

This workbook is an accompanymant to the Design Thinking for Educators Toolkit, available for free at designthinkingforeducators.com.

Designer's Workbook

*Design
Thinking
for
Educators*

MY DESIGN CHALLENGE:

What is Design Thinking?

Design Thinking is about believing we can make a difference, and having an intentional process in order to get to new, relevant solutions that create positive impact.

Design Thinking gives you faith in your creative abilities and a process for transforming difficult challenges into opportunities for design.

Design Thinking is:
human-centered
collaborative
optimistic
experimental

Welcome to the Designer's Workbook.

This workbook includes step-by-step instructions for completing a design challenge using the design thinking process. This workbook is a quickstart guide to the design thinking process and is best used in combination with the Design Thinking for Educators Toolkit.

The Design Thinking for Educators Toolkit contains in-depth instructions and explanations as highlighted by each step in this workbook. The toolkit also provides you with examples from educators, like yourself, of how they've been using design thinking in their work.

THIS WORKBOOK CAN SUPPORT ANY DESIGN CHALLENGE YOU WANT TO TACKLE. THOUGH WE OFTEN SEE CHALLENGES THAT CENTER AROUND A FEW SPECIFIC TOPICS:



CURRICULUM

Every day you design ways to interact with your students around content. You can follow a design process to be more intentional about connecting this content to the interests and desires of today's learners by finding out more about the things that they do outside of school and connecting that to the content you are bringing to them.



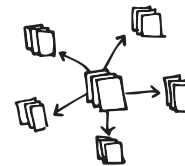
SPACES

The physical environment of the classroom sends a big signal about how you want your students to behave. Right now we tend to think of our classroom spaces as standard... kids in rows, sitting in desks. By rethinking the design of our spaces, we can send new messages to our students about how they should feel and interact in the classroom.



PROCESSES & TOOLS

Your school has already designed a set of processes or tools that may or may not be setting up your school for success. This is typically outside of the classroom and specific interactions around learning, and more around how the system operates. Every process is already designed, and thus can be redesigned! Sometimes creating tools can be essential to supporting newly designed processes.



SYSTEMS

Not everyone can always make decisions for the system that they exist within, but everyone can contribute to the design of that system. Designing systems is about balancing the complexity of many different stakeholder needs with the needs of the operation. When designing systems, we're often setting high-level strategy such as stating visions, priorities, policies, and key communications around these ideas.

Hello Designer!

Whether this is your first design project or your fiftieth, you are taking a brave step to address challenges in your classroom, school or community by designing new solutions that build from people's needs and desires. Exciting!

This workbook is meant to help you structure your process and capture your thoughts. Use it how it best helps you... you can use some of the methods or all of the methods, it's up to you.

First step... define your challenge and create a project plan.

Getting Started

WHAT'S IN THIS SECTION

- 0-1 *Define a Challenge***
- 0-2 *Create a Project Plan***
- 0-3 *Create a Project Plan***



0-2 Create a Project Plan

Sketch out the End Goal(s)

What will I work to produce?

END GOAL(S)



Establish Constraints

What constraints will I need to manage?

CONSTRAINTS



Define Indicators of Success

What measures and indicators will help me know my ideas are successful?

MEASURES



OTHER THINGS TO KEEP IN MIND



Write a Brief

Write up a short "brief" that clarifies the challenge you'd like to address. Write it as if you were handing it to someone else to design with. Capture thoughts on why this is a problem, and what the opportunity for design will be.

BRIEF

A large rectangular area with horizontal dotted lines for writing a brief.

How Might We!

Capture the design challenge you've decided to work on...

CHALLENGE QUESTION

WHAT KIND OF CHALLENGE IS THIS? (CIRCLE ONE)



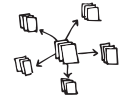
CURRICULUM



SPACES



PROCESSES
AND TOOLS



SYSTEMS



TIP

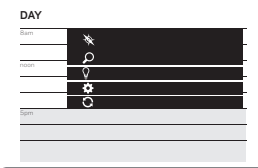
Keep the challenge simple and optimistic. Make it broad enough to allow you to discover areas of unexpected value, and narrow enough to make the topic manageable.



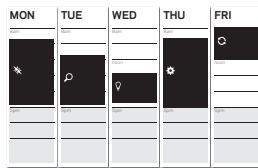
0-3 Create a Project Plan

The Design Thinking process is flexible and can integrate into your school structure and timing. The process can be run in a day, a week, a year, or more. What you put into the challenge determines what you get out of it. The depth of insight, opportunity areas, and level of concept refinement and impact will vary depending on the length of your project. For now, choose the timeline you'd like to begin working with. After getting started on the project, you may find that you'll want to evolve this plan to meet the needs of your design solutions.

