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

The Design Thinking Toolkit for Educators 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.

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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

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.

**WHAT’S IN THIS SECTION**

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

Dreams and Gripe Session
Finding opportunities for design often begins by noticing problems. Sometimes it comes out as wishes ("I really wish our school had __") Sometimes it comes out as complaints ("It annoys me that we're not __") Either starting point is fine. You might want to try this with a friend… share your dreams and gripes and ask them to reflect back design opportunities.

DREAMS/THINGS I WISH WOULD EXIST

I wish I could collaborate more with other teachers.

GRIPES/THINGS THAT COULD BE BETTER

Kids are so engaged on the computers but I don't have enough.

THINGS WOULD BE BETTER: NEWER TECHNOLOGY.

Next, flip these statements into possible design challenges. Begin your question with “How might we…” or HMW for short. This turns the problems you see into opportunities for design!

HOW MIGHT WE...

HMW... REDESIGN MY CLASSROOM TO BETTER MEET THE NEEDS OF MY STUDENTS?

HMW... CREATE NEW TOOLS FOR TEACHERS TO COLLABORATE?
0–2 Create a Project Plan

Sketch out the End Goal(s)
What will I work to produce?

END GOAL(S)
☐ PROTOTYPES I WILL TRY AND BUILD
☐ A PILOT PROGRAM
☐ A VISION DOCUMENT THAT I’LL SHARE WITH OTHERS
☐ A “PITCH” PRESENTATION TO ENLIST OTHERS IN THE IDEAS

Define Indicators of Success
What measures and indicators will help me know my ideas are successful?

MEASURES
☐ POSITIVE FEEDBACK I GET FROM STUDENTS
☐ MY PRINCIPAL FUNDS FURTHER DEVELOPMENT
☐ OTHER TEACHERS WANT TO JOIN ME

Establish Constraints
What constraints will I need to manage?

CONSTRAINTS
☐ NEEDS TO FIT WITHIN MY CURRENT SCHOOL BUILDING
☐ BUDGET OF 50 DOLLARS FOR THE YEAR
☐ HAS TO BE READY TO TRY WHEN STUDENTS RETURN FROM BREAK

OTHER THINGS TO KEEP IN MIND

- Other things to keep in mind
How Might We!
Capture the design challenge you've decided to work on...

CHALLENGE QUESTION

HMW... REDesign MY CLASSROOM to better meet the needs of my students?

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.

WHAT KIND OF CHALLENGE IS THIS? (CIRCLE ONE)

CURRICULUM  SPACES  PROCESSES AND TOOLS  SYSTEMS

BRIEF
WITH THE ATTENTION SPANS OF STUDENTS DECREASING, AND INCREASING COMPETITION WITH THE LATEST TECHNOLOGY, A 30 YEAR-OLD CLASSROOM, AND MORE STUDENTS BEING ADDED TO THE CLASSROOM EVERY YEAR, THE INCREASED CHAOS DOESN'T SERVE THE LEARNING EXPERIENCE. CLASSROOM SET-UP STRONGLY INFLUENCES LEARNING BEHAVIORS, THERE IS A BIG OPPORTUNITY TO REDESIGN MY CLASSROOM TO BETTER ADDRESS THE NEEDS AND INTERESTS OF TODAY'S STUDENTS.

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.
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?

<table>
<thead>
<tr>
<th>CHECKLIST</th>
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<tr>
<td>☐ <strong>BOOK ROOM</strong></td>
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<td>☐ <strong>BORROW CAMERA</strong></td>
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**TO HELP ME WITH PLANNING, I WILL ENGAGE:**

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.

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.

I ALREADY KNOW
- STUDENTS DON'T LIKE CHANGE. THEY WOULD PREFER TO KEEP THEIR DESK LOCATION IN THE SAME PLACE THROUGHOUT THE YEAR.
- BEHAVIOR CAN BE SHAPED BY CLASSROOM SET-UP

I WANT TO KNOW MORE ABOUT
- BEST SET-UP FOR INDIVIDUAL STUDY VS. GROUP WORK
- INTERESTING WAYS OTHERS MANAGE SPACE, PEOPLE & RESOURCES
- PRIVACY IN A PUBLIC ENVIRONMENT

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.

