

EVERYBODY IS A DESIGNER

A Self-paced Workbook in **Design Thinking**

Impevi, Uganda | 2020

THINKING ABOUT THINKING

What ways do school teach us to think?

When was a time you learned something outside of school?

Can there be many answers to a single question?





Thirty Circles



STEP ONE

Receive a sheet of paper with 30 Circles and something to draw with, such as a pen or a pencil.



STEP TWO

Work independently and turn as many of the blank circles as possible into recognizable objects in three minutes. You can draw anything you want, but try to draw different objects.



STEP THREE

With the facilitator, compare your results with others in the group.



ABOUT THIS WORKBOOK

Problems come in all shapes and sizes. The important thing is that they can be solved. Design Thinking is a way to think about, understand, and solve problems. It often helps people become more creative, more resilient, and more resourceful individuals.

This workbook includes step-by-step instructions for your family in completing a problem-solving challenge using the Design Thinking process.

It is our hope that you can apply the process you learn from this workbook to your own life and work.



HOW TO USE THIS WORKBOOK

This workbook is meant to help your family structure your process and capture your thoughts.

You have two weeks to complete your process. Follow the recommended activities for each day, but use it how it can best help your family.

Page 5/32 | RECOMMENDED FOR DAY 1

Feel free to look ahead at future steps and look back to revise previous steps.

Read “extensive reading” contents only when you have extra time.

Two times a week, you will share your progress and receive feedback from Project Backpack.

Have fun!



**EXTENSIVE
READING**



A RECOMMENDED TIMELINE

Week 1	Day 1	With the facilitator	Thinking about thinking & Thirty Circles
	Day 2-3	Family Self-guided	When have you designed something? What does being a designer mean to you?
	Share your progress and receive feedback		
	Day 4-6	Family Self-guided	What is Design Thinking?
	Day 7-8	Family Self-guided	The Wallet Challenge
	Day 9	With the facilitator	Debrief
Share your progress and receive feedback			
Week 2	Day 10-12	Family Self-guided	Your garden
	Day 13	Family Self-guided	Your problem statement
	Share your progress and receive feedback		
	Day 14-16	With the facilitator	Ideate: generate and evaluate solutions
	Day 17	Family Self-guided	Debrief
	Day 18-19	With the facilitator	Digest feedback

WHEN HAVE YOU DESIGNED SOMETHING?



Write down an experience of you designing something, anything.

Write as many as you can.

There is no right or wrong answer. Whatever your answer is, it is a good answer!

Your answer 1

Your answer 2

Your answer 3

Your answer 4

Your answer 5

Your answer 6

WHAT DOES BEING A DESIGNER MEAN TO YOU?



Write down any words or phrases you think are associated with designers.

Write as many as you can.

There is no right or wrong answer. Whatever your answer is, it is a good answer!

Your answer 1

Your answer 2

Your answer 3

Your answer 4

Your answer 5

Your answer 6



SHARE YOUR PROGRESS

Share your workbook with project backpack team.

