Theme and teams
But first... a refresher on play!
Who is the customer?
What is play?
What is the opposite of play?

Quiz results
Our customer is both whoever is buying the toy and the child who plays with it.

- Hannah Rudoltz
Play is a state of mind. Play is when one abandons work and thinks freely and creatively.

- Wei Xun He
What is the opposite of play?

work = 1 1 1 1 1 1 1 1 1 1

boredom = 1 1 1 1

psets = 1 1 1

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

- John Graham
Team Assignments

Wednesday PM
- camel
- meerkat
- hippo
- hedgehog

Thursday AFT
- ostrich
- koala
- llama
- lobster

Thursday PM
- crocodile
- moose
- narwhal
- tiger

Friday AM
- panda
- squid
- t-rex
- goose
Team communication

team email list format:
200b-animal@mit.edu

200b-tiger@mit.edu
Team communication

open design notebook to inside front cover

pass to all team members to write in name, phone number and email
Team communication

Everyone on Team Panda...
Quiz!

1. What is your name?
2. What is invention?
3. What is innovation?
4. What is creativity?
5. Write a caption for:
**Invention vs. 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.
Creativity - krēāˈtivitē

Noun:
The use of the imagination or original ideas, especially in the production of work.
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)

Right, Anterior Superior Temporal Sulcus (ASTS)
“Aha!” Experience (Jung-Beeman 2004)
Types of Ideation

Free Form or Intuitive Methods

- Group Writing
- Brain Writing
- Brain Sketching
- Collective NoteBook
- Pin Cards
- Trigger Sessions
- Free Writing
- Brainstorming

Structured or Logical Methods

- Morphological Analysis
- Attribute Listing
- TRIZ
- ARIZ
- A3STMPPER
- Potential Problem Analysis
- Feasibility

New Perspectives

- Lateral Thinking
- Challenging Assumptions
- Boundary Relax
- Negative Brainstorm
- Reversal
- Progressive Revelation
- Laddering

Associations

- Brutethink
- Analogies
- Force Fit
- Focal Objects
- Mind Mapping
- Brainstorming
- Bunches of Bananas
- Excursions
- Free Association
- Association Mapping
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

Why was 6 afraid of 7?

...because 7 8 9
Cartoon Caption Test

“can you please pass the cow”
-bennett ellenbogen

things in the image

things related to coffee

things related to milk

relate back to boardroom meeting
“let me start by welcoming you all to narcoleptics anonymous” 
-mike worth

things in the image

things related to coffee

things related to caffeine

relate back to boardroom meeting
Association Mapping

“breaks will no longer be dictated by time to finish your coffee”

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

“is this the decaf?”

types of coffee
black, decaffeinated, espresso, latte

“the crullers will be here shortly, as soon as they take the door off the hinge”

served with coffee
donuts, breakfast, newspaper

“who ordered from Java the Hutt?”

names of coffee
joe, java

“coffee sales have been soaring”

properties of coffee
caffeine, diuretic, hot, acidic

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

“the sink’s full again”

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

“coffee sales have been soaring”

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

“who ordered from Java the Hutt?”
Association Mapping

Form
Round
Flat
1-5 cm dia
Association Mapping
Association Mapping

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

- Function
- Motion
- Environment
- Name
- 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

[Image of a green stick figure] + [Image of a chair] = [Image of a green sculpture]
Crossing Products

- pencil
- toothbrush
- vacuum
- flower pot
Crossing Products

Write down the name of three products

Exchange
Theme!
Theme!

2008 — Science & Engineering
2009 — Arts & Crafts
2010 — Outdoors
2012 — Imagination
2013 — “in the Dark”

2015 —
surprise!
What is surprise?

something unexpected that causes the feeling of mild astonishment

- fantasy
- construction
- sensory
- challenge
Logistics

Labs begin this week

Missing lab/lecture
Brainstorm Assignment

- fantasy
- construction
- sensory
- challenge

Redraw these 4 ideas (or more) in design notebook. Submit original 4 at the beginning of lab.

Choose 1 favorite idea from each of 4 categories.

Ideate in each category.

Legible full page sketches with idea name and your name.
Brainstorm Assignment

- fantasy
- construction
- sensory
- challenge

- more thoughtful ideas now = better products later on
- do not do it the hour before lab
- it is graded
- this assignment is important
Brainstorm Assignment

1. Did you complete the assignment?
2. Are the sketches large and legible?
3. Are the ideas thoughtful (do not exist already and are within the theme)?

☐ Fantasy
☐ Construction
☐ Sensory
☐ Challenge

How is this graded?
Logistics

bring drawing kits to class Wed.

brainstorm assignment due in lab 1 this week

closed toe shoes in lab

lockers

do not take name tags
Logistics

Artist & Craftsman Supply in Central

- Prismacolor markers 10%, 30%, 50%, 70%
- Prismacolor fine liner 0.03
- Prismacolor pencils in black, indigo blue and white
- Black Pentel Sign Pen
- Beinfang marker pad 9” x 12”
- 30 60 90 set square
- White erasure
- Olfa knife, heavy duty with ratchet lock

$45
Theme and teams