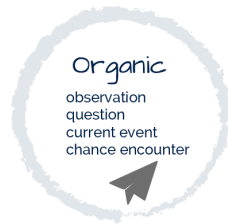


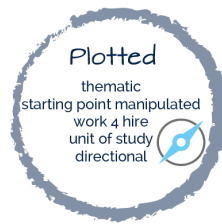
Tackling Plasticware Organization and Storage Challenge



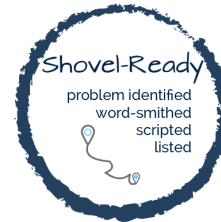
Origins of Design Thinking Challenges



dt challenges arise naturally without influence or preconceived connections or timelines.



dt challenges are lightly scaffold to align with a desired goal or learning outcome



problems are identified with prepackaged users to quickly gain empathy and experience dt process

discover

empathize

experiment

produce

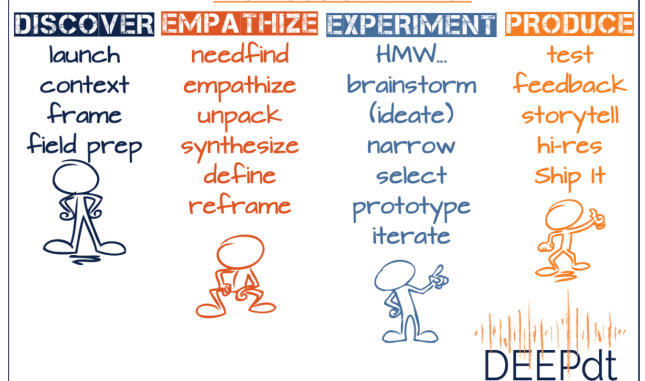


Developing, Emerging, & Mastering of Skills Utilizing Design Thinking Process

- | | | | |
|--------------------------------------|---|---|--|
| <input type="checkbox"/> explain | <input type="checkbox"/> agility | <input type="checkbox"/> develop new approaches | <input type="checkbox"/> listen |
| <input type="checkbox"/> formulate | <input type="checkbox"/> adaptability | <input type="checkbox"/> motivate | <input type="checkbox"/> problem solve |
| <input type="checkbox"/> articulate | <input type="checkbox"/> flexibility | <input type="checkbox"/> initiate | <input type="checkbox"/> accept |
| <input type="checkbox"/> develop | <input type="checkbox"/> oral/written communication | <input type="checkbox"/> critical thinking | <input type="checkbox"/> mediate |
| <input type="checkbox"/> implement | <input type="checkbox"/> cooperate | <input type="checkbox"/> inquire | <input type="checkbox"/> notice |
| <input type="checkbox"/> execute | <input type="checkbox"/> adaptive thinking | <input type="checkbox"/> forecast | <input type="checkbox"/> select |
| <input type="checkbox"/> question | <input type="checkbox"/> personal management | <input type="checkbox"/> predict | <input type="checkbox"/> adapt ideas |
| <input type="checkbox"/> test | <input type="checkbox"/> evaluate | <input type="checkbox"/> spatial reason | <input type="checkbox"/> identify design |
| <input type="checkbox"/> iterate | <input type="checkbox"/> apply | <input type="checkbox"/> abstract thought | <input type="checkbox"/> interpret |
| <input type="checkbox"/> demonstrate | <input type="checkbox"/> classify | <input type="checkbox"/> imagine | <input type="checkbox"/> persuade |
| <input type="checkbox"/> select | <input type="checkbox"/> organize | <input type="checkbox"/> brainstorm | <input type="checkbox"/> define |
| <input type="checkbox"/> experiment | <input type="checkbox"/> categorize | <input type="checkbox"/> create | <input type="checkbox"/> summarize |
| <input type="checkbox"/> sketch | <input type="checkbox"/> support | <input type="checkbox"/> build | <input type="checkbox"/> analyze |
| | <input type="checkbox"/> judgement | <input type="checkbox"/> prototype | <input type="checkbox"/> interview |
| | | <input type="checkbox"/> pace | <input type="checkbox"/> synthesize |
| | | | <input type="checkbox"/> collaborate |



methods of DEEPdt



Learning Focus:

Students will solve an identified problem by working backwards towards the User to identify the Why thus propel them forward towards a User-Centric solution.

