Design Thinking for Educators

Version One | April 2011

Are You Looking To...?

Use your classroom space in different ways?

Support healthy habits inside and outside your school?

Connect more effectively with parents?

Find new ways to teach old content?

Recruit the best teachers to your school?

Develop better systems of feedback between teachers?

Re-envision arrival and departure procedures at your school?

Then you're in the right place.

This is a Toolkit. For You.

This toolkit can help you create solutions for everyday challenges.

It equips you with the process and methods of design. Businesses, social entrepreneurs and other innovators have used them for decades to create solutions for many different types of challenges. In this toolkit, these methods are adapted specifically for educators, because as an educator, you design every day. You design your classroom, you design curriculum, you design learning environments for your students, and you design experiences and interactions for your colleagues.

This toolkit offers you new ways to be intentional and collaborative when you are designing. It hones your skills and empowers you to create desirable solutions.

This is an invitation to experiment with the design process. Let it inspire you to approach challenges differently and experience how Design Thinking adds a new perspective to your work.

Having a process that brings people together to create more and better ideas has been very valuable for us.

Karen,
Learning Specialist

In some ways, I have always had elements of Design Thinking in the way that I have worked and thought about schools, but I have had no real process to validate some of my ideas. I was looking for approaches that combined the logical rigor of study in a traditional discipline with a more open and creative approach to thinking. Design Thinking offers a way of problem solving that is more integrative of different modes of thought. It validates some of the things that teachers already do, but also gives the opportunity to revisit one's practice.

