Design Thinking Playbook
FOR CHANGE MANAGEMENT IN K12 SCHOOLS

Written and designed by Norman Tran
# Acknowledgements

## Organizations
- Chan Zuckerberg Initiative
- IDEO
- Stanford d.school K12 Lab

## Design Sprint Leadership
- David Clifford
- Ariel Raz
- Susie Wise

## Design Sprint Participants
- Robert Bolt
- Matt Cooley
- Kirsty Gonzales
- Hanan Holloway
- Christy Knott
- Sarah Krummel
- Chelsea Little
- Wendy Little
- Galen McAndrew
- Ilene Mitchell
- Russ Moeller
- Christopher Wall
- Wade Wilgus
- Sunny Zhang

## Student Participants
- Jonathan Ferreira
- Malia Savella
- Lauren Shannon
- Jalen Thornley
- Agathe Vasseur
- Lucas Wieser

## Playbook Leadership
- Norman Tran
- Nicole Cerra
- Melissa Mizel
- Ken Montgomery
Introduction

D.TECH INTERNAL MISSION

“
Our mission is to develop students who believe that the world can be a better place and that they can be the ones to make it happen.

Ken Montgomery, Executive Director
"

D.TECH EXTERNAL MISSION

MODEL HUMAN-CENTERED SYSTEMS

Inspire others to redesign their educational programs to make them more human-centered.

KNOWLEDGE IN ACTION

Teach other educators on how to move from knowledge to action
What is Design Thinking?

**DEFINITION**
In order to execute on that mission, Design Tech High (d.tech) needs to run as an organization that is always focused on serving student’s needs. Instead of being trend-focused, we are focused on students and are always iterating ourselves as an organization to best serve their needs. To do that, we use a process called design thinking.

**WHERE DID DESIGN THINKING COME FROM?**
Popularized by the Institute of Design at Stanford (d.school) and widely used to tackle problems from business to K12 education, Design Thinking is a creative problem solving process that focuses on understanding the needs of others, rapid testing and iterating, and bringing out your inner creative genius!

**WHAT IS DESIGN THINKING USED FOR?**
When people think of design they often think of aesthetics such as flyers, or physical things like a table. But design thinking as a process can have broader impact in solving all kinds of school challenges including programs, spaces, services, and systems. In the Case Studies section you’ll find examples of three Design Sprints we’ve run and how we use the design thinking process to solve challenges at d.tech.

**TOOLS**

**SPACES**

**PROGRAMS**

**SYSTEMS**
What is Design Thinking’s Purpose at d.tech?

**THE ROLE**
At d.tech, teachers are considered learning experience designers which means incorporating the design thinking mindsets into the teaching crafting (i.e. curriculum, space, rituals, assessment etc). In addition, as teachers can play a significant role in school-level design through Design Sprints.

**Expectations**
- Participate in Design Sprints
- (With more experience) Facilitate Design Sprints

**THE “INFINI-DT” LOOP**
The “Infini-DT” loop is a framework used at d.tech to describe the relationship between the dual roles that staff embody: that of a Teacher and that of a Designer. d.tech staff are never just or the other, but are instead constantly moving between the two roles.

**THE ROLE**
While learning the design thinking process, teachers also teach it to students, and model for them the processes, mindsets, and skills needed to become changemakers.

**Expectations**
- Attend d.school trainings
- Participate in PD
- Teach d.lab
- (With more experience) Lead PD
Why Is This Valuable For Teachers?

**FOR TEACHERS AS DESIGNERS**
- More creative confidence
- Better project management processes
- Stronger collaborative culture
- Strategic decision-making

**FOR BOTH**
- Increased responsiveness to teacher and student needs
- Prioritizing and evolving effective teaching and learning

**FOR STUDENTS**
- Greater student engagement
- Increased school satisfaction
- New ways to connect with students
- More school advocates and loyalists

**VALUE OF DESIGN THINKING**
Beyond uncovering solutions to the challenges you face on a day-to-day basis, practicing design thinking will also help d.tech develop a new way of working. Design thinking starts by engaging users, be it students or other staff, but from there it ripples through the school and provides numerous benefits for both Teachers as Designers and for students.
What is the Playbook?