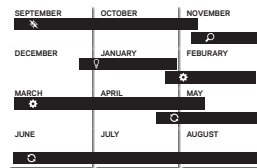
Circle your Design Plan



In a Day



In a Week or Two



Spread out over Months

Sketch your Timeline

Create a timeline for your project. What are major dates you'll be working toward? Do you need a prototype to be ready for use after summer break? Do you want to share learnings at parent-teacher night or pitch your concept to the school board? Consider deadlines, meetings, and interim check-in dates.

Project Checklist

What do you need to get in place to enable you to get started on this project? Do you need to align schedules to conduct a challenge on a professional development day? Do you need to book space or request materials? Who do you want help from?

CHECKLIST

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TO HELP ME WITH PLANNING, I WILL ENGAGE:

Blank space for writing names of people to engage for help with planning.



I WANT TO COMPLETE THE FIRST ITERATION OF THIS PROJECT BY:

Great!

You have now defined a design challenge to create new solutions for, and have sketched a work plan for you and your team.

Now you are ready to move on to the first phase of the design process... Discovery.



1

DISCOVERY

WHAT'S IN THIS SECTION

- 1-1 Understand the Challenge***
- 1-2 Prepare Research***
- 1-3 Gather Inspiration***



1-1 Understand the Challenge

Review the Challenge

What are some things your team identified about the current design challenge? Capture key thoughts, constraints, and barriers from the discussion.

THOUGHTS, CONSTRAINTS, BARRIERS

Dotted lines for writing

Did your group rewrite the challenge after your discussion? If so, capture it here:

HOW MIGHT WE...

Blank space for writing

Share What you Know

What do you believe you already know about this challenge? What would you like to learn more about? Capture your assumptions, and your questions.

I ALREADY KNOW

Dotted lines for writing

I WANT TO KNOW MORE ABOUT

Dotted lines for writing



Build your Team

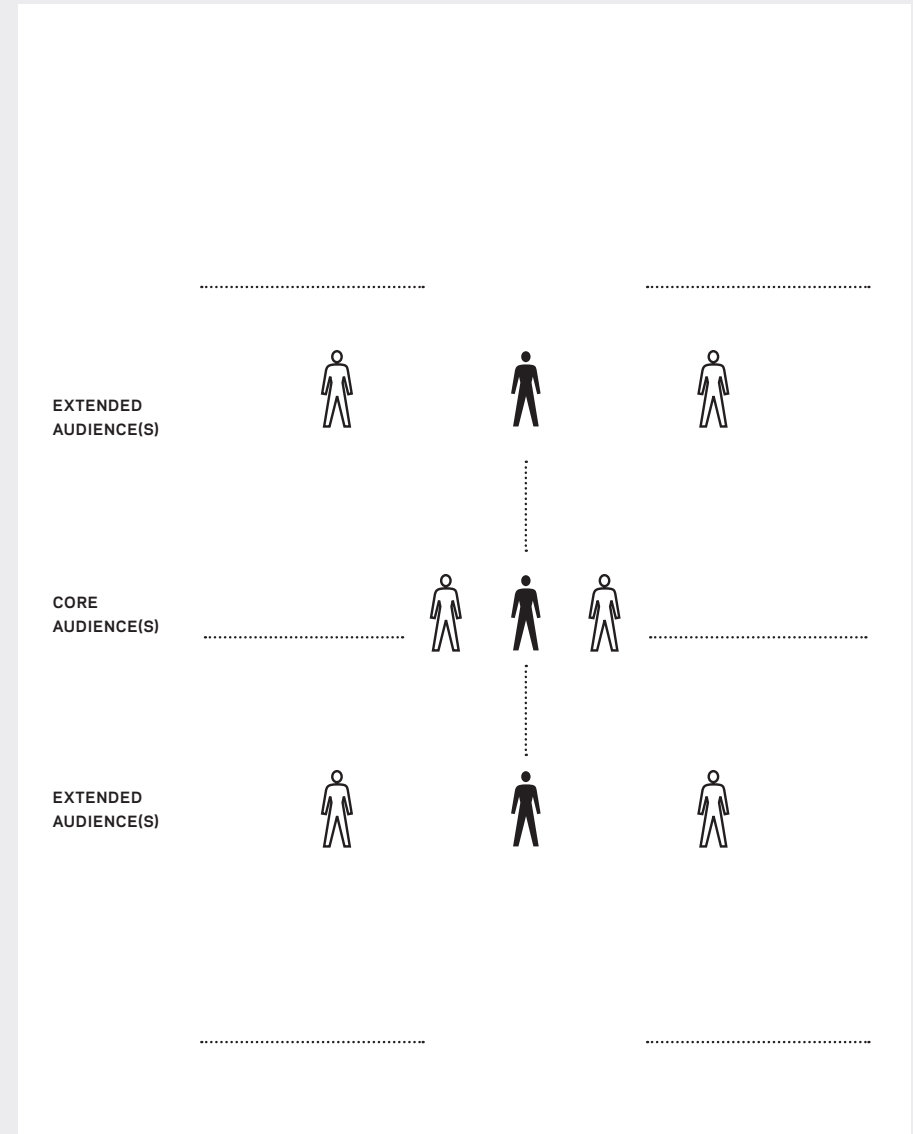
Who is on your team? Who are core members and who are extended members? Through your discussion, what did you determine about the roles that people will play and the unique goals that you each have?