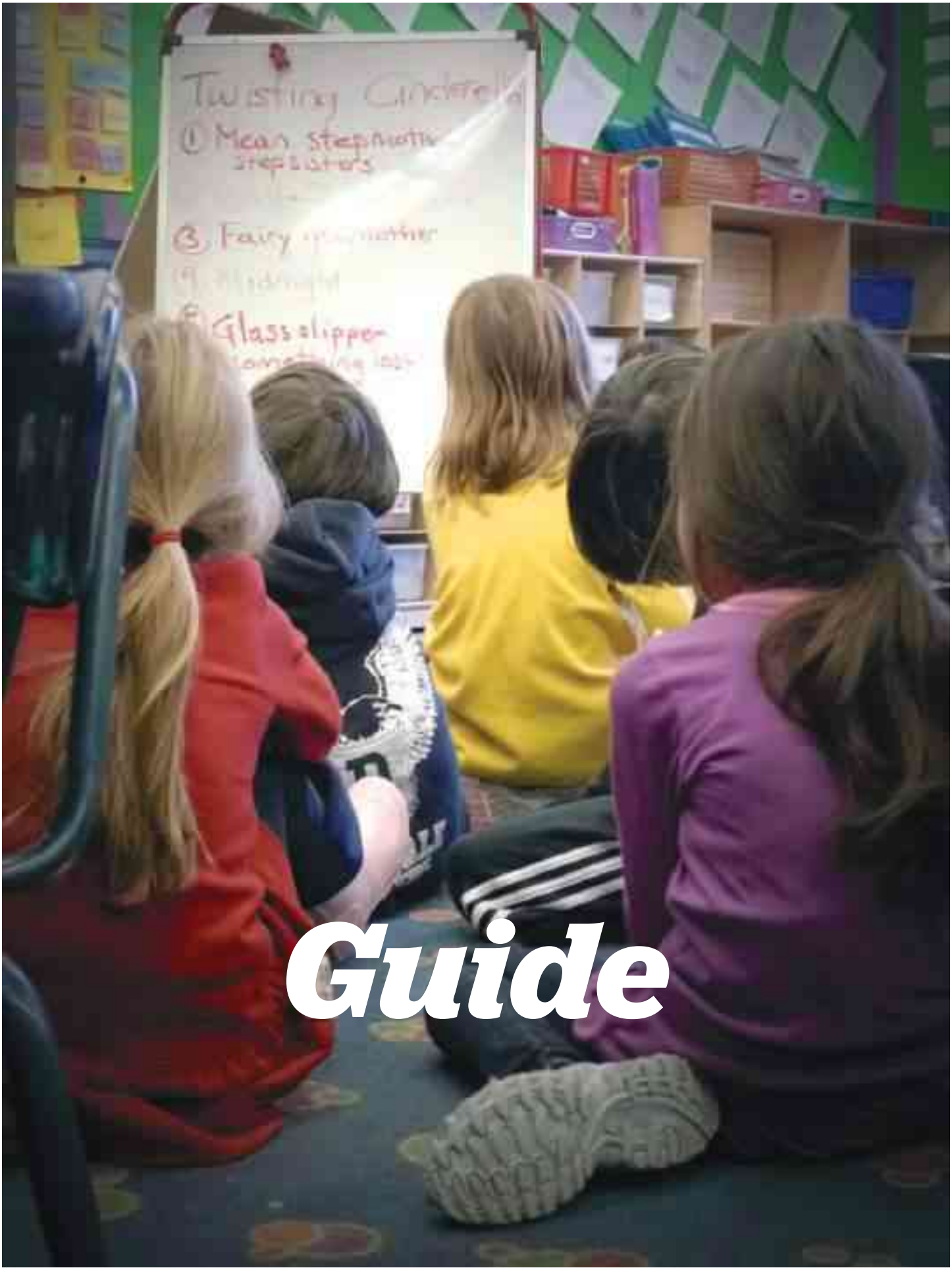
Dominic,
Head of School

Design Thinking has made me look at our curriculum in a whole new way. Incorporating Design Thinking with Grant Wiggins' Understanding by Design, I can research deeper, come up with more ideas and prototype lessons. I have also started to collect feedback as inspiration to come up with new lessons or to adapt a lesson plan for the next time.

Michael,
2nd Grade Teacher

I used to be quick to impose restrictions on myself. I could easily convince myself why a project wouldn't work before ever giving it a chance. Since I have been exposed to Design Thinking, I have made a stronger effort to explore ideas. My students have become part of my research team. The feedback they provide has helped me create lessons that are more student-centered.

Patrick,
3rd Grade Teacher


Twisting Cinderella
1 Mean stepmother
stepsisters
3 Fairy
Glass slipper

Guide

Contents
Guide

What is Design Thinking?

Design Thinking is a mindset.

Thinking like a designer can transform the way you approach the world when imagining and creating new solutions for the future: it's about being aware of the world around you, believing that you play a role in shaping that world, and taking action toward a more desirable future. Design Thinking gives you faith in your creative abilities and a process to take action through when faced with a difficult challenge.

It's Human-Centered. Design Thinking begins by understanding the needs and motivations of people—in this case, the students, teachers, parents, staff and administrators who make up your everyday world. You talk with these people, you listen to them, you consider how best to help them do good work. Design Thinking begins from this place of deep empathy and builds on the power of these empathetic questions and insights.

It's Collaborative. Design Thinking requires conversation, critique and all-out teamwork. And that's something that might be a bit of a shift, because despite the fact that educators are surrounded by people all day long, teaching remains an often solitary profession. Still, addressing complex (or even not-so-complex) challenges benefits significantly from the views of multiple perspectives, and others' creativity bolstering your own.

It's Experimental. Design Thinking creates a real space to try something new. It gives you permission to fail and to learn from your mistakes, because you come up with new ideas, get feedback on them, *then* iterate. Given the range of needs your students have, your work will never be finished or "solved." It is always in progress. Yet there is an underlying expectation that educators must strive for perfection, that they may not make mistakes, that they should always be flawless role models. This kind of expectation makes it hard to take risks. It limits the possibilities to create more radical change. But educators need to experiment, too, and Design Thinking is all about learning by doing.

It's Optimistic. Design Thinking is the fundamental belief that we all can create change—no matter how big a problem, how little time or how small a budget. No matter what constraints exist around you, designing can be an enjoyable process.

In short, Design Thinking is the confidence that new, better things are possible and that you can make them happen. And that kind of optimism is well-needed in education.

Classrooms and schools across the world are facing design challenges every single day, from integrating technology to increasing parent involvement to improving daily schedules. Wherever they fall on the spectrum of scale, the challenges educators are confronted with are real, complex and varied. As such, they require new perspectives, new tools, and new approaches. Design Thinking is one of them.

The Design Process

The design process is what puts Design Thinking into action. It's a structured approach to generating and evolving ideas. Its five phases help navigate the development from identifying a design challenge to finding and building a solution.

It's a deeply human approach that relies on your ability to be intuitive, to interpret what you observe and to develop ideas that are emotionally meaningful to those you are designing for—all skills you are well versed in as an educator.

PHASES

DISCOVERY

I have a challenge.
How do I approach it?