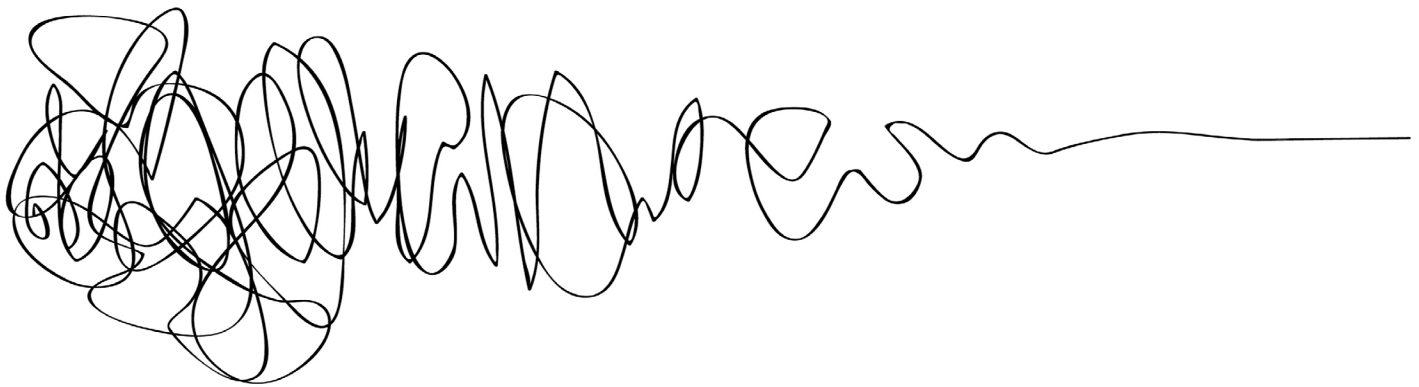
RECEIVE FEEDBACK



Watch video: The Design Thinking process

WHAT IS DESIGN THINKING?

THE DESIGN THINKING PROCESS



Step 1	Step 2	Step 3	Step 4	Step 5	Step 6
EMPATHIZE	DEFINE	IDEATE	PROTOTYPE	TEST	IMPLEMENT AND ASSESS
Know the users and care about their lives	Frame the right problem and bring clarity and focus to the design space	“It’s not about coming up with the ‘right’ idea, it’s about generating the broadest range of possibilities.” -- Hasso Plattner, Institute of design at Stanford	Build to think and test to learn	Put your prototype to use and refine your solution based on what you learned	Take note of what needs improvement. Build an even better version with a new prototype.

Everybody is a designer.

We think of you that way.
We'd like for you to believe it too.

Believe it's possible.

If there is something you need or want in life,
believe you can figure out a way to get it.”.

Be optimistic.

Believe the future will be better.

Start with, "What if?" instead of "What's wrong?"

Be open to trying and learning.

Consider an experience from beginning to end
and then challenge yourself to help others feel
what something new might really be like.

We're all in this together.

Design is a team sport.

Be inspired by your family members and neighbors,
challenge yourself to

contribute to and comment on each other's ideas and brainstorm.



Brainstorming is a group activity.
During a brainstorm session, members of the
group come up with ideas spontaneously
to find a conclusion for a specific problem.



Design Thinking is
a Mindset.

Design Thinking is also
an approach to problem-solving.

Thinking like a designer can transform the way
you approach the world
when imagining and creating new solutions for the future:

- being more aware of the environment around you,
- believing that you play a role in shaping that environment,
- and taking action toward a more desirable outcome.





EXTENSIVE
READING

WHAT IS DESIGN?

The questions and answers below are an extract of the interview between Madame. L. Amic and Charles and Ray Eames. These questions and answers were part of the conceptual basis of the exhibition *Qu'est ce que le design? (What is Design?)* at the *Musée des Arts Décoratifs, Palais de Louvre* in 1972.

Q: Questions by Madame. L. Amic, curator of the *Musée des Arts Décoratifs* in Paris.

A: Answers by Charles and Ray Eames, who were an American couple of industrial designers who made significant historical contributions to the development of modern architecture and furniture.

- Q (Question): "What is your definition of 'Design'?"
A (Answer): "One could describe Design as a plan for arranging elements to accomplish a particular purpose."
- Q: "Is Design an expression of art?"
A: "I would rather say it's an expression of purpose. It may, if it is good enough, later be judged as art."
- Q: "What are the boundaries of Design?"
A: "What are the boundaries of problems?"
- Q: "Is it a method of general expression?"
A: "No. It is a method of action."
- Q: "Is Design a creation of a group?"
A: "Very often."
- Q: "Does Design imply the idea of products that are necessarily useful?"
A: "Yes, even though the use might be very subtle."
- Q: "Is it [possible] to cooperate in the creation of works reserved solely for pleasure?"
A: "Who would say that pleasure is not useful?"
- Q: "Can the computer substitute for the Designer?"
A: "Probably, in some special cases, but usually the computer is an aid to the Designer."
- Q: "Does Design imply industrial manufacture?"
A: "Not necessarily."
- Q: "Is Design used to modify an old object through new techniques?"
A: "This is one kind of Design problem."

