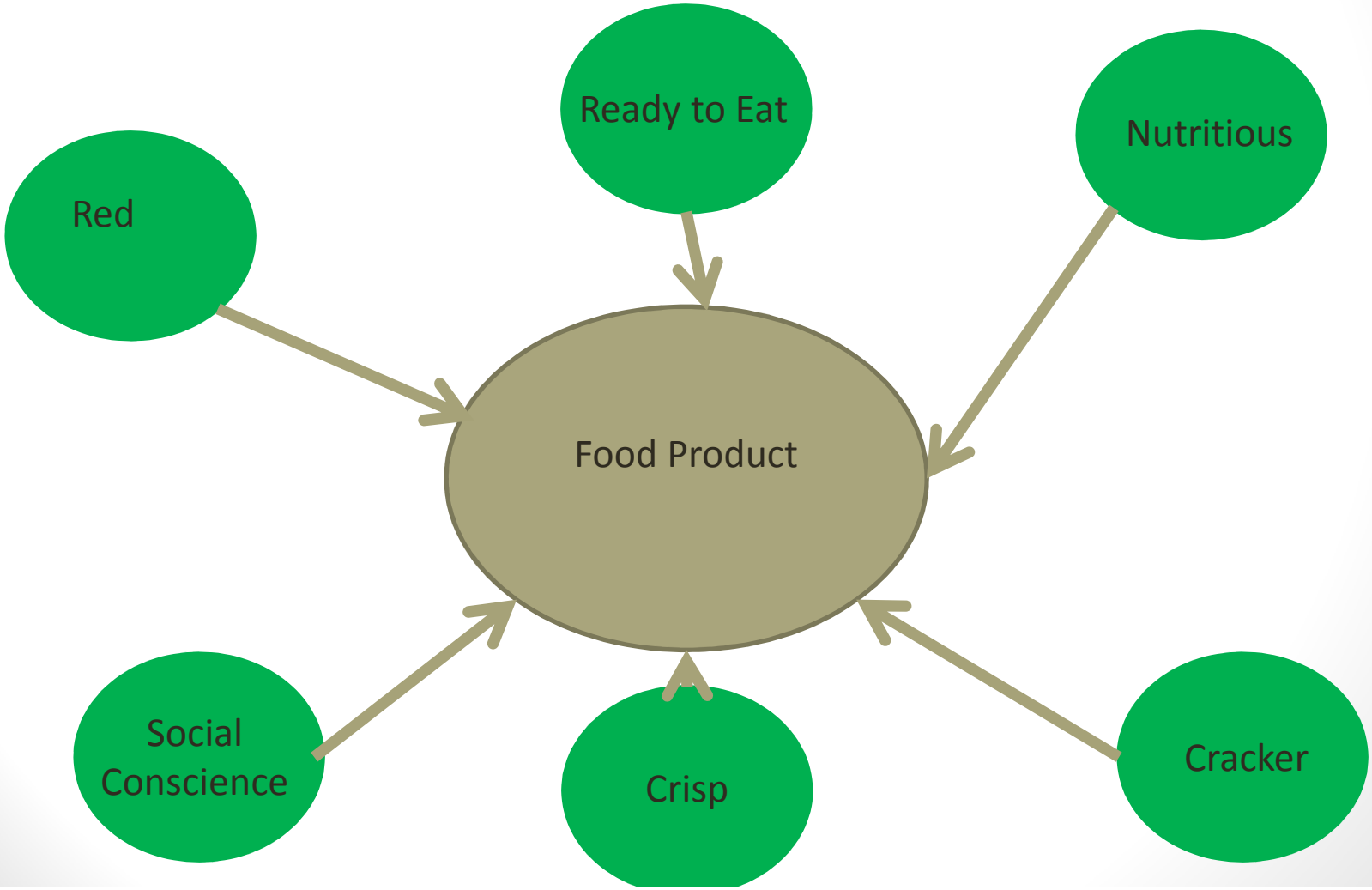
Exercise 2: Product Types

5 minutes



Exercise 3: Mind Map

5 minutes



Exercise 3b: Discussion

10 minutes

- Discuss your mind maps
- Converge on “guiding mind map” for your team project
- Focus on attributes that will define your product
- Develop evaluation matrix

Exercise 4: Decision Matrix Evaluation

- Develop decision matrix to score your ideas against criteria agreed upon by your team. You should include design considerations from the project description
- Use your matrix to score idea
- After all ideas are scored, discuss the highest scoring ones.
- Is there a product idea from the intersection or combination of the top scoring ideas?
- Can ideas be combined?
- Are some ideas incompatible?

Decision Matrix Example

Score	1 (low)	2	3	4	5 (high)
Demographic Fit					
Ready-to-Go					
Nutritious					
Taste Trends					
Shelf Stability					

Due Next Week: Lab Notebook

- Brainstorming summary
- Product idea(s) for refinement

Brainstorming

- “Applied Imagination”
  - Osborn, A. (1953) 'Applied Imagination: Principles and Procedures of Creative Problem-Solving,' New York: Creative Education Foundation Press.
- Think creatively about a problem.
- Rules for brainstorming
  - No criticism! No idea is too odd, too crazy, or two bizarre.
  - Don’t stop writing! Don’t let analytical thought get in the way.
- Guided Exercises
  - Product Characteristics (brainstorming)
  - Mind Mapping (brainstorming + evaluation)
  - Idea Evaluation