Discovery builds a solid foundation for your ideas. Creating meaningful solutions for students, parents, teachers, colleagues and administrators begins with a deep understanding for their needs. Discovery means opening up to new opportunities, and getting inspired to create new ideas. With the right preparation, this can be eye-opening and will give you a good understanding of your design challenge.

INTERPRETATION

I learned something.
How do I interpret it?

Interpretation transforms your stories into meaningful insights. Observations, field visits, or just a simple conversation can be great inspiration—but finding meaning in that and turning it into actionable opportunities for design is not an easy task. It involves storytelling, as well as sorting and condensing thoughts until you've found a compelling point of view and clear direction for ideation.

IDEATION

I see an opportunity.
What do I create?

Ideation means generating lots of ideas. Brainstorming encourages you to think expansively and without constraints. It's often the wildest ideas that spark visionary thoughts. With careful preparation and a clear set of rules, a brainstorm session can yield hundreds of fresh ideas.

EXPERIMENTATION

I have an idea.
How do I build it?

Experimentation brings your ideas to life. Building prototypes means making ideas tangible, learning while building them, and sharing them with other people. Even with early and rough prototypes, you can receive a direct response and learn how to further improve and refine an idea.

EVOLUTION

I tried something new.
How do I evolve it?

Evolution is the development of your concept over time. It involves planning next steps, communicating the idea to people who can help you realize it, and documenting the process. Change often happens over time, and reminders of even subtle signs of progress are important.

One Thing to Keep in Mind

The more abstract steps often feel more intense, but pay off in the long run.

The design process may seem very straightforward at first glance, but there is one important aspect to understand: its real value lies in the mix of tangible problem solving and abstract thinking. The very concrete observations of the first phase are abstracted as you define themes and insights. Only after you have developed a sense of meaning and direction do you develop tangible solutions. What may seem like a detour in idea development ultimately makes your solutions much more meaningful.

It requires taking a step back to reflect, analyze, evaluate, think again and then evolve. This takes time—a scarce resource—and can be challenging, as educators are used to solving problems on the spot in their classrooms. But there are no shortcuts. The small, sometimes hidden, details often hold the keys to solving complex challenges.

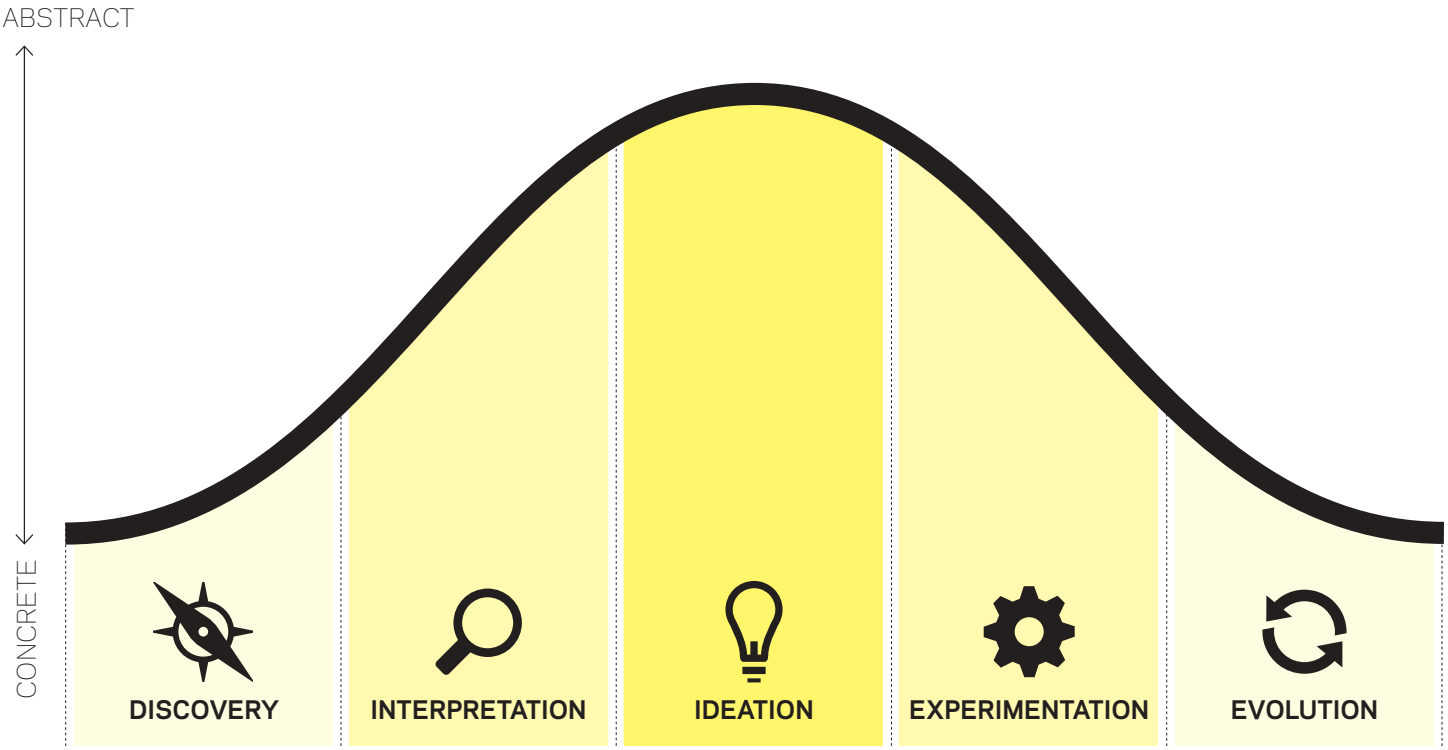
The design process therefore integrates various modes of working: some steps are more reflective, others are hands-on, and some encourage interactions with people outside of your team. To help you know what to expect, the following indicators will guide you through the methods in the Toolkit section:

Reflective

Hands-On

Interaction

This design process can be applied in many forms. The following pages contain a variety of examples of how it has been used to create new, relevant solutions in an educational context.



Case Study *Ormondale Elementary School*

How might we create a 21st century learning experience for our students?

Find videos about Investigative Learning at Ormondale at pvsd.net.

When the teachers and administrators at Ormondale Elementary, a public K-3 school in California, wanted to find ways to bring 21st century skills into their classrooms, they knew the challenge would take time and long-term commitment. They chose a year-long timeframe and used the design process to get started.

During the summer, the teachers kicked off the project with a two-day Design Thinking workshop. The Discovery phase began with an activity that asked them to develop empathy for a learner in the 21st century: the exercise entailed teachers imagining one of their current students in the year 2060. They imagined what these people had done in their lives and careers. As a group, the teachers then captured the most interesting themes and worked backward to understand the skills these people would have needed to develop as children to be successful. Armed with this inspiration from their own experiences, the group then went to visit outside organizations that were facing analogous challenges. Through interpreting all this information, the participants came up with many generative questions, such as "How might we enable the globally aware student?" and "How might we provide opportunities for interest-driven learning?" The brainstorms that followed started with ideas about tools and classroom design and expanded out to include curriculum and the educational system as a whole. Through prototyping several of these ideas, the teachers saw a set of similar patterns emerge across all their prototypes: they were all passionate about a teaching and learning approach that they called Investigative Learning. This approach would address students not as receivers of information, but as shapers of knowledge. At the end of the workshop, the teachers planned and committed to experiments based on this philosophy that they could conduct in their classrooms.

Over the course of the following school year, the teachers tested many ideas in their classes. One teacher developed new communications for parents. The technology team built new tools to support teachers in Investigative Learning. Another teacher even received a grant to renovate a classroom and create a different learning environment for her students. They didn't go it alone: to build a network of learning and support, the staff dedicated time in their weekly meetings to discuss what was happening, learn from each other, and help each other through rough patches.

In their second year, the group got back together for a second workshop to make sense of all the experiments they had conducted around the school. During this session, they shared and discussed their experiences, created a typology of Investigative Learning methods, and developed a framework for Investigative Learning standards and assessments.

Today, the faculty at Ormondale Elementary School are continuing to evolve their approach to Investigative Learning. As new teachers join the school, other faculty help them understand how to construct these experiences, and they have created a "Manual of Investigative Learning" to keep track of their philosophy and methods. They have gained support from their school board, and have become recognized as a "California Distinguished School."

Case Study
Riverdale Country School

How might we create a culture of collaboration?

It was the prototyping and feedback that made me really see the value in this process. We have become a more effective team that now shares ideas, resources and feedback on a regular basis.