SKILL Development:

communication, predicting, spatial reasoning, analyze, empathize, sketch, formulate, test, identify, select, categorize

Learning Progression Focus Options (formative assessment)



Plotted Design Thinking Challenge: Origin Points: thematic, starting point manipulated, work 4 hire, unit of study, directional.




Plotted Design Thinking Challenges are lightly scaffold to align with a desired goal or learning outcome.

Discover

The Discover Launch Pad for this challenge in this (above) photograph.

- Run a [See, Think, Wonder Visible Thinking Routine](#) with your students.

See Think Wonder

A routine for exploring works of art
and other interesting things

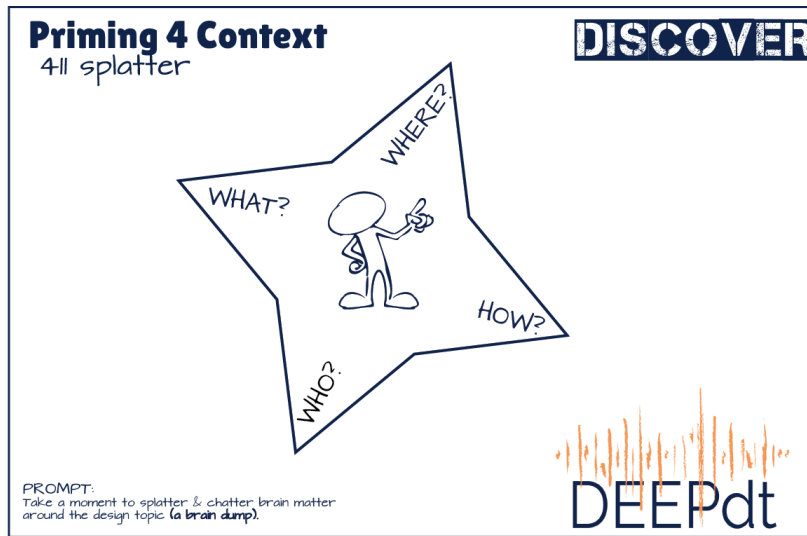
PURPOSE: THIS ROUTINE ENCOURAGES STUDENTS TO MAKE CAREFUL
OBSERVATIONS AND THOUGHTFUL INTERPRETATIONS. IT HELPS
STIMULATE CURIOSITY AND SETS THE STAGE FOR INQUIRY.

MAKING THINKING VISIBLE

RITCHHART, CHURCH, AND MORRISON 2011

- Another Discover Launch possibility: Ask students to snap a photo of their family's plasticware storage system
 - An additional aspect to this assignment is to ask family members what their thoughts are on their current plasticware storage system. What works? What could be improved? Have you ever tried to organize your plasticware differently? How did that work for you? etc
- Create a gallery walk of the different photos from the students and run a See, Think, Wonder VTR under each of the photos.

Your students could utilize some Discover [Learning MEANS](#):



Empathize

Seek users who may have opinions/issues/stories around plasticware.

- Prepare questions to begin a conversation around storage, organization, kinds, and the whys around plasticware.
- Great outliers would be older people who utilize plasticware (aka tupperware) that is not "disposable"
- Other possible users are SAHMs, young adults living on their own for the 1st time, college kids, or any adult you can find
- If there is time, try to have multiple conversations with various Users
- Be sure to capture phrases, feelings, body language, stories
- Ask why, say tell me more, and what makes you say that (a lot during the convos)

After Needfinding, unpack & synthesize the captures aka Data.

- The easiest way to do this is through Affinity Chunking (my go to) However, using an Empathy Map is also way to unpack your findings.
- (also, even though there are handouts to utilize throughout Empathize- I typically instruct my designers to blow up the handouts on the whiteboard or butcher paper as it allows for multiple viewpoints to be involved in the process as well as seeing the information more clearly.)



Next up is Define your POV. Create POV statements around individual User's compelling needs and insights you gained while empathizing with your User.

