

# BECOMING A BETTER DESIGNER

A Self-paced Workbook in **Design Thinking** | Part II



Impevi, Uganda | 2021



## ABOUT THIS SECOND WORKBOOK

In the previous workbook, we demonstrated how you can think like a designer and use design thinking as a way to solve problems and be innovative within your abilities. In this second workbook, we will explore, apply and practice the design thinking process to become better designers: think, make, break and repeat.

This workbook provides more examples and activities for how individuals and families can apply design thinking in solving different challenges. You will find iteration opportunities to make and break prototypes and repeat all over again in order to find better solutions.

It is our hope that the exercises in this workbook can deepen your understanding of when and how to apply design thinking and help you gain the ability to navigate complex challenges, build confidence to work with uncertainty, and turn them to your advantage.





## HOW TO USE THIS SECOND WORKBOOK

Just like the first workbook, this second 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 3/30 | RECOMMENDED FOR DAY 1

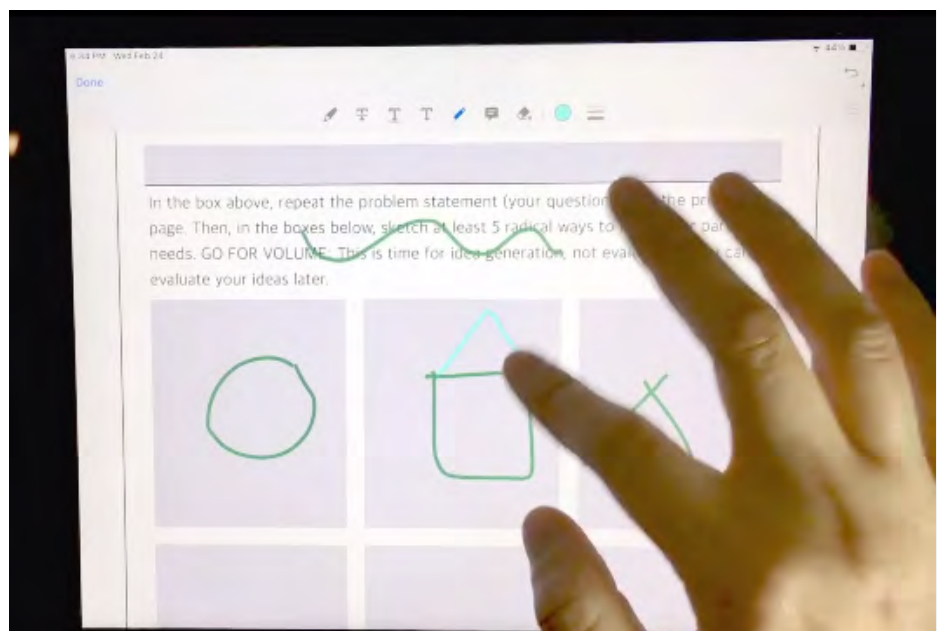
In addition to typing in the text boxes provided, you can also draw your ideas anywhere in the file. This video shows how you can draw using your fingers.

Two times a week, you will share your progress and receive feedback from Project Backpack. You will also be able to ask questions during the process.



Click to watch video:  
**How to make drawings  
in Acrobat**

Have fun!