THE PLAYBOOK IS NOT
- A guide for teaching design thinking in d.Lab
- A be-all-end-all guide to design thinking
- A silver bullet for instantly becoming a design thinker

INSTEAD, THE PLAYBOOK IS...
- A preview of what design thinking is practiced by d.tech staff as a process for improving the school
- A collection of tested methods, mindsets, and practices that work specifically at d.tech
- A support in your learning journey (especially because we don’t expect you to be experts right away!)

PLAYBOOK USE CASES

NEW STAFF
Learn the Design Thinking process and how it is used at d.tech.

EXPERIENCED STAFF
Facilitate the Design Thinking process for new staff.

EDUCATION COMMUNITY
Learn and apply d.tech’s best practices in their own schools.
What Happens In a Design Sprint?

**DEFINITION**
Stanford d.school’s K12 Lab developed a 6-week Design Sprint to help schools use the Design Thinking process to get started, get unblocked, and develop new directions for their various change management initiatives. The sprint is simply a series of steps that alternately flare and focus. We’ll start by working with the leadership team to determine a specific challenge to work on. Then we’ll expand our understanding of the space by engaging with users like students and teachers. We’ll then focus by refining our problem statement. After that, we’ll explore many possible solutions to this problem in the ideation phase. We’ll focus again by deciding on one to three solutions to explore in depth. We’ll then prototype and validate the ways those ideas can manifest by getting feedback from our users. Finally, we’ll create a plan for rolling out the solutions at d.tech, usually in the form of tools, professional development for staff, and systems.

<table>
<thead>
<tr>
<th>PRE-WORK</th>
<th>DESIGN THINKING PROCESS</th>
<th>POST-WORK</th>
</tr>
</thead>
<tbody>
<tr>
<td>WEEKS -2,-1</td>
<td>EXPLORE: WEEKS 1, 2</td>
<td>CREATE: WEEKS 3, 4</td>
</tr>
<tr>
<td>Topic Selection</td>
<td>Notice</td>
<td>Empathy</td>
</tr>
</tbody>
</table>

**FLARE** | **FOCUS** | **FLARE** | **FOCUS**
Expectation vs. Reality

STRAIGHTFORWARD VS. MESSY

Although the previous graphic showed the Design Thinking process as linear, it is in practice very cyclical, iterative, and messy - and that’s okay! The reason why it’s non-linear is because throughout the process, we are constantly crafting clarity by testing assumptions and “squeezing” out risk (imagine squeezing dry a soaked towel). Sometimes an overturned assumption will require us to revisit Empathy to learn more, or a mis-scopeed challenge might need to be narrowed down, or opened up further. This is all to be expected!

EXPECTATIONS
- Linear
- Predictable
- Simple

REALITY
- Cyclical
- Ambiguous
- Complex
# Mindsets

## Definition
When practicing Design Thinking, it is very much like learning how to ride a bike. You can read about biking but until you sit on the bike, fall, and get back up again, you won’t develop the muscle memory. Likewise, until you practice the methods, you won’t experience the difference between “just” following the script vs. embodying the hard-to-observe yet critical mindsets required for successfully developing a practice of design thinking. Below are the mindsets that we habitually practice, and they will be referenced extensively throughout the playbook to explicitly call out which ones you’ll use for each method. Note: These mindsets are not mutually exclusive, and many overlap!

<table>
<thead>
<tr>
<th>Mindset</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Focus on Human Values</strong></td>
<td>Identify real user pain points and ground solutions in their needs; no pet ideas!</td>
</tr>
<tr>
<td><strong>Radical Collaboration</strong></td>
<td>Breakthrough insights come from diverse backgrounds and viewpoints!</td>
</tr>
<tr>
<td><strong>Be Visual</strong></td>
<td>Diagram, sketch - always aim to visualize your ideas &amp; concepts to create clarity</td>
</tr>
<tr>
<td><strong>Bias Towards Action</strong></td>
<td>Show don’t tell. Come up with solutions, not problems. Prototype to learn vs pontificating.</td>
</tr>
<tr>
<td><strong>Defer Judgment</strong></td>
<td>Trust is the fertile soil for creativity; imagine first, evaluate after.</td>
</tr>
<tr>
<td><strong>Crafting Clarity</strong></td>
<td>Embrace experimentation. Ambiguity is inherent in the creative process; run experiments to learn</td>
</tr>
</tbody>
</table>
Pre-Design Thinking