DEEPdt Learning MEANS to utilize in Empathize mode: (a sampling from [DEEPdt Learning MEANS file](#))

Needfinding

Flesh the Qs

EMPATHIZE

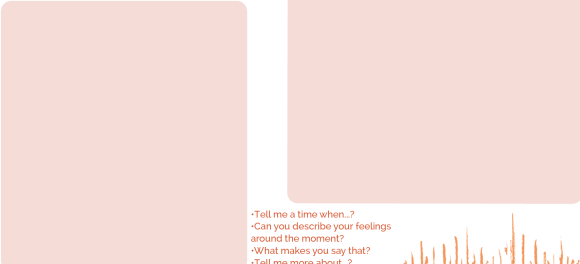
PROMPT:
To avoid 'a route or fluff', take a moment to jot down questions you might ask someone around the design topic.
Source: in Brian Koppert 'Talk issues'.

DEEPdt

Needfinding

face 2 face

EMPATHIZE




PROMPT:
Give DEEPdt a better understanding of users around the design challenge.

DEEPdt

Unpack

Affinity Chunking

EMPATHIZE



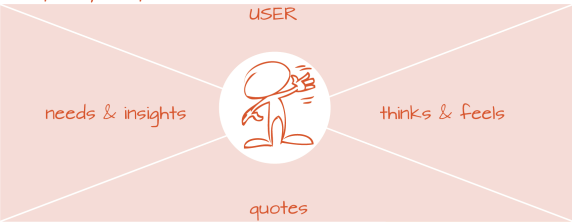
PROMPT:
Jot down your Needfinding & Observations on Post-its. Place on a team surface and then chunk in like groupings.

DEEPdt

Synthesizing

empathy map

EMPATHIZE



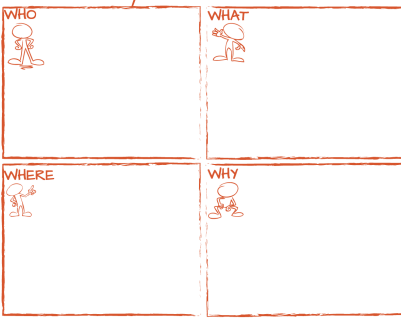
PROMPT:
Unpack & sort needfinding (post-its R. easy)

DEEPdt

Define

The 4 'Dubyas

EMPATHIZE



WHO is this about?
(BE DESCRIPTIVE)

WHAT needs have been revealed?
(HEADLINE WHAT'S BEEN EXPRESSED)

WHERE is this most impacting the User?
(SHOW THE EXPERIENCE)

WHY does it matter to the User?
(SHED LIGHT ON THE INSIGHTS)

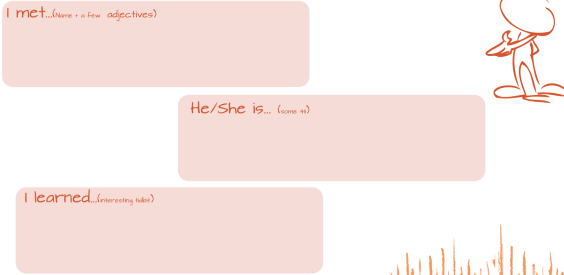
PROMPT:
Create a Needs Statement for your user.

DEEPdt

Unpack

retell

EMPATHIZE




PROMPT:
Take a moment to retell who you met. Capture the essence of your user.

DEEPdt

Define

Needs MadLib

EMPATHIZE



Our User... **WHO** is this about?
(BE DESCRIPTIVE)

needs a way to... **What** needs have been revealed?
(HEADLINE WHAT'S BEEN EXPRESSED)

when/while... **Where** is this most impacting the User?
(SHOW THE EXPERIENCE)

because... **Why** does it matter to the User?
(SHED LIGHT ON THE INSIGHTS)

PROMPT:
Create a Needs Statement for your user.