Michael,
1st Grade Teacher

In 2010, the faculty at Riverdale Country School, an independent K-12 school in New York, embarked on a design project to encourage more collaboration among teachers. With three teachers leading the process as facilitators, a group of 15 worked as a design team to take on the challenge. They started with observations and conversations—not just in their own school, but also with analogous environments. Splitting into three teams, they interviewed employees at Sirius XM, Consumer Reports and IDEO—organizations that were noted for their teamwork and collaboration. One of the teacher-facilitators noted that this inspiration was important to the team: "It was really provocative. We saw that people have very different ways of managing their time and we developed a new awareness [of these companies]."

Bringing this inspiration back on-site, the team discussed their learnings and clustered them into three themes: online tools, faculty spaces and team-building activities. They identified opportunities for design within these areas, and brainstormed dozens of ideas. In smaller groups, they built different prototypes, including an online collaboration tool to make faculty meetings more effective, a new faculty lounge, and potluck brunches to bring teachers together in casual settings.

After several experiments with a few different collaboration tools, the Riverdale teachers now have an online platform for sharing lesson plans and activities as well as creating meeting agendas to save time. "It seems to be working for us. We're sharing more as a team and we've freed up time to get more done in our meetings," said one of the team members.

And there's still a lot more happening: teachers at Riverdale were so energized by Design Thinking that they submitted ideas for several design projects. In early 2011, they assembled a core team of five teachers to conduct a one-year project to revise the school's program in character, conduct, and ethics. Another team of teachers is helping to design a smooth transition for the new head of the elementary school. Teachers are using Design Thinking in their classrooms and are sharing their enthusiasm and ideas with their colleagues. The impact has expanded way beyond the initial design project and continues to spread.

Case Study
Motion Math

How might we develop games to tackle the toughest learning hurdles?

When the founders of Motion Math got together to think about how to use games to help kids learn, they knew that teaching math and designing a product weren't the same thing. Both teachers who worked with elementary-school-aged kids, Gabriel Adauto and Jacob Klein began their project with an understanding of both what kids liked and what parents and teachers valued—but they also recognized that their experience and intuition alone weren't enough to design a successful learning product.

They turned to Design Thinking to develop a game and combined it with the Backwards Design methodology, which begins with the end goal in mind, to create the educational content. Using Backwards Design, they were able to hone in on how they could assess students' mastery of concepts and work from there to help them get the concepts right. Using Design Thinking, they were able to create a game that was fun, engaging and valued by parents, teachers and students alike. "The most important part of merging the two processes was iteration, being open to really listening to what people want," observed Adauto.

Adauto and Klein started the process by defining a challenge to create a game that would address the biggest stumbling block for elementary school kids. They went out to talk to teachers. Over and over, they heard that fractions were a huge pain point. Next, they looked for inspiration from the most popular games at the time, one of which had a bouncing device to move a character around a screen. From there, the team started brainstorming, and generated lots of ideas for interactive games that could help kids learn fractions. Many prototypes and feedback sessions later, Adauto and Klein launched Motion Math. "We did lots of feedback sessions with paper prototypes. The most valuable feedback session we had was with parents, teachers and kids all together. We saw how the groups interact, and it helped us realize that the payers [parents and teachers] and the players [kids] had different needs and understood different things. But the game actually had to meet all these needs simultaneously."

Since launching, Motion Math has been on the "Top 5" list of educational apps, was featured in the *Wall Street Journal*, and won an Excellence in Design Award from *Children's Technology Review*. Most rewarding for Adauto and Klein was the fact that institutional school purchases have been very strong. Teachers have emailed them videos of kids playing their game in the classrooms, and students from preschool through community college are using the game to learn math skills. The founders are currently building on their success and designing additional educational games to address other hurdles in elementary education.

`Read more about Motion Math at motionmathgames.com.`

This is a Work in Progress.

Enough theory—it's time to take action. The Toolkit provides you with instructions to explore Design Thinking yourself.

It's Version One: this is not a finished piece, it's a foundation. The Toolkit will evolve and change based on your feedback. That's why we want to hear from you. Please send us comments, stories, photos or movies of your experiences using this toolkit to create new design solutions: DT_ed@ideo.com

Collaborative development of this toolkit, February-April 2011.