**Topic Selection**

<table>
<thead>
<tr>
<th>PRE-WORK</th>
<th>DISCOVER</th>
<th>CREATE</th>
<th>LEARN</th>
<th>POST-WORK</th>
</tr>
</thead>
<tbody>
<tr>
<td>Topic Selection</td>
<td>Notice</td>
<td>Ideate</td>
<td>Test</td>
<td>Solution Rollout</td>
</tr>
<tr>
<td>Empathy</td>
<td>Define</td>
<td>Prototype</td>
<td>Share</td>
<td></td>
</tr>
</tbody>
</table>

**Sprint Topic Brainstorm**

**DEFINITION**
To decide what to work on in the next Sprint, we often gathered d.tech staff during Intersession PD to brainstorm some topics. Unlike the Brainstorm used later in Ideate, this one is focused on topics and not solutions. Therefore the guidelines are differ; specifically the ideas generated are not meant to be wild solutions but more focused on tangible needs the school, teachers, or students have that could benefit from a design sprint.

**TIME:** 10 minutes

**MINDSETS**
- Defer Judgment
- Yes And

**TOPICS FOR DIFFERENT USERS**

**STUDENT**

**TEACHER**

**COMMUNITY**

**TIP:** You don’t have to have ideas for every user group. These are just suggested user groups to get the brainstorming started.
Prioritizing with Dot Votes

DEFINITION
Using the sprint ideas generated from the Sprint Topic Brainstorm, each staff member gets 1-3 dots to vote (to save resources, use a pen to mark a dot on a post-it note to indicate a vote). After all the dots are put on the Post-it’s, reorganize the sprint ideas in descending order. Save the list as a Sprint Backlog for future reference.

TIME: 5 minutes

MINDSETS
- Bias Towards Action
- Radical Collaboration
- Crafting Clarity
Design Thinking

Notice

<table>
<thead>
<tr>
<th>PRE-WORK</th>
<th>DISCOVER</th>
<th>CREATE</th>
<th>LEARN</th>
<th>POST-WORK</th>
</tr>
</thead>
<tbody>
<tr>
<td>Topic Selection</td>
<td>Notice</td>
<td>Empathy</td>
<td>Define</td>
<td>Ideate</td>
</tr>
</tbody>
</table>
Values / Constraints / Gaps

DEFINITION
Before beginning a Sprint, it’s important to acknowledge the Teacher Designers’ beliefs & biases and understand their impact on the Sprint. Start by drawing three large bubbles, and allowing participants to freely add terms as they see fit.

TIME: 15 minutes

MINDSETS
- Crafting Clarity
- Focus on Human Values
- Radical Collaboration

VALUES
- Equity (Emergent)
- Emotion (Emergent)
- Trust
- Fun
- Creativity
- Students
- Students as Individuals
- Whole Kids
- Innovation
- Independence (Staff & Students)
- DIY Mentality
- Contribution to Greater Community

CONSTRAINTS
- Money
- White Staff
- Equity
- Consciousness
- To Build Trust
- Systems
- SEL
- Awareness
- Networks
- Deep Awareness of A.DULT Emotional Intelligence

GAPS
- Reflective Discipline
- Depth of Content
- Holding People’s Story
- Joy
- Academics
- Culture of Care
- Collectivism
- Staff Support from Leadership
- Ownership
Assumption-Storm

DEFINITION
In every Design Sprint, the problem statement may contain words or jargon that need to be defined and unpacked. The assumption-storm is a tool to do that. The goal is to break down loaded words & phrases like “Presentation of Learning” (Sprint 1), “Personalization” (Sprint 2), “Whole Student” (Sprint 3) into their atomic parts that even a 5th grader can understand.

TIME: 15 minutes

MINDSETS
• Crafting Clarity

UNPACKING TERMS
HMW help D.TECH STAFF to UNDERSTAND “the WHOLE KID” and translate that to DESIGN a PERSONALIZED LEARNING EXPERIENCE (PLE’s)?

D.TECH STAFF
LEADING OPP’S
LEARNING OPP’S

UNDERSTAND
EMOTIONAL
PERSONAL
ACADEMIC
FAMILY

WHOLE KID

DESIGN

PLE
FEELS LIKE...
ANALOGUES
DANGERS
THE SYSTEM

TIP: Use giant Post-It’s for unclear terms (i.e. “Design”) and smaller Post-It’s to break down the terms underneath. Sometimes it’s useful to break down the unclear term into sub-categories (i.e. “Whole Student” — Emotional / Personal / Social / Academic), in which case different-colored giant Post-It’s may come in handy as well.