THOUGHTS, CONSTRAINTS, BARRIERS
- TOO MANY STUDENTS IN MY CLASSROOM, THERE’S ONLY ONE WAY TO FIT ALL THE DESKS IN THE ROOM
- DON’T WANT TO GET RID OF SUPPLY OVERFLOW BUT I HAVE NO WHERE TO STORE IT

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

HOW MIGHT WE...
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?

<table>
<thead>
<tr>
<th>CORE TEAM MEMBER(S)</th>
<th>GOALS AND ROLES</th>
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<tbody>
<tr>
<td><strong>(ME)</strong></td>
<td><strong>TEAM LEADER, TO LEAD A DESIGN PROCESS THAT HELPS ME BETTER ENGAGE MY STUDENTS.</strong></td>
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<table>
<thead>
<tr>
<th>EXTENDED TEAM MEMBER(S)</th>
<th>GOALS AND ROLES</th>
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Define your Audience
Who will you be designing for? Consider the core audience and extended audience. Draw a visual reminder.

<table>
<thead>
<tr>
<th>CORE AUDIENCE(S)</th>
<th>GOALS AND ROLES</th>
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<td></td>
<td><strong>STUDENTS THAT NEED MORE ATTENTION</strong></td>
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<table>
<thead>
<tr>
<th>EXTENDED AUDIENCE(S)</th>
<th>GOALS AND ROLES</th>
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<td></td>
<td><strong>TEACHERS THAT USE MY ROOM TO COLLABORATE</strong></td>
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<tr>
<th>EXTENDED AUDIENCE(S)</th>
<th>GOALS AND ROLES</th>
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<tr>
<td></td>
<td><strong>PARENTS THAT WANT TO COME HELP IN THE CLASSROOM</strong></td>
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</table>
**1–2 Prepare Research**

**Identify Sources of Inspiration**
Who are all of the people involved in your topic? Who might represent extreme behaviors related to your topic? Which experts do you want to meet with to learn more about your topic? List the candidates that you think will provide the most inspiration and circle 3-5 that you want to engage with first.

**USERS, EXPERTS, EXTREME USERS**

**EXPERTS:** INTERIOR DESIGNERS FOR OFFICES, BEHAVIOR EXPERT, PENG SHUI MASTER, SPACE ORGANIZATION SPECIALIST

**EXTREMES:** HOME SCHOOLED CHILDREN, STUDENTS GOING TO DIFFERENT TYPES OF SCHOOLS, STUDENTS ATTENDING AFTER SCHOOL PROGRAMS

**Identify Places of Inspiration**
Where can you go to have an inspiring experience related to your challenge? What are analogous settings or extreme experiences where you might witness similar or relevant behaviors and activities in a different context? List the as many locations as you can and circle 3-5 that you are most excited to observe first.

**INSPIRING LOCATIONS, ANALOGOUS SETTINGS**

**WORKSPACE ON AN AIRPLANE, IKEA, GOOGLE, PIXAR**

**SPEND TIME WORKING & SITTING IN THE STUDENTS’ CHAIR, IN A CUBICLE, AT A PLAYGROUND**
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
B-17 year-old student whose primary learning space is not in a formal classroom, learning might take place in experiential locations such as an outdoor biology and geology class, in a museum, at an office, or through remote means. Interview to take place in one of these learning locations or at the student's favorite study spot. Would love to see backpack, favorite book, or learning technology.

USER TYPE
USER DESCRIPTION

USER TYPE
USER DESCRIPTION

USER TYPE
USER DESCRIPTION
Build a Question Guide: Interview

What do you want to learn to better understand the challenge at hand? What are you hoping to understand about people’s motivations and frustrations? What do you want to learn about their activities?

START SPECIFIC
What are some specific questions you can ask to open the conversation?

TELL ME A BIT ABOUT WHAT YOU DID IN CLASS TODAY...

GO BROAD
What are some broad questions that can help you start to understand this person’s hopes, fears, and ambitions?

DRAW YOUR LEARNING SPACE FOR ME AND TELL ME WHAT YOU LOVE AND WHAT YOU DON’T

PROBE DEEP
What are some ways you might be able to dig deeper in the conversation, to find even more of the perspective this person has?

TELL ME A STORY ABOUT A TIME WHEN YOU FELT REALLY GOOD IN THIS SPACE. WHAT HAPPENED? WHO WAS THERE? WHY DID YOU FEEL SO GOOD?