Continued on next page

**EXTENSIVE
READING**

Continued from previous page

- Q: “Does the creation of Design admit constraint?”
A: “Design depends largely on constraints.”
- Q: “What constraints?”
A: “The sum of all constraints. Here is one of the few effective keys to the Design problem: the ability of the Designer to recognize as many of the constraints as possible; his willingness and enthusiasm for working within these constraints. Constraints of price, of size, of strength, of balance, of surface, of time, and so forth. Each problem has its own peculiar list.”
- Q: “Are there tendencies and schools in Design?”
A: “Yes, but these are more a measure of human limitations than of ideals.”
- Q: “How would you define yourself with respect to a decorator? an interior architect? a stylist?”
A: “I wouldn’t.”
- Q: “To whom does Design address itself: to the greatest number? to the specialists or the enlightened amateur? to a privileged social class?”
A: “Design addresses itself to the need.”
- Q: “Have you been forced to accept compromises?”
A: “I don’t remember ever being forced to accept compromises, but I have willingly accepted constraints.”
- Q: “What is the future of Design?”
(no answer)



EXTENSIVE
READING



Watch video: The 5 Whys



Read: Basadur Simplex Problem Solving document, Steps 1 & 2

The Perfect Wallet/Purse

STEP 0 - DESIGN

3 minutes

Draw your ideas below for the perfect wallet/purse, or whatever you use to carry money, ID, and cards.

EPATHIZE: INTERVIEW YOUR PARTNER

STEP 1 - INTERVIEWS (SYMPATHIZE)

10 minutes

Your new mission is design something useful and meaningful for someone else. One way to do this is to have a good conversation. Choose a person from your family as your partner and ask them to walk you through the contents of their wallet/purse. What do the things in their wallet/purse tell you about their life? Take note of things you find interesting or surprising.

After the first set of questions, follow up on things that intrigued you. Try to dig for stories, feelings, and emotion. Ask questions start with 'WHY?' and find out what's important to your partner. Take note of things you find interesting or surprising.

DEFINE: REFRAME THE PROBLEM

STEP 2 - CAPTURE FINDINGS

5 minutes

GOALS AND WISHES

What is your partner trying to achieve?

*use verbs



INSIGHTS

New learnings about your partner's feelings and motivations.

What's something you see about your partners experience that maybe they don't see?*

*write down what you heard in your own words

STEP 3 - TAKE A STAND WITH A POINT-OF-VIEW

5 minutes



Here is an examples of point-of-view:

'Drew needs a way to feel he has access to all his stuff ready to travel. Surprisingly, he hasn't traveled for a while. Your point-of-view will be your problem statement, which is your definition of your partner's problem.

your partner's name / description

needs a way to _____

their need

because / but surprisingly,

[circle one]



Circle "because" when you think it's important to explain your interviewee's motivation to achieve their goals and wishes. Circle "but surprisingly," when you gain insights that don't appear to agree with your interviewee's statements during the interview.

