I don’t get it.
What exactly don’t you get?
It turns from a building into a robot, right?
Precisely.
Well, what is fun about that?
Well, if you had read your industry breakdown, you would see that our success in the action figure area has climbed from 27% to 45% in the last two years.
I still don’t get it.
What don’t you get?
There’s a million robots that turn into something. This is a building that turns into something. What’s fun about playing with a building? That’s not any fun.
This is a skyscraper.
Limericks!

Though all limericks had their good parts
So many warmed our design hearts
The problem we're finding
is rhythm and rhyming
I guess we're not all liberal arts

Victor Hung
Limericks!

For MechE's design is the art
Creative and comes from the heart
It's passion you feel
Your visions made real
A journey we all wish to start

Luis Fernando Herrera Arias

There are many a useful design
Whose function and form are refined
And no one proclaims
A product is lame
If their encounter is one of a kind

Julie Vaughn

A normal bear, but when hugged: glowing eyes!
A clear pen, but in this light - colors arise!
The toys that are fun
Are things that aren't 'done' -
New, unexpected: the fun's in surprise!

Maxine Beeman
Quiz results

What is **design**?
plan to achieve a desired effect

What is a **toy**?
item that functions as tool for play

What is a **product**?
produced by human effort for distribution

answers to all three!
Quiz!

1. What is your name?

2. Who is our customer in toy design?

3. What is play?

4. What is the opposite of play?
Who is our Customer?

Influence on Product Selection

Product Use

user

purchaser

producer

retailer

Influence on Product Selection
Understanding Play

What is play?

**It is a quality of mind.**
“Play and work are words used to describe the same activity under different circumstances”
- Mark Twain

**It is a natural and learned schematization of life.**
“A primitive and paradoxical communication, schematic expression, and a succession of disequilibrial bipolar state, with their own rules, sequences and climaxes”
- Brian Sutton Smith, PhD

**It is developmental and cathartic.**
“It is essential for helping children reach important social, emotional, and cognitive developmental milestones as well as helping them manage stress and become resilient"
- The American Academy of Pediatrics (AAP)
Understanding Play

Play describes a state of mind during an activity that is: enjoyable
Understanding Play

Play describes a state of mind during an activity that is:

- enjoyable
- captivating
Understanding Play

Play describes a state of mind during an activity that is:

- enjoyable
- captivating
- superfluous
Understanding Play

Play describes a state of mind during an activity that is:

- enjoyable
- captivating
- superfluous
- intrinsically motivated
Understanding Play

Play describes a state of mind during an activity that is:

- enjoyable
- captivating
- superfluous
- intrinsically motivated
- process focused
Understanding Play

Play describes a state of mind during an activity that is:

- enjoyable
- captivating
- superfluous
- intrinsically motivated
- process focused

**work**  work disguised as play  directed play  guided play  free play  chore
Importance of Play

**Evolutionists**
Children learn important survival tools and prepare for adulthood

**Psychoanalysts**
Play is an emotional outlet (cathartic) and children develop an identity

**Developmental Psychologists**
“It is essential for helping children reach important social, emotional, and cognitive developmental milestones as well as helping them manage stress and become resilient” —American Academy of Pediatrics

Physical, Social

Emotional, Creative

Cognitive, Social, Emotional
Importance of Play

UN Convention on the Rights of the Child of 1989. Article 31

1. States Parties recognize the right of the child to rest and leisure, to engage in play and recreational activities appropriate to the age of the child and to participate freely in cultural life and the arts.

2. States Parties shall respect and promote the right of the child to participate fully in cultural and artistic life and shall encourage the provision of appropriate and equal opportunities for cultural, artistic, recreational and leisure activity.
Importance of Play

**Evolutionists**
Children learn important survival tools and prepare for adulthood

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Play is an emotional outlet (cathartic) and children develop an identity

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—American Academy of Pediatrics

**Brian Sutton Smith**
Play for the sake of play

- Physical, Social
- Emotional, Creative
- Cognitive, Social, Emotional
- Fun and Relaxation
Classifying Play

“Classification is the first step in bringing order into any scientific endeavor” - Michael Ashby
Existing Classifications

“The Classification is the first step in bringing order into any scientific endeavor” - Michael Ashby

The National Institute for Play
- Body Play
- Object Play
- Social Play
- Imaginative/Pretend Play
- Storytelling Play
- Creative Play
- Attunement Play

Consumer Product Safety Commission
- Active Play
- Manipulative Play
- Make-Believe Play
- Creative Play
- Learning Play
Scales of Play

- **involvement**
  - passive
  - active

- **social involvement**
  - solitary
  - parallel
  - associative
  - collective

- **level of restraint**
  - free
  - ruled

- **interaction**
  - mental
  - mental and physical
  - physical

- **gender**
  - male
  - neutral
  - female
Scales of Play

involvement
- passive
- active

social involvement
- solitary
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- mental
- mental and physical
- physical

gender
- male
- neutral
- female
Types of Play

- Sensory
- Fantasy
- Construction
- Challenge
Types of Play

Sensory
Massage, Yoga, Music

Fantasy
Movies, TV, Flirting Books, Makeup

Construction
Arts and Crafts Music, Cooking

Challenge
Games, Gambling, Trivia Sports, Recreation
Types of Play

The Play “Pyramid”

construction

sensory

challenge

fantasy

Sensory

Fantasy

Fantasy

Challenge

Challenge

Construction

Construction

Sensory

Challenge

Fantasy

Construction
Types of Play
The Play “Pyramid” - Fantasy Challenge Edge
Types of Play
Inside the Play Pyramid

- Sensory
- Construction
- Fantasy
- Challenge
Types of Play
Inside the Play Pyramid

- Sensory
- Fantasy
- Construction
- Challenge
Types of Play
Inside the Play Pyramid

- Sensory
- Construction
- Fantasy
- Challenge
Designer Toys?

- Sensory
- Construction
- Fantasy
- Challenge
What Play is Eggman?
What Play is Eggman?

- Sensory
- Construction
- Fantasy
- Challenge
What is Play Value?

Developmental benefits of the play?

Length of time a user plays?

Variety of play?

Does it Afford Play?
Play Affordances

Affordance: the action possibilities (of a toy) that limit and guide an actor (customer audience)

“I suspect that none of us know all the affordances of even everyday objects.”
—Donald Norman
Play Affordances

Affordance: the action possibilities (of a toy) that limit and guide an actor (customer audience)

“I suspect that none of us know all the affordances of even everyday objects.”
—Donald Norman

Perceived Play Affordances
Play Affordances
Play Affordances

“it is dangerous to pretend we know what a child will do with a toy just from its characteristics alone; children have a way of doing things with toys over and beyond the apparent character of the toy”
-sutton smith

“...but we can still design suggestions! A toy is in the mind of the child, a toy product is in the mind of the designer. Ideally, a toy product is the same in the mind of both parties.”
-kudrowitz
Designing Toy Products

Design Embodiments
Designing Toy Products

Design Embodiments
Designing Toy Products

Toy Products also require play value (functional requirements)

Functional Requirements
Designing Toy Products

Toy Products also require play value (functional requirements)

it works! and it plays!

Functional Requirements
Design for Play

Play with the toy

Suggest the designer’s intended play type and target age

How would you alter the toy to enhance or change the play or suit a different audience?
Labs!

start next week

class and labs:
don’t be late!
Questions?