INTERVIEWEE NAME

JOHN, AGE 16

TIP
Make a copy of this for each interview.
## Build a Question Guide: Observation

What are you looking to learn in this observation? Capture themes and questions that you want to make sure you get to in the site visit! Fill in one of these worksheets for each observation, so that you can consider what you will ask for each place you are visiting.

### THINGS TO SEE

What are some things you want to make sure you observe while you are visiting this place?

1. **HOW DO PEOPLE INTERACT WITH INFORMATION IN DIFFERENT LOCATIONS?**
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2. **WHERE DO PEOPLE SEEM TO FOCUS BEST OR LIKE TO STUDY?**
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   - ...
   - ...
   - ...
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   - ...
   - ...

### THINGS TO DO

What are some things you can do to gain inspiration in this place?

1. **PRETEND I AM WORKING ON A BIG PAPER AND TRY TO GET COMFORTABLE ENOUGH TO STUDY AND FOCUS. WHAT DO I NEED?**
   - ...
   - ...
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   - ...

**TIP**

Make a copy of this for each observation.
### Prepare For Fieldwork
Assign responsibilities before going into the field. Who is in charge of confirming date, time, and location of the research activities? Who is responsible for making sure you have all the necessary equipment? Who will take the lead in interviewing? In documenting?

<table>
<thead>
<tr>
<th>TEAM MEMBER</th>
<th>ROLE</th>
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<tbody>
<tr>
<td>MEG</td>
<td>INTERVIEWER</td>
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<table>
<thead>
<tr>
<th>LOCATION OR INTERVIEWEE</th>
<th>ADDRESS, DATE AND TIME</th>
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<tbody>
<tr>
<td>JOHN SMITH</td>
<td>123 MAIDEN LANE, JAN 12, 4:30PM</td>
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### CHECK LIST
- QUESTION GUIDE
- PARTICIPANTS CONTACT DETAILS
- TEAM MEMBERS' CONTACT DETAILS
- DIRECTIONS TO LOCATION
- NOTEPADS AND PENS
- CAMERA (CHECK BATTERIES)
- MOBILE PHONES
- THANK YOU GIFTS FOR PARTICIPANTS (IF APPLICABLE)
- POST-IT NOTES, SHARPIE MARKERS
1–3 Gather Inspiration

Inspiration Notes

NAME OF PERSON INTERVIEWED/LOCATION VISITED

JOHN SMITH, HIS BEDROOM AND WORKSPACE

OBSERVATIONS AND QUOTES

- JOHN KEEPS EARPHONES AT HIS DESK
- "I'M VISUAL, SO I USE PINTEREST WHEN I'M WRITING A PAPER."

INTERPRETATIONS

- I THINK MUSIC HELPS JOHN FOCUS WHILE STUDYING
- I THINK JOHN LEARNS BEST THROUGH VISUAL CONTENT AND WANTS MORE OPPORTUNITIES TO SURF THE WEB WHILE HE IS WORKING IN SCHOOL.

TIP
Fill this out 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.
### 1-3 Gather Inspiration

**Inspiration Notes**

<table>
<thead>
<tr>
<th>NAME OF PERSON INTERVIEWED/LOCATION VISITED</th>
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<tbody>
<tr>
<td>STARBUCKS, NEAR THE UNIVERSITY</td>
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</table>

#### OBSERVATIONS AND QUOTES

- The cafe mostly has one person and one laptop per table

#### INTERPRETATIONS

- People like to work in public but still want their own space.

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**TIP**

Fill this out for each observation.

---

**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 workarounds 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.
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.

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)
JOHN, 16, HIS HOUSE

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

What was the most memorable and surprising story?
JOHN FOCUSES BEST AT A COFFEE SHOP, NOT THE LIBRARY BECAUSE SOME STIMULUS KEEPS HIM FROM ZONING OUT.

What did this participant care about the most?

What frustrated him/her?

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

What motivates him/her?
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.
# 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.

