16 Ideation. Curve sketching

Friday, February 28, 2025 12:45 PM

Admin

Today

Grad presentations Finish ideation

Choice:

Pod time Sketching

Modern/Minimalists -International Style, Art Deco, Organic Design

Grad presentation today

Jules Fischer-White TBD

Some content from Thinkertoys by Michael Michalko

Business/entrepreneur oriented Lots of stories, some references Assortment of techniques Very positive-thought oriented

Ideation, particularly new ideas, comes from shifting your perspective, your point of view



Linear techniques

Explore idea space systematically

Intuitive techniques

Your subconscious already has an answer, you just have to ask it nicely

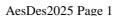
Linear Techniques

False Faces

- 1) State your challenge
- 2) List your assumptions
- 3) Challenge your fundamental assumptions
- 4) Reverse each assumption; write down the opposite of each one
- 5) Record differing viewpoints that might prove useful to you
- 6) Ask yourself how to accomplish each reversal. List as many ideas for each as you can.

Scamper

From Alex Osborn, 1940, pioneer of brainstorming techniques. Memonic by Bob Eberele **S**ubstitute something



Combine it with something else
Adapt something to it
Modify or Magnify it
Put it to some other use
Eliminate something
Reverse or Rearrange it

Design Heuristics

| 1 | Add levels | 20 | Change geometry | 39 | Incorporate environment | 58 | Scale up or down |
|-----|--|-----|-----------------------------|----|---------------------------|-----|---|
| 2 | Add motion | 21 | Change product lifetime | 40 | Incorporate user input | 59 | Separate functions |
| 3 | Add natural features | 22 | Change surface properties | 41 | Layer | 60 | Simplify |
| " | read material readures | | Change sarrace properties | 42 | Make components | 61 | Slide |
| 4 | Add to existing product | 23 | Compartmentalize | | attachable/detachable | 62 | Stack |
| 5 | Adjust function through | | Contraction | 43 | Make multifunctional | 63 | Substitute way achieving |
| , | movement | 24 | Contextualize | 44 | Make product recyclable | - | function |
| 6 | Adjust functions for | 25 | Convert 2-D material to 3-D | 45 | Merge surfaces | | Synthesize functions |
| | specific users | | object | 43 | sterge surfaces | | Telescope |
| 7 | Align components around center | 26 | Convert for second function | 46 | Mimic natural mechanisms | 66 | Twist |
| 8 | Allow user to assemble | 27 | Cover or wrap | 47 | Mirror or array | 67 | Unify |
| l° | Allow user to assemble | 28 | Create service | 48 | Nest | 68 | Use common base to hold components |
| .9 | Allow user to customize | 29 | Create system | 40 | Office and and account | 69 | Use continuous material |
| 10 | Allow user to rearrange | 20 | Divide continuous surface | 49 | Offer optional components | | Use different energy |
| 111 | Allow user to reorient | 30 | Divide continuous surrace | 50 | Provide sensory feedback | 70 | source |
| | | 31 | Elevate or lower | 51 | Reconfigure | 71 | Use human-generated |
| 12 | Animate | 32 | Expand or collapse | - | | 1.0 | power |
| 13 | Apply existing mechanism in new way | | | 52 | Redefine joints | 72 | Use multiple components for one function |
| ١ | Attach independent | 33 | Expose interior | - | Date and select | 73 | Use packaging as |
| 14 | functional components | 24 | Extend surface | 53 | Reduce material | 13 | functional component |
| 15 | Attach product to user | .,4 | Extend surface | 54 | Repeat | 74 | Use repurposed or recycled materials |
| 16 | Bend | 35 | Flatten | | | | • |
| 1.0 | Build user community | 36 | Fold | 55 | Repurpose packaging | 75 | Utilize inner space |
| | • | 37 | Hollow out | 56 | Roll | 76 | Utilize opposite surface |
| 18 | Change direction of access | | Impose hierarchy on | | | | Visually distinguish |
| 19 | Change flexibility | 38 | functions | 57 | Rotate | 77 | functions |

Intuitive

https://www.youtube.com/watch?v=JPwxlwaUpi0

Neurological perspective on creativity. Practice, but then let it flow.

Not Kansas

Guided visualization. Similar to 'go to your happy place'; imagine experiencing all 5 senses: sight, touch, smell, taste, hearing. Entwine receiving mysterious messages, then look at them and write them down.

STORM

was blood-red for a few minutes, then the red was streaked with black. When you looked at the eerie sky, it seemed as if the world had turned upside down and the road that ought to be beneath your feet was now above your head. And then the sky turned black.

You are surprised by a flicker of light to the west—so quick that you do not recognize it as lightning. But it flickers again and again and soon is almost constant. Then comes the thunder, with a sound that seems to roll You had never seen such a sunset. The sun was like a dying coal, ringed with black long before it neared the horizon. After the sunset, the rim of the earth

over you like boulders. The lightning begins to drive into the earth, with streaks as big as poles and terrible sounds.

The rain begins, pelting down in big scattered drops that at first feel and, but the drops grow bigger and soon the rain is falling in sheets, blown this way and that by the fitful wind. In a bright flash of lightning, you see something run in front of you. What is it? Study it and then let it go, but remember what you saw.

The water beats down more heavily, pounding you and running in streams off your hat brim. The rain is now so heavy that you begin to think you might be drowned. A stream of water pours down in front of your nose while another runs down your back. You are so cold and wet that you feel vou might never get warm again.

The ground is covered with water and there is nothing to do but splash along. Suddenly, you begin to slide—you have stepped into a hole and you feel water rising up to your hips. You climb out and squish along again.

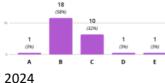
Soon you get too tired to think and can only hope for morning. But the night goes on and on. Finally, the lightning dies and the hard rain slows to a drizzle. You stop to empty your shoes of water. You drop one. When you stoop down to pick it up, you notice a bottle with a slip of paper in it. You pick up the bottle and put it in your pocket.

A little while later, dawn breaks and the rain stops completely. The sky is cloudless. The first sunlight sparkles on the wet trees and bushes and on the hundreds of scattered puddles. Cold and damp, you bend over a puddle and wash the mud off your clothes. Now that the sun is beginning to warm things up, you find a grassy hill that isn't too wet and start a small fire. Set up a Starved, you fry up some eggs and thick slices of bacon. Breaking the fried / Cook Stave eggs with your knife, you eat them with slices of bacon as you warm your substitute body by the fire.

Remembering the bottle, you take out the note and read it slowly. What are the images? Open your eyes and write or draw your impressions and images. Write whatever comes to mind.

If the images are cloudy, repeat the exercise daily until you are comfortable with it and the images grow vivid. Begin to imagine that you are going to experience a breakthrough and the images will flow. trying to find a new business niche experienced

- a) I got nothing
- b) Kinda cool, but nothing specific
- c) A couple of ideas
- d) Bingo! Something useful



| Х | 2020 | 2019 |
|---|------|------|
| А | 21% | 3 |



fauror ite

protein

Clicker:

| В | 61 | 37 |
|---|----|----|
| С | 14 | 47 |
| D | 4 | 13 |

Next:

- A) Pod time, talk about your project ideas
- B) Sketching practice
- C) Modern design movements: Art Deco, International style



Sketching Practice