NOTICE | 13
Design Thinking

Empathy

PRE-WORK
- Topic Selection

DISCOVER
- Notice
- Empathy
- Define

CREATE
- Ideate
- Prototype

LEARN
- Test
- Share

POST-WORK
- Solution Rollout
Choosing Your Users

**DEFINITION**
In every Design Sprint, the problem statement may contain words or jargon that need to be defined and unpacked. The assumption-storm is a tool to do that. The goal is to break down loaded words & phrases like “Presentation of Learning” (Sprint 1), “Personalization” (Sprint 2), “Whole Student” (Sprint 3) into their atomic parts that even a 5th grader can understand.

**TIME:** 15 minutes

**MINDSETS**
- Crafting Clarity

---

**LEARNING FROM EXTREMES**

- **HAS NEVER DONE IT**
- **DOES IT REGULARLY**
- **DOES IT AS A PROFESSIONAL**

**EXTREMES**

- **TRADITIONAL TEACHER**
- **D.SCHOOL FACULTY**

---

**NOTE:** Instead of looking at the “average” user, extreme users provide novel insights to your problem space. Ways to identify extremes:

- **Demographics:** age, gender, ethnicity
- **Behaviors:** experts vs. newbies
- **Motivations:** what drives a user to do something
Analogous Research

**DEFINITION**
Most of the design challenges we work on won't be unique problems, meaning others (especially in other domains and fields) are likely to have thought about it, and even have solved it for their context. It is useful to think about what existing solutions / frameworks exist already in other domains that we can learn from. Creativity comes from cross-pollinating ideas from different contexts!

**TIME:** Recommended to be done independently on own time

**MINDSETS**
- Radical Collaboration

**INSPIRATIONS FROM DIFFERENT DISCIPLINES**

**QUESTIONS TO ASK YOURSELF:**
- Who else is already doing this in our space, and what can we learn from them?
- After doing an Assumption-Storm, what analogous fields / domains have related concepts / processes / tools that we can learn from?
Interviewing

DEFINITION
How do we know if we’re actually solving users’ needs? We talk to them! Interviewing is one of the most effective methods of Empathy. To effectively conduct interviews, we need to avoid Leading Questions, and we need to ask questions that move from Open-Ended to Specific to get the data we need. It is good to have a hunch of what your user(s) will say, but the goal of the interview is NOT to confirm our biases but to surprise us and enlighten us.

TIME: 30 minutes - 1 hour

MINDSETS
- Focus on Human Values

TIP: Remember to SCHEDULE interviews with the individuals chosen from Choosing Your Users. Reach out to those individuals (i.e. email), get a confirmation time, mark it in your calendar, and send a Google Calendar invite.

THE INTERVIEW LIFECYCLE

- Intent + Introductions
  - Tell me about your background in...

- Tell me about the last time you...

- Can you tell me more...
  - Can you show me how you...

- 5 Why’s: Why do you...
  - Thank You’s

TIPS FOR SUCCESS
- Allow for Pregnant Pauses: don’t fill silences; give them time to answer
- Stay Unbiased: don’t correct, judge, refute, or challenge
- No Leading Questions: don’t ask “what problems do you have”; instead ask open-ended questions and allow them to tell you
- No Hypotheticals: don’t ask “would you use this” because in politeness the interviewee often gives a shallow yes
- Pair Interview: interview with another Sprint member to avoid the distraction of multi-tasking
Shadowing

**DEFINITION**

After conducting interviews, shadowing, and research, it is then time to synthesize your findings. The Empathy Map is a tool to take the sometimes vast and complex insights from your Empathy work and boil it down to digestible categories, which you will use to inform the Define stage after.

**TIME:** 15 minutes per interviewee; 1 hour for entire session

**MINDSETS**

- Focus on Human Values
- Radical Collaboration

**TIP:** The logistics are often forgotten amidst the day-to-day responsibilities so remember to SCHEDULE shadowing with the individuals chosen in the previous step of Choosing Your Users. Reach out to those who may be affected by the shadowing ahead of time (i.e. a teacher whose class you need to sit in on).

**WHAT TO NOTE**

- **WHAT:** What are they doing? What sparks your curiosity
- **HOW:** How are they doing it? Are there any behaviors or objects involved?
- **WHY:** Why are they doing it?

**TIP:** Approach shadowing with an open and curious mind. Stay away from generalizations, judgment, evaluation, assumptions, and prescriptions (should/would/could).