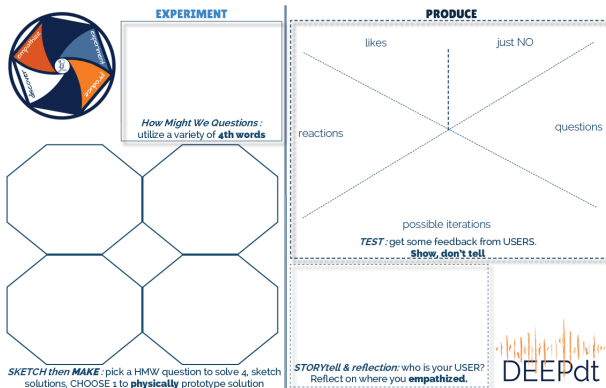
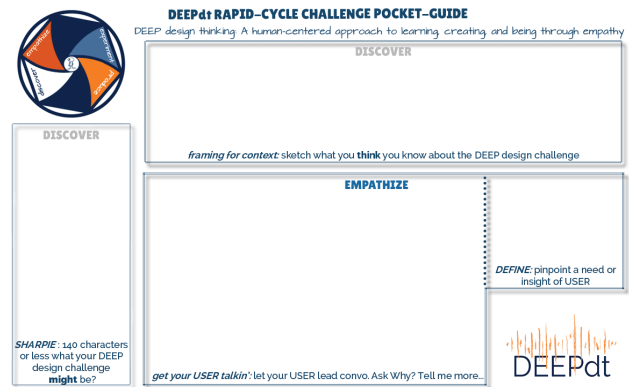
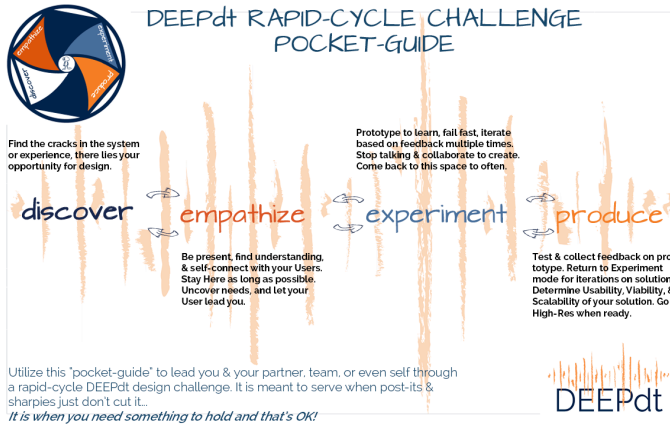
DEEPdt

SHOVEL-READY DESIGN THINKING CHALLENGE

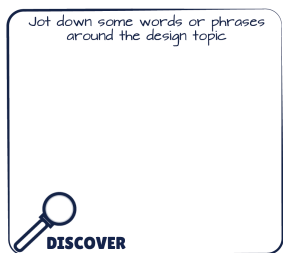
As a Shovel-Ready Design Thinking Challenge the set-up and execution of the challenge is simpler, more prescribed, and a lot shorter. This challenge could run from 30-60 minutes. I would utilize the DEEPdt Rapid Cycle Pocket Guide or Handout 2 (a 2-pager) or I would simply utilize my go to tools: post-its, Sharpies, & whiteboards.

Shovel-Ready: problem identified, word-smithed, scripted, listed

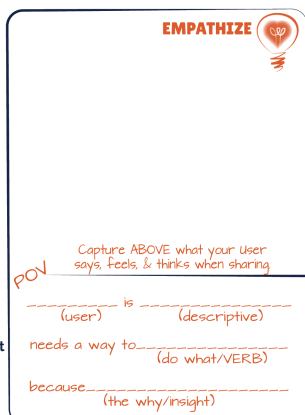
Problems are identified with prepackaged users to quickly gain empathy and experience a lap of the dt process.



Handout 2



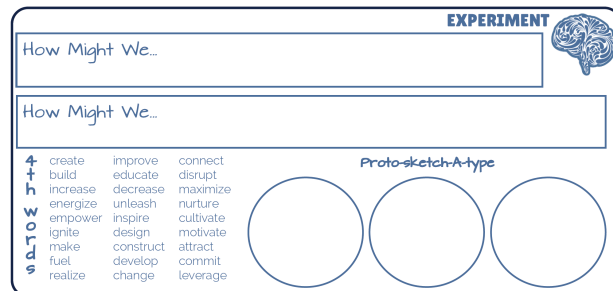
DEEP design thinking: human-centered approach to learning, creating, & being through Empathy.