CORE TEAM MEMBER(S)	GOALS AND ROLES
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EXTENDED TEAM MEMBER(S)	GOALS AND ROLES
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Define your Audience

Who will you be designing for? Consider the core audience and extended audience. Draw a visual reminder.





Select Research Participants

Who specifically do you want to talk to and learn from? Create detailed descriptions for at least 3 different users or sources of inspiration. Be sure to cover a variety of gender, experience, ethnicity, etc.

USER TYPE

USER DESCRIPTION

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USER TYPE

USER DESCRIPTION

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1-3 Gather Inspiration

Inspiration Notes

NAME OF PERSON INTERVIEWED/LOCATION VISITED

TIP

Fill this out of this for each interview.



AS YOU ARE INTERVIEWING, capture what you see and hear during a field visit. Capture direct quotes. Separate your observations from your interpretations so that you know what you saw and what you thought it meant for

that person. Look for work-arounds and adaptations people have made to make a system to serve their needs better such as books stacked under a laptop to make the screen a better height for viewing.

OBSERVATIONS AND QUOTES

Area with horizontal dotted lines for writing observations and quotes.

INTERPRETATIONS

Area with horizontal dotted lines for writing interpretations.

Through the Discovery phase, you have gained deeper understanding, empathy, and inspiration for your design challenge.

Through Interpretation, the second phase of the design process, you will now make meaning and define insights from your Discovery observations and interviews.



2

INTERPRETATION

WHAT'S IN THIS SECTION

2-1 Tell Stories

2-2 Search for Meaning

2-3 Frame Opportunities



2-1 Tell Stories

Capture Your Learnings

Immediately after interviewing, be sure to capture your learnings. Capture one observation, story highlight or quote per post-it note. Use the prompts to guide you.

WHO DID YOU MEET? (PROFESSION, AGE, LOCATION, ETC)

What was the most memorable and surprising story?

What was interesting about the way he/she interacted with his/her environment?

What did this participant care about the most?
What motivates him/her?

What frustrated him/her?

What questions would you like to explore in your next conversation?



Share Inspiring Stories

Take turns sharing stories of the people you talked to or the places you visited. While listening to your team, capture their stories and observations on post-it's, using a separate post-it per thought. Capture the most interesting learnings here.

Learnings from my partner/team:

Learnings from my partner/team:

Learnings from my partner/team:

Learnings from my partner/team:

Learnings from my partner/team:

Learnings from my partner/team:



2-2 Search for Meaning

Find Themes

Look for themes, patterns and connections across your wall of post-it notes. Cluster related post-it's around themes that you notice. It's like moving your thoughts around and seeing new patterns as a result. Create headlines for each category that capture these themes and patterns.

HEADLINES

Area with horizontal dotted lines for writing headlines.

Make Sense of Findings

Take a closer look at your themes and find overlaps, patterns and tensions as they relate to each other. Can you group several related themes in larger categories?

WHAT ARE THE LARGER CATEGORIES?

Area with horizontal dotted lines for writing larger categories.

Did you find any contradictions? Did you have any unexpected learnings or find something that felt surprising? Why?

After having discussed with your team, and/or gotten feedback on the categories, what are you excited to dig deeper into?

UNEXPECTED LEARNINGS

Area with horizontal dotted lines for writing unexpected learnings.

I AM EXCITED TO EXPLORE...

Area with horizontal dotted lines for writing what is exciting to explore.



Define Insights

Insights are a concise expression of what you have learned from your research and inspiration. They are the “aha” moments and unexpected learnings.

Sometimes, it can be helpful to write an insight in the form of a Point-of-View (POV) statement which makes an insight specific to a user or user group. A simpler way to create a POV is through the POV equation.

$$\text{user} + \text{need} + \text{interesting learning} = \text{POV}$$

INSIGHT/POV

INSIGHT/POV

INSIGHT/POV

INSIGHT/POV

2-3 Frame Opportunities

Make Insights Actionable

Actionable and successful ideas start with the right question, which identifies important opportunities through great INSIGHTS. Remember, each “How might we” (HMW) question will only address a portion of your challenge so you can create multiple HMW’s and prioritize them for ideation.

TIP
Avoid brainstorm questions that already imply a solution.

Is your question...