**TIP:** When possible, it’s best to conduct shadowing without the observee noticing to avoid the Hawthorne Effect (where observees change behavior while being observed). If observing a student, sit in an area where he/she is in view without making it obvious that you are shadowing that particular student.
Note Taking

DEFINITION
In addition to asking questions, interviewing or Shadowing also has a note-taking component. We generally recommend writing down whatever piques your curiosity rather than trying to transcribe word-for-word, but that free-form process may be intimidating. We've included some structure to reduce that ambiguity and hope over time you internalize what to look out for during interviewing / shadowing.

TIME: 30 minutes - 1 hour (depends on interview / shadow duration)

MINDSETS
- Focus on Human Values
- Radical Collaboration

WHAT TO CAPTURE NOTES ON

- Interesting Quotes
- Problems
- Opportunities
- Interpretations
- Ideas
- Insights

TIP: Always store your notes where you will remember. The next step requires all interviewers and shadowers to share their notes so don’t lose them!
Empathy Map

**DEFINITION**
After conducting interviews, shadowing, and research, it is then time to synthesize your findings. The Empathy Map is a tool to take the sometimes vast and complex insights from your Empathy work and boil it down to digestible categories, which you will use to inform the Define stage after.

**TIME:** 15 minutes per interviewee; 1 hour for entire session

**MINDSETS**
- Focus on Human Values
- Radical Collaboration

**TIP:** The facilitator’s role is to 1) capture what the participants are sharing in Post-It notes; and 2) organizing those Post-It notes into the respective Empathy Map categories.

**NOTE**
- **Questions:** are whatever sprint participants have on their mind while completing the Empathy Map
- **Tensions:** are a way to note competing needs. We rotate Post-It notes 45 degrees for a diamond shape to differentiate it from normal Post-Its. An example would be Student Needs vs. Teacher Needs or For All vs. For Some
Design Thinking

Define

<table>
<thead>
<tr>
<th>PRE-WORK</th>
<th>DISCOVER</th>
<th>CREATE</th>
<th>LEARN</th>
<th>POST-WORK</th>
</tr>
</thead>
<tbody>
<tr>
<td>Topic Selection</td>
<td>Notice</td>
<td>Define</td>
<td>Ideate</td>
<td>Test</td>
</tr>
<tr>
<td></td>
<td>Empathy</td>
<td></td>
<td>Prototype</td>
<td></td>
</tr>
</tbody>
</table>
“How Might We” Question

**DEFINITION**
In every Sprint, properly scoping the challenge will ensure the creation of 1+ solutions that will solve the users’ identified problems. Questions are worded as “How Might We” because it encourages imagination, exploration and is ultimately solutions-oriented. The goal is to create a HMW question that feels exciting to work on as Teacher Designers, and that feels doable within a 6-8 week time frame.

**TIME:** Varies (10 minutes; but revisit as necessary)

**MINDSETS**
- Bias Towards Action

**PROPER SCOPING: THE QUESTION PYRAMID**

- **TOO NARROW**
  - HMW create software to track students’ learning needs so that teachers can personalize learning?
- **JUST RIGHT**
  - HMW engage and support new teachers in developing a practice of personalized learning?
- **TOO BROAD**
  - HMW personalize learning?

**GUIDELINES FOR A GOOD PROBLEM STATEMENT**
- Focuses on a user group at a tech school
- Addresses a real problem
- Not a solution in question form
- Invites multiple solutions
- Doable in 6 week Timeline
- Feels inspiring to work on

**TIP:** Don’t be afraid to create multiple HMW questions, even if they only differ by a word or two. It’s important to create a question that gets the team excited to work on, so keep permuting until you find the right question.
Frameworks

**DEFINITION**
In order to communicate the insights gleaned from the Empathy phase, it is often useful to use visual diagrams like 2x2 graphs, relationship maps, and venn diagrams.

**TIME:** 15 minutes

**MINDSETS**
- Crafting Clarity
- Make It Visual

**VENN DIAGRAM**
Venn Diagrams are a simple way to express relationships, and is suitable for communicating both differences and commonalities.

**RELATIONSHIP MAP**
Relationship Maps are great for visualizing stakeholders or the flow in a process in connection to a larger system.