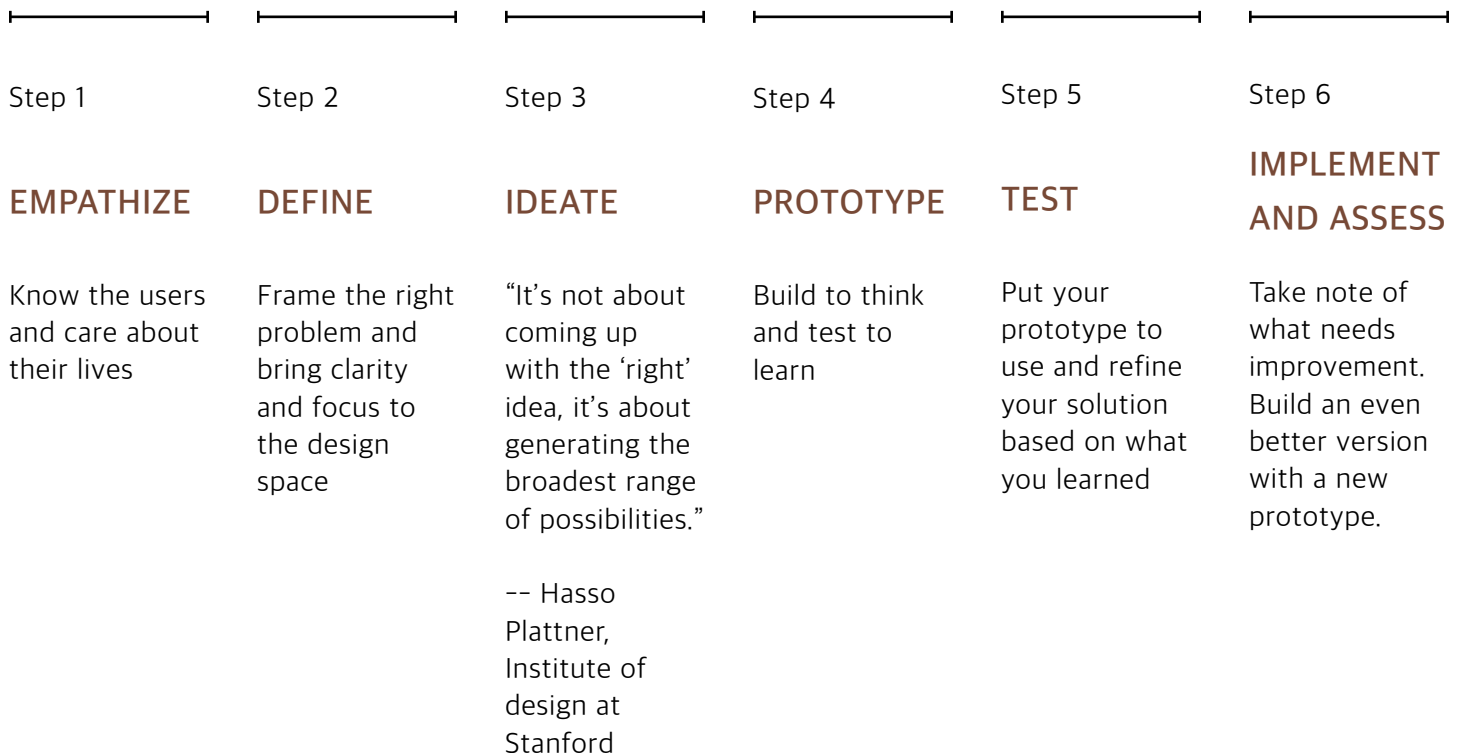
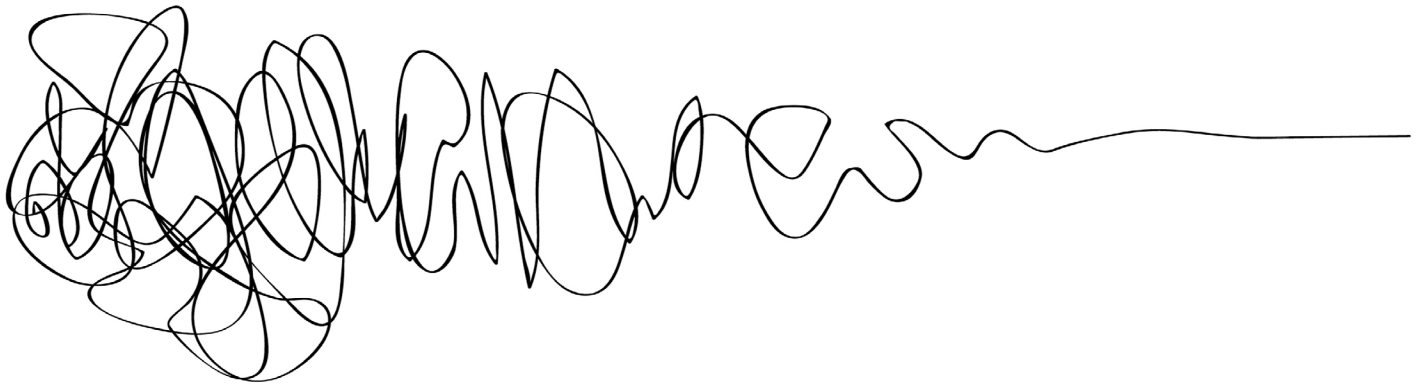
## A RECOMMENDED TIMELINE