BROAD ENOUGH TO SPEAK NEW IDEAS?



NARROW ENOUGH TO FEEL MANAGEABLE?



FOCUSED ON RESPONDING TO YOUR USER-DRIVEN INSIGHT?

HOW MIGHT WE...

A series of horizontal dotted lines for writing.

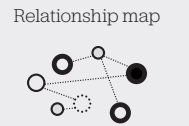
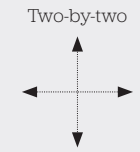
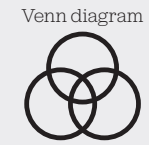


Create a Visual Reminder

Frameworks, diagrams, and illustrations are great tools for communicating insights or complex information.

THINGS TO TRY

Map out the network of connections—people, actions, objects, interactions. Illustrate activity or information flow. Map the actual/figurative journey that people or things take.



SKETCH OR CREATE A VISUAL THAT WILL HELP EXPRESS YOUR INSIGHTS.

Now that you've created a point-of-view and framed opportunities for your design challenge, you are ready to move to the third phase of the design process...Ideation!

Ideation will help you come up with many possible design solutions to address your challenge.



3

IDEATION

WHAT'S IN THIS SECTION

3-1 *Generate Ideas*

3-2 *Refine Ideas*



Facilitate Brainstorming

Create, or use some of the suggested warm-up brainstorm questions from the Facilitate Brainstorming method to get people in the right mood. Which questions will you use?

WARM-UP QUESTIONS

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Which topic will you focus your brainstorm on?

TOPIC

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Which HMW brainstorm questions will you use?

HOW MIGHT WE...

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Feeling stuck?

Here are a few other things to try:

Add constraints

Change the magnitude of the solution space, using size, price, time commitments, and count. Ask yourself, "What if... it was larger than this room? smaller than a peanut? took 5 years to implement? took 1 minute? was available for all? available for only a few?"

Use inspiring brands.

Ask yourself, "How would McDonald's, Nike, Apple, Urban Outfitters, or Disney do it?"

Make it time-specific

Ask yourself, "What if it were made for the morning? night?"