**2x2 CHART**
2x2 Charts help break down information into discrete properties and can point out tensions between categories.
Design Thinking

Ideate

PRE-WORK: Topic Selection
DISCOVER: Notice, Empathy, Define
CREATE: Ideate, Prototype
LEARN: Test, Share
POST-WORK: Solution Rollout
Brainstorming

**DEFINITION**

Brainstorming is a way of generating lots of ideas to be prototyped. We encourage you to think expansively without constraints. With careful preparation and a clear set of mindsets and guidelines, one brainstorm session can produce many ripe ideas.

**TIME:** 15 minutes

**MINDSETS**

- Defer Judgment
- Make It Visual
- Radical Collaboration
- Yes And

---

**ENCOURAGING A WIDE RANGE OF IDEAS**

- **IN FRONT OF US**
- **BEYOND THE TREES**
- **OVER THE MOUNTAINS**

**TIP:** Go for low-hanging fruit ideas to get started. Then try to imagine if you had less constraints. Finally, go for moonshot ideas - even wild, absurd ones!

---

**GUIDELINES FOR GREAT BRAINSTORMING**

- Defer Judgment
- Encourage Wild Ideas
- One Conversation At A Time
- Be Visual
- Build On Others' Ideas
- Go for Quantity
- Stay Focused On Topic

**TIP:** After collecting multiple feedback forms, remember to set up time to synthesize the themes and to qualify the feedback because not all feedback is actionable!
Prioritizing Ideas

**DEFINITION**
After brainstorming ideas, it’s important to decide which ones to prototype. This may be difficult if there are a lot of good ideas to choose from. There are two primary methods we have found helpful: Ease vs. Impact is more formal whereas Pick Your Fancy is more loose.

**METHOD ONE: EASE VS. IMPACT**

**INSTRUCTIONS:** Draw a graph using 2 axes: Technical Complexity and User Value. Now organize your Brainstorm Post-It’s by mapping them on this graph. It will become clear which ideas are low-hanging fruit, and which ones are harder to implement but still valuable.

**METHOD TWO: CHOOSE YOUR FANCY**

**INSTRUCTIONS:** Choose the ideas that you are most excited about. Ask yourself “what do I want to prototype right NOW?”

**TIME:** 5 minutes

**MINDSETS**
- Bias Towards Action

**TIP:** Assign each Sprint member a prototype to work on and agree as a team when these prototypes need to be completed by. This ensures a Bias Towards Action, accountability, and sprint progress.
Design Thinking

Prototype

PRE-WORK

Topic Selection

DISCOVER

Notice

Empathy

Define

CREATE

Ideate

Prototype

LEARN

Test

Share

POST-WORK

Solution Rollout
How to Prototype

**DEFINITION**
To bring your ideas to life, d.tech Design Sprint leaders have discovered several common prototypes that have arisen from the past 3 sprints. The goal is to maximize your rate of learning by starting with low-fidelity artifacts or experiences that can elicit user feedback quickly, then slowly move on to higher fidelity prototypes to refine the solution. The design thinking process is not always linear, so don’t be afraid to revisit previous steps to get more understanding of the user and your constraints!

**TIME:** 30 minutes - 1 hour (depends on prototype)

**MINDSETS**
- Show Don’t Tell
- Bias Towards Action
- Embrace Experimentation
- Crafting Clarity

**COMMON PROTOTYPES**
- Sketch
- Meeting
- Tool
- Activity
- Plan
- Google Form
- Fake Ad

**FIDELITY AND LEARNING**

**TIP:** Don’t get discouraged if your prototype does not get adoption. Remember the design process is not about coming up with “your” brilliant ideas but for solving users’ real needs. This is not a reflection of you as a Teacher Designer, so keep learning!
Testing Card

DEFINITION
In order to be intentional about our prototypes, it is important to note the hypotheses we have (assumptions we are making), the questions we are trying to answer, and the pass/fail condition(s) for the prototype. By having these three things in mind, prototypes can be an excellent way to learn. To use the card, fill one out per prototype by simply following the prompts.

TIME: 10 minutes

MINDSETS
- Bias Towards Action
- Embrace Experimentation
- Crafting Clarity

Test Card

<table>
<thead>
<tr>
<th>Test Name</th>
<th>Deadline</th>
</tr>
</thead>
<tbody>
<tr>
<td>Assigned to</td>
<td>Duration</td>
</tr>
</tbody>
</table>

STEP 1: HYPOTHESIS

We believe that

STEP 2: TEST

To verify that, we will

STEP 3: METRIC

And measure

STEP 4: CRITERIA

We are right if

TIP: Even though this step may feel tedious, it is extremely important because Test Cards will help you track ongoing solutions & interventions later. Without doing so, you will not be able to keep track of progress or know when to close a project.
Design Thinking

Test
Feedback Form

**DEFINITION**
In order to know if our prototypes solve users’ needs, we need to gather feedback. To make that easier for you, we designed a Feedback Form.