<table>
<thead>
<tr>
<th>HEADLINES</th>
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<tbody>
<tr>
<td>- Students feel a lack of privacy necessary for studying when in the classroom</td>
</tr>
<tr>
<td>- Students desire a variety of desk/table work options while still having ownership over personal desks</td>
</tr>
<tr>
<td>- The current classroom doesn't encourage student collaboration as there is no where for them to work together</td>
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</tbody>
</table>

## 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?

<table>
<thead>
<tr>
<th>WHAT ARE THE LARGER CATEGORIES?</th>
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<tbody>
<tr>
<td>- Flexibility</td>
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<tr>
<td>- Students want privacy but also accessibility to help</td>
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</table>

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

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<thead>
<tr>
<th>UNEXPECTED LEARNINGS</th>
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<tbody>
<tr>
<td>- Creative work places change their space configuration often</td>
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<tr>
<td>- Students feel they can study best when away from their normal desks</td>
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</table>

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

<table>
<thead>
<tr>
<th>I AM EXCITED TO EXPLORE...</th>
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<tbody>
<tr>
<td>Creating a study space that's quiet enough for focus but active enough to keep students stimulated</td>
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</table>
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 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**

John needs a balance of privacy and stimulus to study because he focuses best when there is some activity to keep him from getting too bored.

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 HMWs and prioritize them for ideation.

**TIP**
Avoid brainstorm questions that already imply a solution.

**HOW MIGHT WE...**
- How might we make a classroom feel like a home study space?
- How might the classroom customize itself for each individual?
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.

WHAT’S IN THIS SECTION

3–1 Generate Ideas
3–2 Refine Ideas
3-1 Generate Ideas

Prepare for Brainstorming
A successful brainstorm session requires planning. The small details matter. Invite a diverse group of people who can stay open-minded and can build on each other’s ideas. 6-10 is ideal for a brainstorm. Who will you invite?

NAMES

Sufficient wall space is necessary to have room for everyone to get up and see each other’s ideas, and will leave you with room to post plentiful ideas. Where will you conduct the brainstorm and how will you set-up the space to facilitate a brainstorm?

ROOM SET-UP

CHECK LIST

- SELECT A FACILITATOR
- PRESENT YOUR TOPIC
- INTRODUCE THE RULES OF BRAINSTORMING
- EQUIP EVERYONE TO PARTICIPATE
- START WITH A WARM-UP
- MOVE ONE BY ONE
- KEEP THE ENERGY HIGH

SNACKS
(never underestimate the power of sugar in a brainstorm!)

BRAINSTORM RULES
1. DEFER JUDGEMENT
2. ENCOURAGE WILD IDEAS
3. BUILD ON THE IDEAS OF OTHERS
4. STAY FOCUSED ON TOPIC
5. ONE CONVERSATION AT A TIME
6. BE VISUAL
7. GO FOR QUANTITY

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

WARM-UP QUESTIONS
- HOW MIGHT WE FIND A NEEDLE IN A HAYSTACK?
- “NEVER COULD WE EVER.” THINK OF THINGS YOU COULD NEVER DO AT SCHOOL, UNDERWATER, IN A TUXEDO.

Which topic will you focus your brainstorm on?

TOPIC
PERSONAL SPACE CUSTOMIZATION

Which HMW brainstorm questions will you use?

HOW MIGHT WE...
- HMW DESIGN THE CLASSROOM TO CUSTOMIZE ITSELF FOR EACH INDIVIDUAL?

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?”
Select Promising Ideas
After you brainstorm, cluster any related ideas and have the team pick their 3 favorite ideas.
Collect the post-its of the favorite concepts from the brainstorm.
Include the sketches if applicable. Which ideas received the most votes?
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

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3–2 Refine Ideas

**Do a Reality Check**

What is at the core of your idea: what gets you excited about it? What is the most important value for your audience? What is the real need that this is addressing?

Make a list of all the challenges and barriers you are facing with your idea. What are you missing? Who would oppose the idea? What will be most difficult to overcome?

**VALUE, NEEDS**

- Lets students have privacy in public space
- Enables students to collaborate using existing desks
- Lets students keep personalized desks

**CHALLENGES, BARRIERS**

- Not enough help or funding to hack all the desks in my room to work this way

**NEW CONCEPTS**

- If students need privacy, maybe I can rearrange my room to give them a sense of privacy without having to build new desks instead of modifying all the desks, maybe we prototype a larger collaboration table that can stow away in my room when not in use (like a folding table)

Starting from the list you created in step one of this worksheet page, describing the core values of your idea, what are other ways in which you could address the needs differently?
Describe Your Idea
Create a concept description for the idea that you would like to prototype and repeat for each idea.

CONCEPT NAME:
Fold-Up Leaf-Desk

HOW DOES IT WORK?
Add a hinge and desk leaf to each desk top. The leaf will fold up to offer students privacy when they're trying to be heads down, or fold out to give them more workspace when the students want to work as a team. Add casters to the desk so students can easily move the desk around for collaboration. Desk cushions!