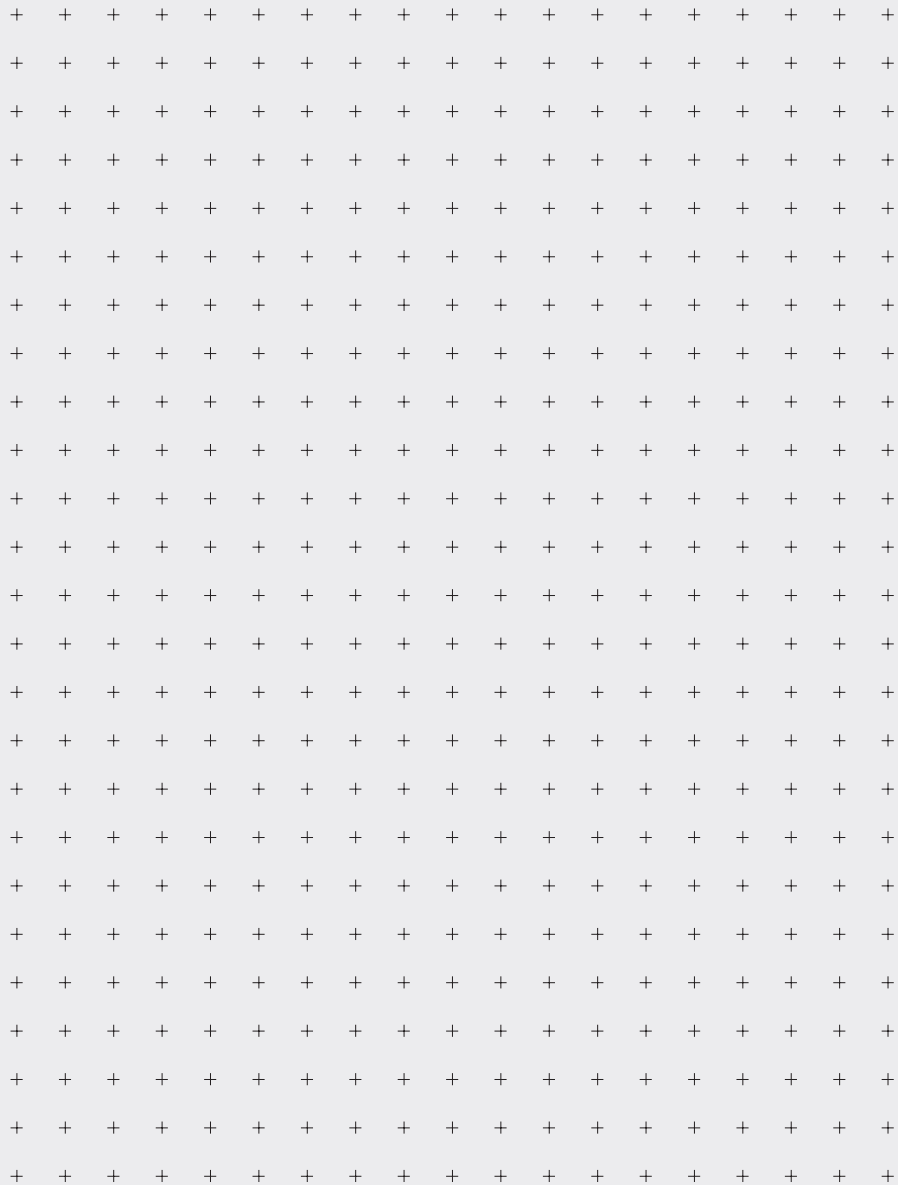
Hone in on a target audience

Ask yourself, "What if it were only for tweens? kids? athletes? parents?"



Sketch to Think

Pick one of the favorite ideas from the brainstorm, and flesh out the concept through a quick sketch or two.



Ask other group members for feedback about their favorite part of your sketch as well as aspects where they see room for improvement. What did they say?

NOTES

Area with horizontal dotted lines for taking notes.



Describe Your Idea

Create a concept description for the idea that you would like to prototype and repeat for each idea.

CONCEPT NAME:

SKETCH

HOW DOES IT WORK?

WHAT NEEDS OR OPPORTUNITIES DOES THE CONCEPT ADDRESS?

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ONE-SENTENCE CONCEPT DESCRIPTION:

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WHO DOES IT INVOLVE, BOTH IN BUILDING AND IN USING IT?

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WHAT DO YOU HOPE TO LEARN MORE ABOUT THROUGH PROTOTYPING THIS IDEA?

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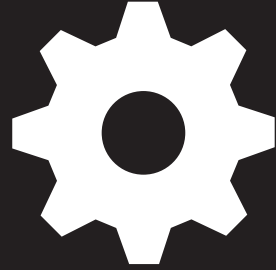
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You have now generated lots of ideas and chosen a few concepts to move forward.

In the fourth phase of the design process—Experimentation—you will prototype in order to bring your concepts to life.



4

EXPERIMENTATION

WHAT'S IN THIS SECTION

4-1 Make Prototypes

4-2 Get Feedback



4-1 Make Prototypes

Take Photos

Since your prototype should be out in the world, take photos of it and place them here.

SOME THINGS TO TRY

CREATE SEPARATE SIMPLER PROTOTYPES

"Works like" (how the back end functions), "acts like" (how the "front-end" interaction works), and/or "looks like" (how it looks).

TRY "EXPERIENCE PROTOTYPES"