Week 1	Day 1	With the Learning Guide	Introduction to the second workbook.
	Day 2-3	Family Self-guided	Recap: What is Design Thinking?
	Day 4-6	Family Self-guided	The Backpack Challenge
	Day 7	With the Learning Guide	Debrief
Share your progress & receive feedback			
Week 2	Day 8	Family Self-guided	Your garden & Your problem statement
	Share your progress & receive feedback		
	Day 9-10	With the Learning Guide	Ideate: generate solutions & gather feedback
	Day 11-13	Family Self-guided	Prototype & Test
	Day 14	With the Learning Guide	Debrief & Digest feedback



# RECAP: WHAT IS DESIGN THINKING?

## THE DESIGN THINKING PROCESS

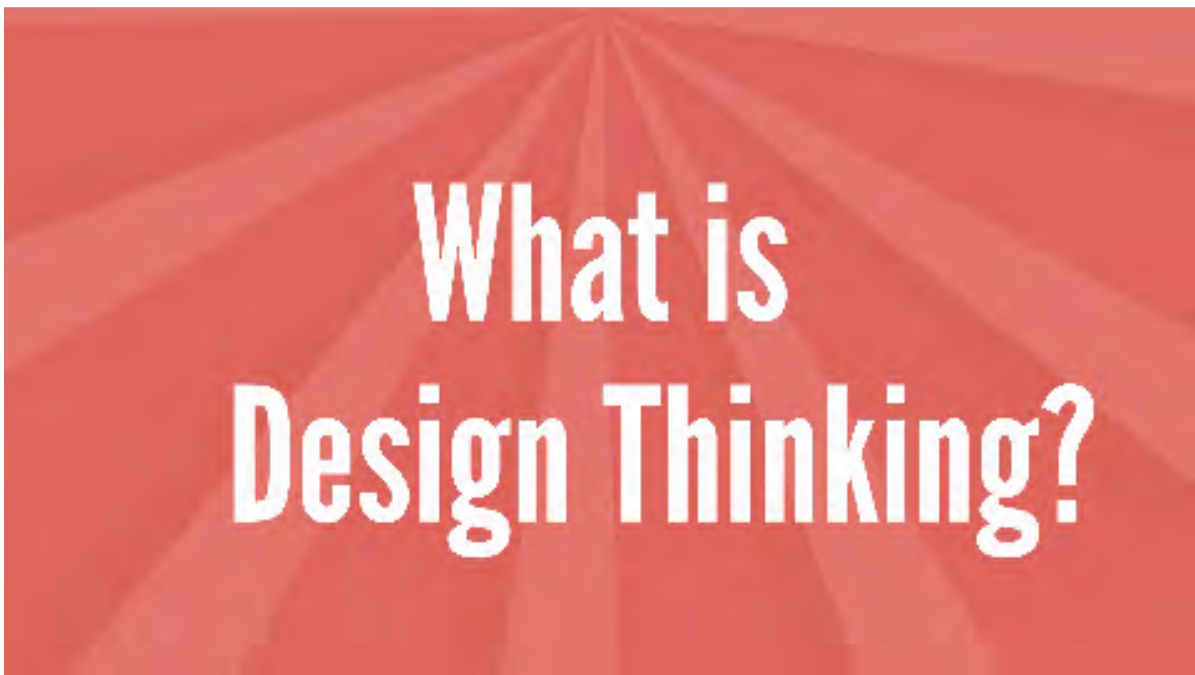




## RECAP: WHAT IS DESIGN THINKING?



Click to watch video: **“What is Design Thinking?”**



### Questions?

Is there anything in the video or the reading material you don't understand?  
Write down your questions in the box below for Project Backpack team.

## The Backpack Challenge

Your first challenge in this workbook is to design a useful backpack for someone else.

To get started, choose a partner.

Your partner can be your parent, child, sibling, friend, neighbor,  
or anyone else you know of.