WHAT NEEDS OR OPPORTUNITIES DOES THE CONCEPT ADDRESS?
Lets students have flexibility to collaborate in the classroom but also put up their 'desk blinders' when they're trying to focus. Enables students to continue to have personalized desks that allow for flexible workstyles.

ONE-SENTENCE CONCEPT DESCRIPTION:
The Murphy Desk, fold up the leaves for privacy, fold out to create extended desk space for collaboration.

WHO DOES IT INVOLVE, BOTH IN BUILDING AND IN USING IT?
- Help from a woodworker, someone who can sew and/or handy-man volunteer parents
- Classroom students and after-school activities group will benefit

WHAT DO YOU HOPE TO LEARN MORE ABOUT THROUGH PROTOTYPING THIS IDEA?
Test that the idea works on a few desks to get funding for the entire class.
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.

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.
Identify Sources for Feedback
How do you need to test your prototype in order to receive the most relevant feedback? Can you let people experience your prototype without further explanation by leaving it in various places? Do you need to walk people through the experience of your prototypes? What will your testing session look like?

Select Feedback Participants
Who do you want to engage in the feedback process? Who will you learn the most from? Include people you have met during your field research as well as new participants.

I WILL TEST BY...
ASKING STUDENTS TO USE DURING STUDY HALL OR AFTER-SCHOOL WHEN MY CLASS ISN’T AS BUSY

What about your idea do you need to test? What kind of feedback do you need in order to iterate and refine your idea? What is the most important question you want to ask? Are you trying to learn whether people would participate in a new activity you designed? Are you wondering whether people will change behaviors over time because of your concept?

LIST FEEDBACK GOALS
WANT TO KNOW IF THE PRIVACY BLINDERS MAKE THE STUDENTS FEEL MORE LIKE THEY’RE WORKING FROM THE COMFORT OF THEIR HOME WITH PRIVACY.
WANT TO SEE IF THE ADDED SURFACE SPACE ENABLES MORE COLLABORATION.
**Build a Question Guide**

It is likely that as you have made your idea tangible, you have developed questions about how the prototype should work, what people are interested in, how to best engage participation, etc. List any questions that have been bubbling up about your concept. During your feedback session, you’ll want to ask for specific feedback about your idea. What would you like to know more about?

**START SPECIFIC**
What are some specific questions you can ask to open the conversation?

**GO BROAD**
What are some questions that can help you start to understand this person’s hopes, fears, and ambitions?

**PROBE DEEP**
What are some ways you might be able to dig deeper in the conversation, to find even more of the perspective this person has?
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.

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<td>PUTTING 2 DESKS TOGETHER DOESN'T WORK BECAUSE OF THE CRACKS IN THE SURFACE AREA.</td>
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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?

Thought I needed to build new desks but realized that I could offer privacy and flexibility by rearranging the room and adding one new table. I didn’t have to reinvent the wheel.

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
Students still liked personalizing their space. HMW enable space personalization with shared collaborative workspaces?
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?

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?

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<th>AVAILBLE AT SCHOOL</th>
<th>NEED TO BUY</th>
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<td>OLD DOOR THAT I CAN TRANSFORM INTO LARGE WORK SURFACE</td>
<td>CASTERS TO EASILY ROLL THE TABLE OUT OF THE WAY WHEN NOT IN USE</td>
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How much do I need to make this concept a reality? How can I get funding or materials support? 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?

**COST**
20 US DOLLARS

**PEOPLE**
JOHN'S DAD CAN BUILD IT

**SOURCES**
LOCAL HARDWARE STORE DONATION

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.

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

STUDENTS ARE SO EXCITED BY THE COLLABORATION TABLE THAT THEY'VE STARTED "RESERVING" IT FOR USE.

STUDENTS ARE USING THE PRIVACY CORNER TO STUDY, AND HAVE MY HELP NEARBY, RATHER THAN GOING TO THE LIBRARY WHICH USED TO BE THEIR PRIVATE ZONE.

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...

ULTIMATELY, BETTER GRADES.

FEWER EXCUSES FROM STUDENTS ABOUT WHY THEY CAN'T GET MORE OF THEIR WORK DONE WHILE IN CLASS, AND SIMILARLY, FEWER COMPLAINTS FROM PARENTS.