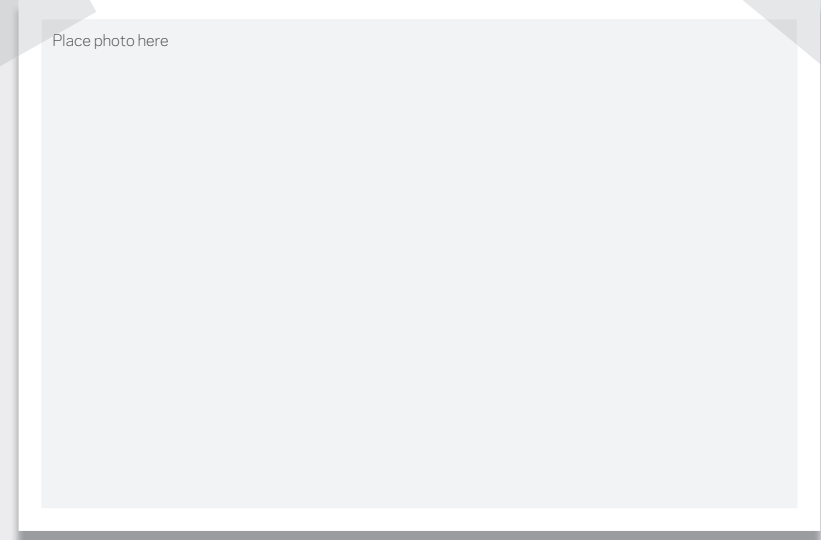
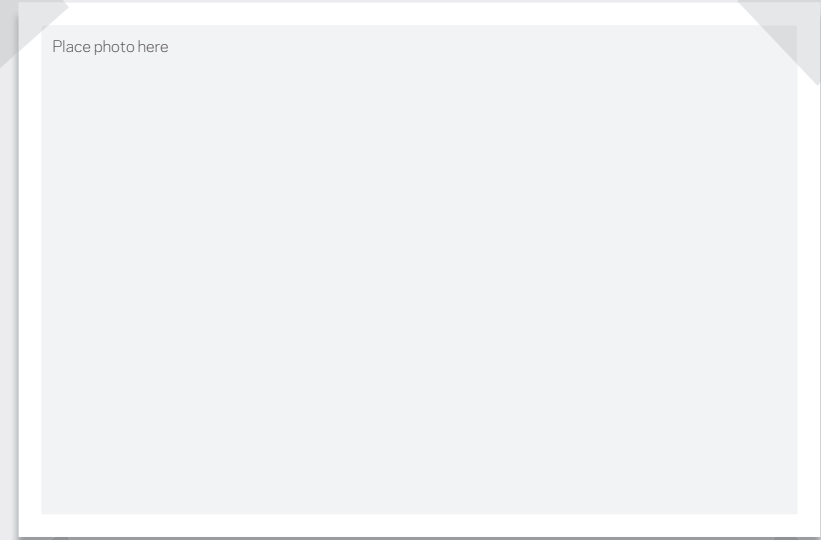
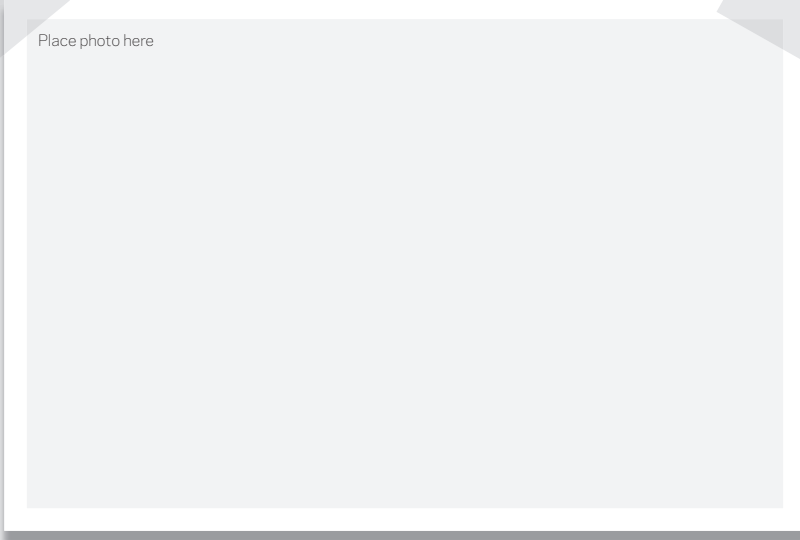
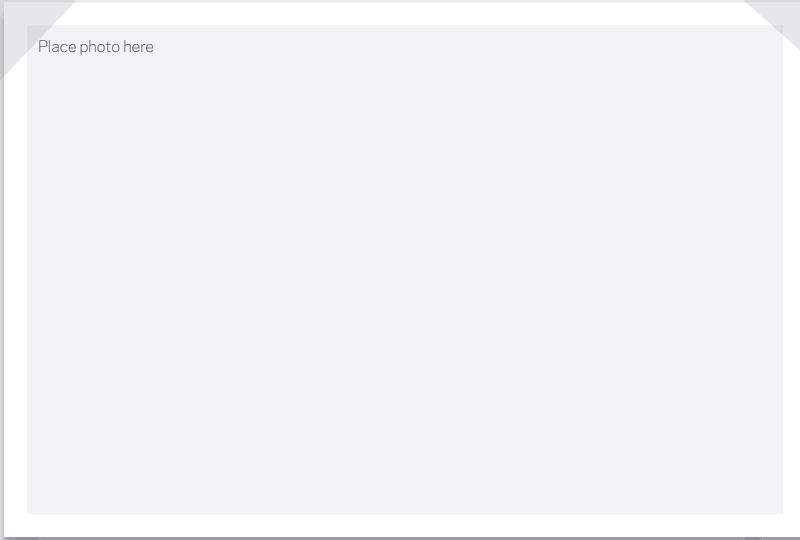
Have people roleplay or bodystorm using props and prompts.

SHRINK BIG THINGS DOWN

Use scale models and mockups.

GO 2D

Use storyboards or diagrams.





Facilitate Feedback Conversations: Capture Prompts

Use these prompts to help people give you constructive feedback, and to help you consider what parts of the experiment you should keep or change.

KEEP

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INCREASE

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DECREASE/STOP

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KEEP

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INCREASE

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DECREASE/STOP

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Integrate Feedback

What was the original intent of your concept? Review the feedback from your testing sessions. Based on the feedback you have received, do your earlier learnings and ideas from your research and ideation phase hold true?

