Design Thinking and Applied Ideation

- Thinking about problems
- Brainstorming and ideation
- Improv and collaboration
- Practice brainstorms
- Scenarios and storytelling
- Presentation and wrap

Gayle Curtis
E110 – 14 January 2010
Thinking about problems

**Problems**
- Investigate
- Observe
- Record
- Analyze
- Understand

**Solutions**
- **Brainstorm**
  - Explore:
    - Alternatives
    - Possibilities
    - Choices
  - Explain
- **Cluster**
  - Analyze
  - Prioritize
  - Eliminate
  - Elevate
- **Evaluate**
  - Diagram
  - Mockup
  - Express
  - Build
- **Prototype**
- **Test**
  - Try out on stakeholders
  - Test with users

**Iterate**
- Reframe
- Redefine
- Reprioritize
- Redirect
- Replan
Ideation and inspiration

Genius is one percent inspiration and ninety-nine percent perspiration.

Thomas Edison, inventor

Inspiration is for amateurs. The rest of us just show up and get to work.

Chuck Close, artist
Brainstorming

Defined by Alex Osborn in 1939

“Storming a problem in a commando fashion”

- “Your Creative Power,” 1949
- “Applied Imagination,” 1953

Took on a life of its own

- BBDO - Alex Osborn
- MIT Creative Engineering Lab - John Arnold
- Stanford Design Division - Bob McKim
- IDEO
- d.school at Stanford and Potsdam

Sources: _, Verner Reed/Time & Life Pictures/Getty Images; Gayle Curtis
The Osborn Rules for Brainstorming
Osborn Rule #1

DEFER

JUDGEMENT

Say Yes!

Source: Doré
Fifty phrases that kill creativity

- Our place is different
- We tried that before.
- It costs too much.
- That's not my job.
- They're too busy to do that.
- We don't have the time.
- Not enough help.
- It's too radical a change.
- The staff will never buy it.
- It's against company policy.
- The union will scream.
- That will run up our overhead.
- We don't have the authority.
- Let's get back to reality
- That's not our problem.
- I don't like the idea.
- I'm not saying you're wrong but...
- You're two years ahead of your time.

- Now's not the right time.
- It isn't in the budget.
- Can't teach an old dog new tricks.
- Good thought, but impractical.
- Let's give it more thought.
- We'll be the laughingstock of the industry.
- Not that again.
- Where'd you dig that one up?
- We did alright without it before.
- It's never been tried.
- Let's put that one on the back burner for now.

- It can't be done.
- It's too much trouble to change.
- It won't pay for itself.
- It's impossible.
- I know a person who tried it and got fired.
- We've always done it this way.
- We'd lose money in the long run.
- Don't rock the boat.
- That's what we can expect from the staff.
- Has anyone else ever tried it?
- Let's look into it further.
- We'll have to answer to the stockholders.
- Quit dreaming.
- If it ain't broke, don't fix it.
- That's too much ivory tower.
- It's too much work.

What do you hear?

Thanks, Daniel DuFour
Osborn Rule #2

GO FOR

QUANTITY

FLUENCY + FLEXIBILITY

Thirty Circles
Exercise – Thirty Circles

You have a sheet with 30 circles

1. When we say GO!
   Transform each circle into something recognizable, such as a ball, a planet, bicycle wheels, etc.

2. It’s OK to draw outside the lines.

3. The goal: transform all 30 circles in TWO minutes.
# Osborn’s checklist for transforming ideas

<table>
<thead>
<tr>
<th></th>
<th></th>
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</tr>
</thead>
<tbody>
<tr>
<td>▪ New ways to use as is?</td>
<td>▪ What to add?</td>
<td>▪ What to subtract?</td>
<td>▪ Transpose positive and negative?</td>
<td>▪ Interchange components?</td>
</tr>
<tr>
<td>▪ Other uses if modified?</td>
<td>▪ More time?</td>
<td>▪ Smaller?</td>
<td>▪ How about opposites?</td>
<td>▪ Other pattern?</td>
</tr>
<tr>
<td></td>
<td>▪ Greater frequency?</td>
<td>▪ Condensed?</td>
<td>▪ Turn it backward?</td>
<td>▪ Other layout?</td>
</tr>
<tr>
<td></td>
<td>▪ Stronger?</td>
<td>▪ Miniature?</td>
<td>▪ Turn it upside down?</td>
<td>▪ Other sequence?</td>
</tr>
<tr>
<td>▪ What else is like this?</td>
<td>▪ Longer?</td>
<td>▪ Shorter?</td>
<td>▪ Change shoes?</td>
<td>▪ Change pace?</td>
</tr>
<tr>
<td>▪ What other idea does this suggest?</td>
<td>▪ Extra Value?</td>
<td>▪ Lighter?</td>
<td>▪ Turn tables?</td>
<td>▪ Change schedule?</td>
</tr>
<tr>
<td>▪ Does the past offer parallel?</td>
<td>▪ Plus ingredient?</td>
<td>▪ Omit?</td>
<td>▪ Turn other cheek?</td>
<td></td>
</tr>
</tbody>
</table>
Osborn Rule #3

GET

RADICAL

WILD  WEIRD  ABSURD  STUPID

Easier to tone down than pump up

Source: Obey the Pure Breed
Transformation cards

- Source: the MIT Creative Engineering Laboratory, ca 1956 – Adapted from Osborn's Applied Imagination
Osborn Rule #4

LEAPFROG

Piggy-back
Tag on
Let go

Source: Rolf Faste
Ground Rules Recap

Four content rules

1. **Defer Judgment**
   - Say Yes!
   - Save analysis and evaluation for later

2. **Go for quantity**
   - Fluency - lots of ideas
   - Flexibility - lots of *different* ideas

3. **Get radical**
   - Encourage wild, eccentric, improbable ideas
   - Easier to tone down than pump up

4. **Leapfrog**
   - Build on others’ ideas
   - Let yours go into the mix

Four process rules

5. **Stay focused on topic**
   - A loose thread can throw you off
   - Turn it around to something that relates

6. **One conversation at a time**
   - Let everyone get their idea out
   - Bring side discussions onto the table

7. **Headline it**
   - Express the essence and move on
   - Maintain flow

8. **Be visual**
   - Get the right brain working
And, for best results...

Explicitly agree
- “Let’s brainstorm!”
- “Yeah!”

Facilitate
- “What else...?”

Record
- Capture the thought

Time box
- Define the play period