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

NUMBER OF TIMES MY CLASSROOM IS REQUESTED FOR AFTER-SCHOOL ACTIVITIES ASKING STUDENTS ABOUT WHICH CLASSROOM CONFIGURATIONS ARE BEST
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

THE COLLABORATION TABLE HAS RESULTED IN LARGER PROJECTS, PHYSICALLY RESULTING FROM STUDENTS. THIS MEANS THAT EACH STUDENT, LITERALLY HAS PHYSICAL ROOM ON A PROJECT TO INCORPORATE HIS/HER WORK.
MORE STUDENTS ARE CHOOSING TO WORK IN TEAMS VERSUS ALONE ON PROJECTS.
BECAUSE THE PRIVACY CORNER IS NEAR MY DESK, SOME OF THE MORE INTROVERTED STUDENTS HAVE BEEN ASKING MORE QUESTIONS.

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...

QUOTES FROM STUDENTS
PHOTOS OF THE STUDENTS WORKING IN THE DIFFERENT AREA OF THE CLASS
EXAMPLES OF THE BEFORE AND AFTER WORK, AND HOW THE COLLABORATION TABLE HAS ENCOURAGED THAT CHANGE.
5-2 Engage Others

Plan Next Steps
What are all the actions that need to be taken to build your concept? Capture any open questions. Who will be responsible for each task? Who will be responsible for finding answering to any open questions?

ACTIONS, QUESTIONS

HOW CAN WE MAKE THE PRIVACY CORNER MORE "PRIVATE" AND SOUNPROOF AND STILL LET LOUDER STUDENTS COLLABORATE NEARBY

BUILD A STURDIER AND MORE FLEXIBLE COLLABORATION TABLE THAT CAN EASILY BE STORED/FOLDED UP WITHIN THE CLASSROOM.

PERSON RESPONSIBLE FOR FOLLOW-UP

(ME): CONNECT WITH PARENTS TO SEE IF ANYONE HAS ARCHITECTURE OR SOUNPROOFING EXPERIENCE

MR. ARCHER WILL REACH OUT TO HIS FURNITURE MAKING FRIEND.

Create a timeline which includes your deadline for evolving this concept along with any other major meetings or dates.

TIMELINE
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...

THERE WAS A BETTER WAY TO SHARE PHYSICAL AND HUMAN RESOURCES ACROSS THE SCHOOL? WHAT IF WE RESTRUCTURE OUR CLASSROOMS TO SHARE THEM ACROSS GRADES? WHAT IF WE KNOCKED DOWN THE WALLS OF OUR CLASSROOMS TO ENABLE MORE SPACE FLEXIBILITY? WHAT IF WE COULD HAVE PRIVACY CLASSROOMS OR LOUD COLLABORATION SPACES ALL WITHIN AN ARMS REACH OF A TEACHER?

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**

ALL STUDENTS DO NOT STUDY, LEARN, OR WORK ALIKE. AS WE NEED TO BE FLEXIBLE IN OUR TEACHING STYLES, AS DO OUR CLASSROOMS NEED TO BE TO SUPPORT US. STRUCTURAL BARRIERS IMPACT LEARNING AND BEHAVIOR. OFFICE SPACES ARE FLEXING TO NEW WORK STYLES, OUR CLASSROOMS SHOULD BE ABLE TO LEVERAGE THOSE LEARNINGS.

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

**NEEDS**

HELP FROM ARCHITECTS, PARENTS, INTERIOR DESIGNERS, TO RETHINK THE BEST USE OF THE CLASSROOM, OR, HELP US TO START FROM SCRATCH.
**Build Partnerships (optional)**

Which organizations or individuals that 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...

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?

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Share your Story
Outline the presentation you’d like to give to share your story. Consider these prompts...

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

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

What needs did you learn about?

What partners did you integrate?

What partners did you integrate?

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?
Show us where you've gotten
Use photos to illustrate where possible. Share your concept.

HOW HAS YOUR PROTOTYPE BEEN SUCCESSFUL?

CAPTURE QUOTES YOU'VE HEARD RELATED TO THE DESIGN AND/OR IMPACT you've seen around the students/school/classroom.
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?

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?

WHAT KIND OF CHALLENGE IS THIS? (CIRCLE ONE)

- Curriculum
- Spaces
- Processes and Tools
- Systems

CHALLENGE QUESTION
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.

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