# EMPATHIZE: INTERVIEW YOUR PARTNER

## STEP 1 - INTERVIEWS (EMPATHIZE)

10 minutes

Get to know your partner's needs and likes by having a good conversation. How do they define what a backpack is ? What do they need from a backpack? When and where do they need a backpack? What do they usually carry with them and how do they carry them? What do they like or dislike about backpacks? 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 needs that maybe they don't see?\*

\*write down what you heard in your own words

## DEFINE: REFRAME THE PROBLEM

### STEP 3 - TAKE A STAND WITH A PROBLEM STATEMENT

10 minutes



Here are two examples of problem statements:

How can we create something new to help my partner carry their baby?

OR

How can we make carrying water easier for my partner?

Your problem statement is a question that can help you find a solution to your partner's problem.

**How can we**

**help**  
**create**  
**develop**  
**make**  
**change**  
**build**

[ Check one of the boxes above to select a word ]

---

Finish your question that can help you solve your partner's problem.

Make sure your question is specific to meet your partner's needs.

If you want to write more than one problem statement, you can write down all of them in the box above, just start all of them with "How can we..."



## IDEATE: GENERATE SOLUTIONS

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

10 minutes

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In the box above, repeat the problem statement (your question) from the previous page. 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.

## IDEATE: GATHER FEEDBACK

### STEP 5 - SHARE YOUR SOLUTIONS WITH YOUR PARTNER & CAPTURE FEEDBACK

10 minutes

Share your sketches with your partner. Spend the time listening to your partner's 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 of 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.

# PROTOTYPE

## STEP 7 - CREATE A PROTOTYPE OF YOUR FINAL SOLUTION

1+ hours

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 build 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!

# TEST!

## STEP 8 - TEST YOUR PROTOTYPE & GET FEEDBACK

1+ hours

Hand your prototype to your partner. Do not tell them what to do.

Observe how they use it. Help them only when they ask for help.

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 prototype, as well as questions that emerged and new ideas that came up.

## TEST!

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

+ what worked

- what I can do to improve it

? what I still don't know

! new ideas...



## DEBRIEF

What have you learned from the backpack challenge?

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Your answer



## What is a challenge

that you can apply Design Thinking to?

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Your answer

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

Q1. Who does this affect?

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Q2. How many people does this affect?

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Q3. How does this affect you?

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Q4. How does this affect your neighbor?

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Q5. In what ways would your daily life be better if you didn't have this problem?"

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## SHARE YOUR PROGRESS

Share your workbook with project backpack team and ask questions

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(Optional) If you have questions, write them down in the box above.

## RECEIVE FEEDBACK

# YOUR GARDEN

## INTERVIEWS AND INSIGHTS

Interview everyone in your family and your neighbors to reflect on your garden.  
Then, share and revise your findings and insights.

### 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 didn't see before?\*

\*write down what you heard in your own words

## YOUR PROBLEM STATEMENT

How can we

**help**

**create**

**develop**

**make**

**change**

**build**

[ Check one of the boxes above to select a word ]

---

Finish your question that can help you solve your partner's problem.

Make sure your question is specific to meet your partner's needs.

If you want to write more than one problem statement, you can write down all of them in the box above, just start all of them with "How can we..."



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(Optional) If you have questions, write them down in the box above.

## RECEIVE FEEDBACK

## IDEATE: GENERATE 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.

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Write your problem statement from page 21.

## IDEATE: GATHER FEEDBACK

Share your solutions with your family members.

10 minutes

Share your sketches with your family. Spend the time listening to everyone's 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 family member's needs.

# PROTOTYPE

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 family can engage and interact with.

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! new ideas...



## DEBRIEF

What have you learned from the garden challenge?

---

Your answer



## SHARE YOUR PROGRESS

Share your workbook with project backpack team and ask questions

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(Optional) If you have questions, write them down in the box above.

## RECEIVE FEEDBACK



## **Reference**

Stanford d.school | Resources

IDEO Design Kit | The Human Centered Design Toolkit

IDEO Design Thinking for Educators | Designer's Workbook

Design 4 Impact (D4i) | Pangea Education | Avenues: The World School