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dSchool design thinking mindsets
(illustrated by Ellen Deutscher @Indeutsch)



Discover (5 min)

Discover Launch Pad: Show the photo above.

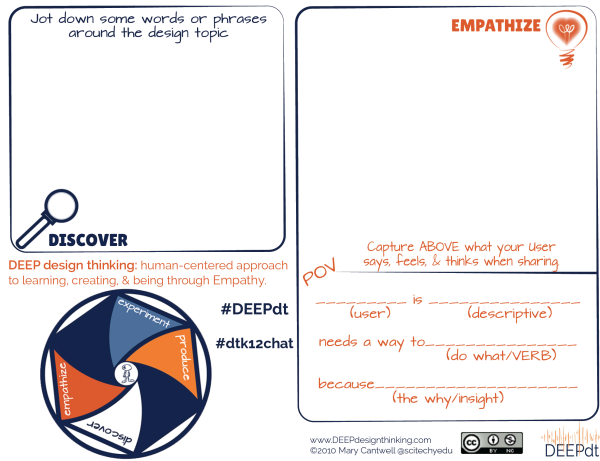
- Run a See, Think, Wonder VTR to get pumps primed

Empathize Mode (10-15 min)

Utilize this brief **Persona Connection** in small groups of 2-3. Have your students find at least 2 needs and try to gain "surface" empathy to lead them towards some insights.

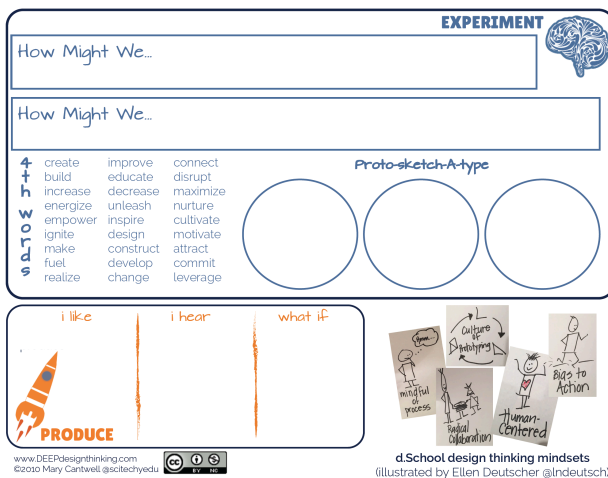
- Mary, a blessed housewife lives with her husband, 22 month old, and their 2 chocolate labs in a small, ranch style house. Her kitchen is a galley kitchen (which means its very narrow) and her cabinet storage options are limited due the design of the kitchen. For years, she has struggled to find a way to organize, store, and access the various plasticware items. This is her current setup and as you can see its haphazard, cluttered, and multiple times a day Mary says to herself, "There has to be a better way to maintain this." Another aspect to her dilemma is she uses a lot of different sized containers multiple times a day to feed her baby. When unloading the dishwasher, she has very little time or patience to neatly place the plasticware in some type of organization so she tends to toss and cram it into the cabinet. A few things to know about Mary-she does not have the time to place things in neat rows, stacks, or even holders, she likes to reuse plasticware that tends to be disposable, and loose lids drive her batty. Also, if she would love to figure out a way to store and organize her plasticware for easy access and less thinking with regards to grabbing the right lid for the right container. She needs something to easily reheat and contain food yet the random pieces of plasticware and the organization causes her hourly frustrations and anger.

Once 2-3 needs and insights have been gained, have students develop a POV statements utilize the Mad Lib framework



Experiment MODE (10-15 min)

Flip the POV statement into a How Might We question. Here are some helpful verbs to spark the HMW...? After All it's all about the 4th Word



Once an HMW? Is crafted, have students brainstorm possible solutions to meet the needs of their user, Mary.

- Options for prototyping can be sketching or providing specific low-res materials i.e. tape, paperclips, post-its, straws, & pipe-cleaners

Produce Mode (2-5 min)

Have students share their prototypes to another partner, gain feedback through the I Like, I Wish, What If protocol and if time, return to experiment mode to apply feedback to their iterations.