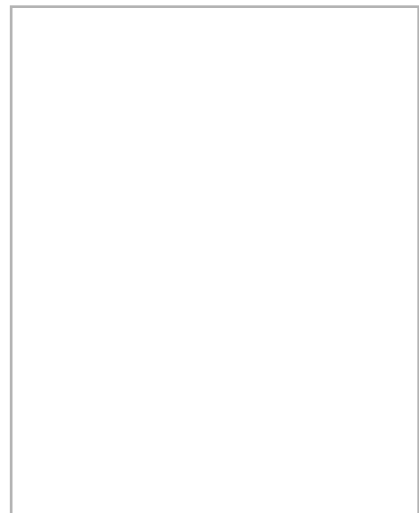
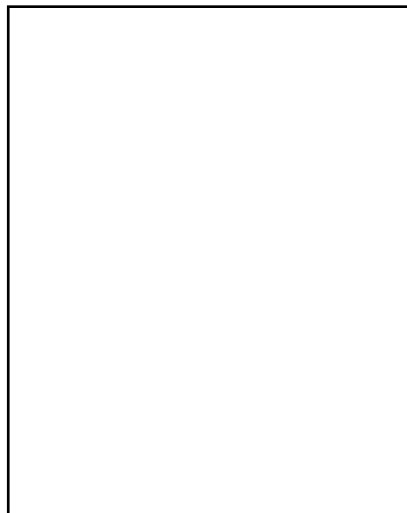
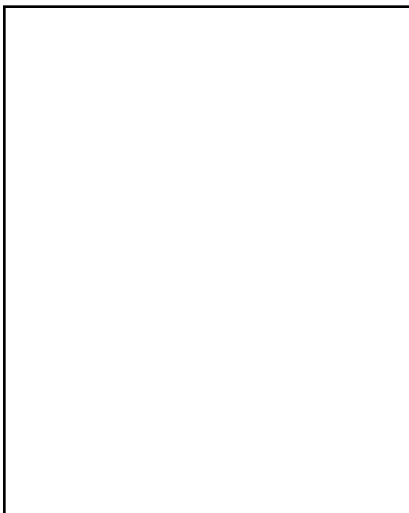
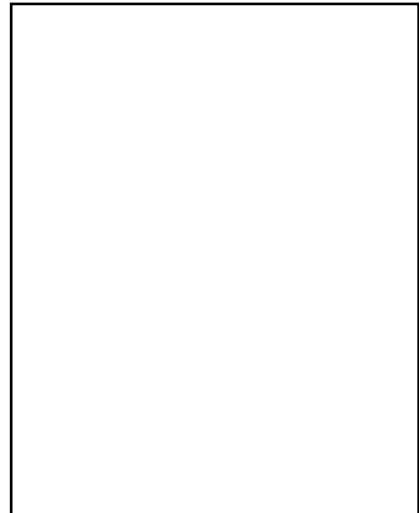
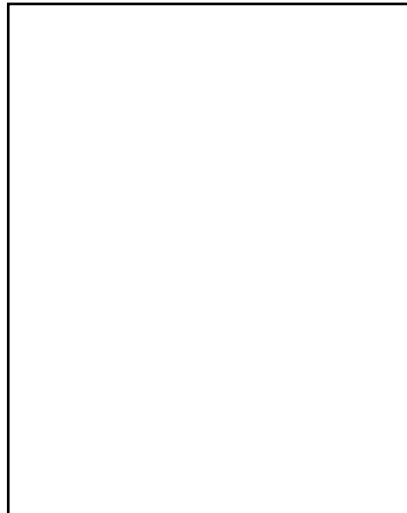
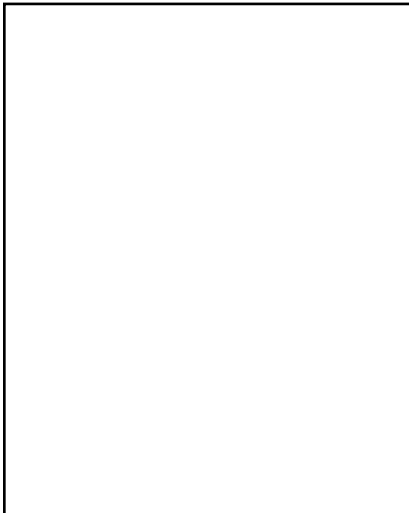
insight

IDEATE: GENERATE SOLUTIONS TO GATHER FEEDBACK

STEP 4 - SKETCH AT LEAST 5 RADICAL WAYS TO MEET YOUR USER'S NEEDS

10 minutes

Write your problem statement above. Then, in the boxes below, sketch at least 5 radical ways to meet your partner's needs. GO FOR VOLUME: This is time for idea generation, not evaluation—you can evaluate your ideas later.



STEP 5 - SHARE YOUR SOLUTIONS WITH YOUR INTERVIEWEE & CAPTURE FEEDBACK
10 minutes

Share your sketches with your partner. Spend the time listening to your partners reactions and questions.