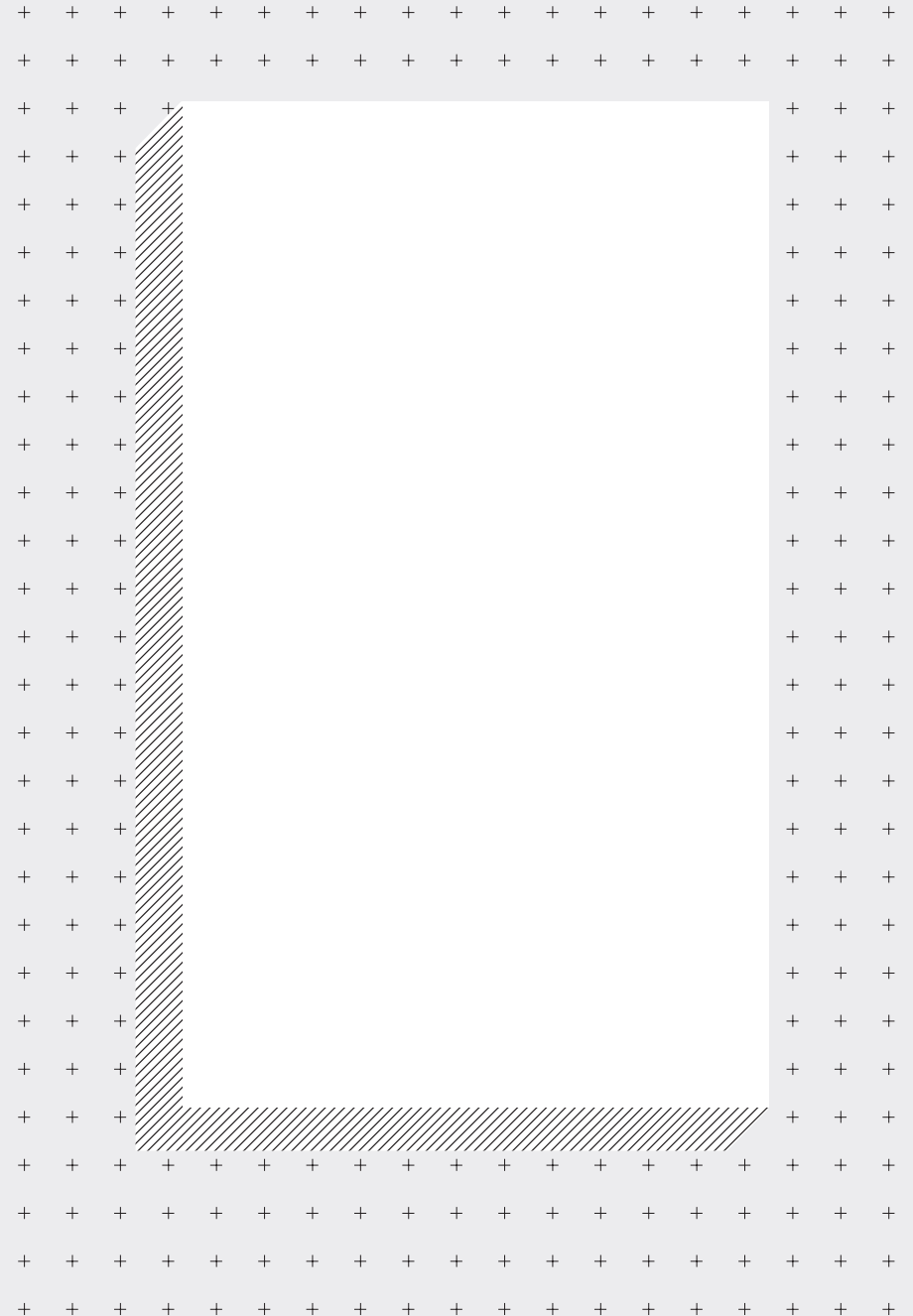
REFLECT

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According to your feedback, what do you think is most important to making your idea a success? How might you improve your prototype? How can you emphasize what was well received about your prototype?

FEATURES TO ITERATE

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Identify What's Needed

List the materials you will need to build your refined concept. Are these supplies available at your school? Will you need to purchase any new assets?

AVAILABLE AT SCHOOL

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NEED TO BUY

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How much do I need to make this concept a reality?

COST

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Who can help you realize your idea? What capabilities are you looking for? Who is invested in supporting the concept? Do you need to find someone to champion the idea?

PEOPLE

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How can I get funding or materials support?

SOURCES

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How long will it take to bring this concept to life in a more refined way?
Do you need time for preparation? Does anyone need to be trained?
Do you want to use an existing meeting time differently?



You now have a prototype out in the world. Congratulations!

Now it's time for the Evolution step of the design process, where you'll collect learnings and consider how you can scale and engage others to further your design solution.



5

EVOLUTION

WHAT'S IN THIS SECTION

5-1 Track Learnings

5-2 Engage Others



5-1 Track Learnings

Define Success

Review the goals you set out in the getting started section of this workbook. Reflect on how your vision maps to where you are today. How has your concept been used? Is the prototype being used by the people you intended it for? What do they appreciate about your concept?