**TIME:** 30 minutes - 1 hour (depends on prototype)

**MINDSETS**
- Show Don’t Tell
- Embrace Experimentation
- Crafting Clarity

**TIP:** After collecting multiple feedback forms, remember to set up time to synthesize the themes and to qualify the feedback because not all feedback needs to be acted on!
Learning Card

**DEFINITION**
In order to be intentional about our prototypes, it is important to note the hypotheses we have (assumptions we are making), the questions we are trying to answer, and the pass/fail condition(s) for the prototype. By having these three things in mind, prototypes can be an excellent way to learn. To use the card, fill one out per prototype by simply following the prompts.

**TIME:** 10 minutes

**MINDSETS**
- Bias Towards Action
- Embrace Experimentation
- Crafting Clarity

**TIP:** Remember to create a Learning Card after each prototyping / testing session with users to capture any insights into their behaviors, use cases, and needs.

**STEP 1: HYPOTHESIS**
We believed that

**STEP 2: OBSERVATION**
We observed

**STEP 3: LEARNINGS AND INSIGHTS**
From that we learned that

**STEP 4: DECISIONS AND ACTIONS**
Therefore, we will
Design Thinking

Share

PRE-WORK  DISCOVER  CREATE  LEARN  POST-WORK

Topic Selection  Notice  Empathy  Define  Ideate  Prototype  Test  Share  Solution Rollout
Sharing the Sprint

**DEFINITION**
An important but often-forgotten part of the design thinking process is sharing what the team did/learned. In order for the solutions developed to have any real impact at d.tech, the design process must be communicated to the rest of the staff (and sometimes students).

**TIME:** 15 minutes

**MINDSETS**
- Crafting Clarity

**NOTE:** QA with the audience is usually appreciated, so try to budget minimum of 5 minutes in the Share meeting.

**FRAMEWORK**
- **Wanted to Learn**
- **HMW:** How Might We question
- **What We Did:** prototypes
- **Discovered:** needs, assumptions
- **Going to Do:** prototyping, testing, deployment
- **Mindsets Practiced**
Journey / Story Map

**DEFINITION**
Visual storytelling is a powerful way of sharing the work done in a sprint. Remember the goal is not to be Picasso; rather, the goal is to visualize to the best of your abilities the pivotal moments throughout a sprint. Stick figures are welcome.

**TIME:** 10 - 15 minutes

**MINDSETS**
- Crafting Clarity
Post-Design Thinking

Solution Rollout

<table>
<thead>
<tr>
<th>PRE-WORK</th>
<th>DISCOVER</th>
<th>CREATE</th>
<th>LEARN</th>
<th>POST-WORK</th>
</tr>
</thead>
<tbody>
<tr>
<td>Topic Selection</td>
<td>Notice</td>
<td>Empathy</td>
<td>Define</td>
<td>Test</td>
</tr>
<tr>
<td></td>
<td>Ideate</td>
<td>Prototype</td>
<td></td>
<td>Share</td>
</tr>
</tbody>
</table>
**Roadmap Co-Creation**

**DEFINITION**
Once all the Sprint work is done, it's then time to create a timeline for rolling out the solutions. This is best done by scheduling with all staff present, so that dates and needs can be determined together.

**TIME:** 30 minutes

**MINDSETS**
- Bias Towards Action
- Radical Collaboration
- Crafting Clarity

**STEPS**
1. **Discuss Steps:** Discuss with Design Sprint team what are all the Steps needed to implement the prototypes at d.tech
2. **Distribute Materials:** Write those Steps in Giant Post-It's and at the start of the staff meeting, distribute the Post-It's to different staff in the room
3. **Create Milestones:** Have the staff discuss how to sequence the steps in accordance with milestone dates (determined by Design Sprint team)
4. **Identify Needs:** Have all participants share their Needs in order to execute / implement those Steps (i.e. what resources, tools, and skills would they need). Use different colored Post-It's for Resources, Skills, and Tools.
5. **Documentation:** Take a picture of the Roadmap and digitize it.