This is not just about validating your ideas. Take notes on what they like and dislike and build on the ideas, but also listen for new insights. If they dislike an idea, try not to explain and defend it. This is another opportunity to learn more about your partner's feelings and motivations.

IDEATE BASED ON FEEDBACK

STEP 6 - REFLECT & GENERATE ONE NEW SOLUTION

5 minutes

Knowing what you know about your partner now, sketch your big idea, note details if necessary. This solution may be a variation on an idea from before or something completely new.

*You are still addressing a problem statement that you articulated in STEP 3, but your previous problem statement may need to change to incorporate the new insights and needs you discovered.

STEP 7 - SHARE YOUR SOLUTIONS & GET FEEDBACK

15 + minutes

Create a physical prototype of your solution, an experience that your partner can react to. Use whatever materials are available to you to make something that your partner can engage and interact with.

You could decide to test just one aspect of the overall solution. If your solution is a service or a system, create a scenario that allows your partner to experience this innovation.

Be scrappy and quick. It doesn't need to be perfect to be tested!

Validation of the prototype is not the point—it should be something that helps create new, interesting conversations.

Remember, your prototype is not precious, but the feedback and new insights it draws out are. Don't defend your prototype; instead, watch how your partner uses and misuses it.

On the next page, take note of things your partner liked and didn't like about the idea, as well as questions that emerged and new ideas that came up.

Take note of things your partner liked and didn't like about the idea,
as well as questions that emerged and new ideas that came up.

+ what worked

- what I could do to improve the idea

? what I still don't know

! new ideas...



DEBRIEF

How might we

turn this exercise into a mindset
that could impact the way we approach challenges in the future?

Your answer



What is a challenge

that you are facing right now that you can apply Design Thinking to?

Your answer

Also answer following questions, be as specific as you can.

Q1. Who does this affect?

Q2. How many people does this affect?

Q3. How does this affect you?

Q4. How does this affect your neighbor?

Q5. How much does this affect your daily life?



SHARE YOUR PROGRESS

Share your workbook with project backpack team.

RECEIVE FEEDBACK

YOUR GARDEN

STEP 1 - INTERVIEWS AND INSIGHTS

Take turns and interview everyone in your family and your neighbors to reflect on your garden. Then, share and revise your findings and insights to make sure everyone in your family is informed.

GOALS AND WISHES

What is your family trying to achieve

*use verbs



INSIGHTS

New learnings about your family members' feelings and motivations.

What's something you see about your family members' experiences that maybe they don't see?*

*write down what you heard in your own words

YOUR PROBLEM STATEMENT

your family

needs a way to

your need

because / but surprisingly,

[circle one]

insight

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RECEIVE FEEDBACK

IDEATE: GENERATE AND EVALUATE SOLUTIONS

Brainstorm with your family and sketch at least 5 radical ways to meet your family's needs



For your family's brainstorm session to be successful, follow these rules:

- 1. Go for quantity:** the more ideas you can come up with, the bigger the chance you will have a good solution.
- 2. Withhold criticism:** focus on adding to ideas and put criticism and judgments on hold.
- 3. Welcome wild ideas:** look at the problem from new perspectives and ask question start with "what if."
- 4. Combine and improve ideas:** get people unstuck by building on their ideas and combine ideas from different people.

write your problem statement above

Cluster any related ideas and have the team settle with two favorite, realistic ideas.

Discuss your solutions, use the chart below to make them better.

If possible, test your solutions in your garden.

+ what worked

- what we could do to improve them

? what we still don't know

! new ideas...



DEBRIEF

How might we

turn this exercise into an approach to problem-solving that could impact our garden in the future?

Your answer



SHARE YOUR PROGRESS

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RECEIVE FEEDBACK



References

Stanford d.school | Resources

IDEO Design Kit | The Human Centered Design Toolkit

IDEO Design Thinking for Educators | Designer's Workbook

D4i references