CONCEPT USE

Dotted lines for writing.

What does success mean to you? What do you wish to see happen with this project? Are you hoping that a large number of colleagues attend an event? What would you tell the school's leadership in order to receive more funding? What would you like to hear a student say about your idea?

IMPACT I AM LOOKING FOR...

Dotted lines for writing.

How will you track and measure the success of your design solution? Will you ask people about the concept? Are you waiting for someone to approach you?

METHOD FOR TRACKING

Dotted lines for writing.



Document Progress

Document progress of your concept. What different behaviors have you noticed since implementing your concept? Have the relationships between people changed? What comments have you received from your students or peers?

NOTES

Dotted lines for notes

What do you need to illustrate the "before/after" impact overview of the design solution?
Do you need to gather images? Quotes?

ASSETS I NEED...

Dotted lines for assets needed



Pitch Your Concept (optional)

Who are you pitching to? Create a provocative statement for your idea that will get your audience excited about the opportunities you see. Frame it as "What if...?"

TIP

Use this method when you are trying to gain support from others in order to bring your idea to life.



WHAT IF...

Dotted lines for writing a pitch concept.

Tell a brief and engaging story, focusing on the most important aspects of your concept. What story will you tell? What inspired your idea and how does it respond to the needs you uncovered? Why is this idea valuable to the various people involved?

STORY, INSPIRATION, VALUE

Dotted lines for writing a story, inspiration, and value.

What are you asking for from your audience? Clarify your list of needs.

NEEDS

Dotted lines for listing needs.



Build Partnerships (optional)

Which organizations or individuals have capabilities you are missing in order to realize your idea? What is your relationship with them? How can you reach out to them?

TIP

Use this method when you need the resources or capabilities from others to realize your idea.



WHAT IF...

Dotted lines for writing

NOTES

Dotted lines for writing

What are you asking from them? Consider adapting your pitch to speak directly to this audience. Why would they be interested in helping? How do both parties hope to benefit from a partnership?

BENEFITS

Dotted lines for writing

NOTES

Dotted lines for writing



Share your Story

Outline the presentation you'd like to give to share your story. Consider these prompts...



TIP

Use this method when you want to share your design experience and solution with a broader audience.

What was the initial dream/gripe that kicked off this challenge?

Who was part of the team or contributed to the project?

What partners did you integrate?

What partners did you integrate?

What needs did you learn about?

What needs did you learn about?

What was the most surprising thing you learned while looking for inspiration?



Remember your process

Use photos to illustrate where possible.

What was the most absurd brainstorm idea?

Share a few of your initial concepts or prototypes.
What kind of feedback did you receive on these concepts?

Concept

Feedback

Concept

Feedback

Concept

Feedback



Show us where you've gotten

Use photos to illustrate where possible. Share your concept.

Place photo here

Place photo here

Place photo here

HOW HAS YOUR PROTOTYPE BEEN SUCCESSFUL?

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CAPTURE QUOTES YOU'VE HEARD RELATED TO THE DESIGN AND/OR IMPACT YOU'VE SEEN AROUND THE STUDENTS/SCHOOL/CLASSROOM.

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Build a Community

Advancing your understanding of Design Thinking is best done through repeatedly undergoing the process with new design challenges. Having a network of people you can bounce ideas off is essential to moving your thinking forward. Who will you invite to your design network?

DESIGN MEETING TIMES

How often will you meet? How long will your meetings last? Where will you meet? What dynamic do you want to establish? What will you discuss?

Who you will meet?

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When?

How often?

Now that you've completed one challenge, it's time to start the process over again. Define a new challenge and work your way through the process. Refer to the Design Thinking for Educators Toolkit to bring more depth to your work!

What design challenge will you tackle next?

CHALLENGE QUESTION

WHAT KIND OF CHALLENGE IS THIS? (CIRCLE ONE)



CURRICULUM



SPACES



PROCESSES
AND TOOLS



SYSTEMS



ABOUT THE TOOLKIT:

At IDEO, we've been using similar processes, methods and tools for years in tackling some dauntingly complex challenges. More often than not, we've experienced how Design Thinking helps to get to the next step. That's why we are excited to see how it can impact the world of education. Teachers at Riverdale Country School are starting to use design process to address challenges in their classrooms and schools, and together we've created this toolkit in order to share these processes more broadly.

Riverdale



Riverdale Country School is a Pre-K through Grade 12 independent school in New York City.

www.riverdale.edu

IDEO (pronounced "eye-dee-oh") is an award-winning global design firm that takes a human-centered approach to helping organizations in the public and private sectors innovate and grow.

www.ideo.com

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Designer's Workbook

**Design
Thinking
for
Educators**