Innovation & Ideation

"The best way to have a good idea is to have lots of ideas." - Linus Pauling
But first... a refresher on play!
Who is the customer?
What is play?
What is the opposite of play?

Quiz results
The customer is both the child who will play with the toy and the parent of the child (or whoever will purchase the toy on the child’s behalf)

- Neena Dugar
Who is our Customer?

Influence on Product Selection

Product Use

user

purchaser

producer

retailer

Influence on Product Selection
An action that evokes the feeling of contentment.

- Alexis Vivar

A state of mind while doing something.
What is the opposite of play?

“Sitting Completely Still” - Crystal Winston

“Vegetating on a couch” - Allison Nguyen

“yalp, yolq, ðæld” - Chetan Shama
What is the opposite of play?

- chore
- work
- boredom
- lecture

Quiz results
The opposite of play is clean-up time. It brings immense sadness, but results in clean carpets.

- John Graham

Quiz results
Quiz!

1. What is your name?
2. What is invention?
3. What is innovation?
4. What is creativity?
Quiz!

1. What is your name?
2. What is invention?
3. What is innovation?
4. What is creativity?
5. Write a caption for:
Invention and Innovation

**Invention** is something that has never existed before. Not a product, but a technology.
Invention and Innovation

**Invention** is something that has never existed before. Not a product, but a technology.

**Innovation** is the application of new ideas or the combination of existing items in a novel way. This is product design.
Product design

Why not invention?
Creativity - krē ā’tivitē

Noun:
The use of the imagination to create original ideas.
Creativity in Design

novel and useful!
Creativity in Design

novel and useful!
Eureka!

“I have found it!”

-Archimedes
Eureka!

“I have found it!”

-Archimedes
Neurological Analysis
Right hemisphere and creativity

Music, perception, visual art, language
Neurological Analysis
Right hemisphere and creativity

Right, Posterior Superior Temporal Sulcus (PSTS)
Processing novel metaphors in poetry (Gorana et al 2008)
Novel connections between unrelated words (Mashal et al 2007)
Linguistic creativity (Flaherty, 2005)
Neurological Analysis
Right hemisphere and creativity

Right, Posterior Superior Temporal Sulcus (PSTS)
Processing novel metaphors in poetry (Gorana et al 2008)
Novel connections between unrelated words (Mashal et al 2007)
Linguistic creativity (Flaherty, 2005)

Right, Anterior Superior Temporal Sulcus (ASTS)
“Aha!” Experience (Jung-Beeman 2004)
Methods to help your Brain
Right hemisphere and creativity
Ideation techniques

**Free Form or Intuitive Methods**
- Group Writing
- Brain Writing
- Brain Sketching
- Collective Notebook
- Pinboard
- Mind Map
- Triggers

**Structured or Logical Methods**
- Brainstorming
- TRIZ
- ARIZ
- ANST
- Scammper
- Morphological Analysis
- Attribute Listing
- Potential Problem Analysis
- FRDPPRC

**New Perspectives techniques**
- Lateral Thinking
- Challenging Assumptions
- Boundary Break
- Negative Brainstorming
- Ladders

**Associations techniques**
- Brute Think
- Analogies
- Forced Fit
- Focal Objects
- Mind Mapping
- Free Association
- Association Mapping
- Provocation
- Bushes of Bananas
- Excursions
Associations

**Associations** can be used to generate concepts based on linking ideas and finding new relations between connections.
Humor and Associations

Non-obvious connections

Making the incongruity congruent
Humor and Associations

Non-obvious connections

Making the incongruity congruent

Why was 6 afraid of 7?
Humor and Associations

Non-obvious connections

Making the incongruity congruent

Why was 6 afraid of 7?

...because 7 8 9
Humor and Associations

Non-obvious connections
Making the incongruity congruent
Why was 6 afraid of 7?

...because 7 8 9
“can you please pass the cow”
-bennett ellenbogen
“let me start by welcoming you all to narcoleptics anonymous”

-mike worth
Association Mapping

actions related to coffee
sipping, spilling, staining, drinking, burning, break

types of coffee
black, decaffeinated, espresso, latte

served with coffee
donuts, breakfast, newspaper

names of coffee
joe, java

products related to coffee
coffee maker, mug, coffee machine, grinder, tea

places related to coffee
dunkin donuts, starbucks, kitchen, south america

properties of coffee
caffeine, diuretic, hot, acidic

things that go in coffee
milk, cream, dairy, sugar, stirrer, coffee beans, water
Association Mapping

- **Actions related to coffee**: sipping, spilling, staining, drinking, burning, break
- **Names of coffee**: joe, java
- **Products related to coffee**: coffee maker, mug, coffee machine, grinder, tea
- **Places related to coffee**: dunkin donuts, starbucks, kitchen, south america
- **Properties of coffee**: caffeine, diuretic, hot, acidic
- **Things that go in coffee**: milk, cream, dairy, sugar, stirrer, coffee beans, water
- **Types of coffee**: black, decaffeinated, espresso, latte
- **Served with coffee**: donuts, breakfast, newspaper

- "breaks will no longer be dictated by time to finish your coffee"
- "who ordered from Java the Hutt?"
- "the sink’s full again"
- "is this the decaf?"
- "coffee sales have been soaring"
- "where’s the bathroom?!"
- "the crullers will be here shortly, as soon as they take the door off the hinge"
Association Mapping

Form
Round
Flat
1-3 cm dia
Association Mapping
Association Mapping

Column $\rightarrow$ Structural support $\rightarrow$ Bone

function
Association Mapping

Column $\rightarrow$ Structural support $\rightarrow$ Bone
Association Mapping

Function

Environment

Name

Motion

Used With

Materials
Crossing Products
Innovation is the application of new ideas or the combination of existing items in a novel way.

Crossing products is a strategy to generate innovative ideas.
Crossing Products
Crossing Products

+  =
Crossing Products
Crossing Products
Crossing Products

cross products!

toothbrush
Crossing Products

pencil

toothbrush
Crossing Products

pencil

vacuum
Crossing Products

pencil

flower pot
Crossing Products

Write down the name of three products

Exchange
Crossing Products

Write down the name of three products

Exchange

pencil
Crossing Products

Write down the name of three products

Exchange

lamp
Crossing products

my top pencil cross-product is: ________________________

☐ fantasy
☐ construction
☐ sensory
☐ challenge

and it could become: ________________________________

☐ fantasy
☐ construction
☐ sensory
☐ challenge
Crossing products

my top lamp cross-product is: _____________________

and it could become: ___________________________
Next Class is Tuesday!

Don’t forget to get a design notebook for next week!
Theme and teams
Innovation & Ideation

"The best way to have a good idea is to have lots of ideas." - Linus Pauling