Discovery





Interpretation





Ideation



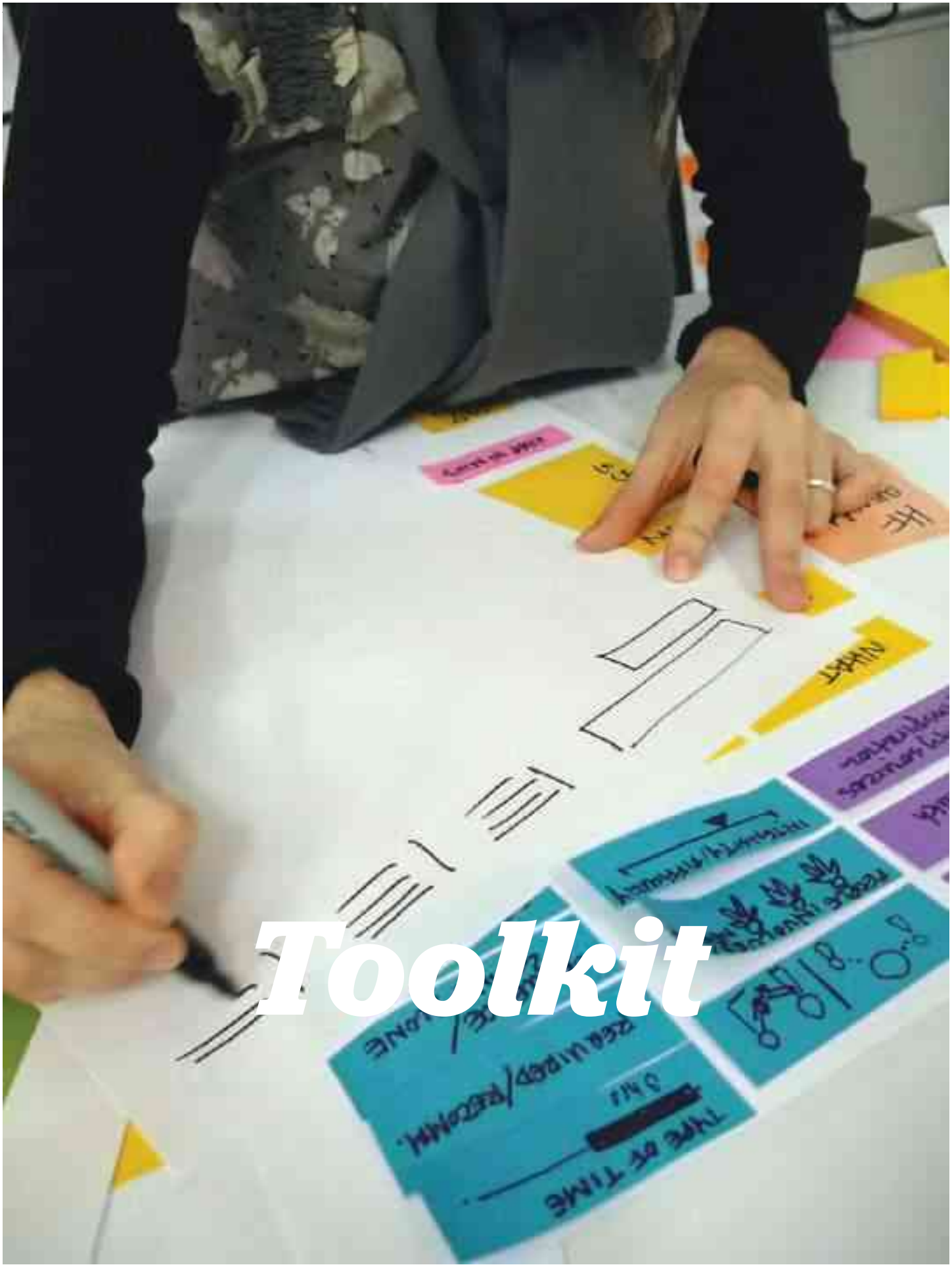


Experimentation





Evolution


Toolkit

Contents
Toolkit

Explore This Toolkit

Prototype of a method during the development of the toolkit.

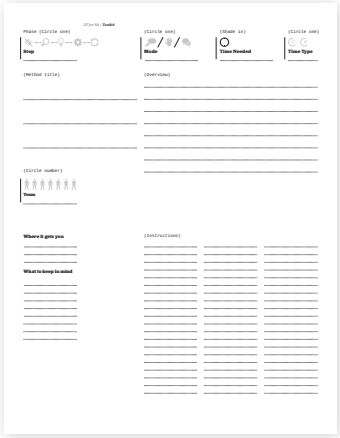
Are you curious to explore Design Thinking and try it out yourself? This document explains how to do so.

As you start to experience the design process, many parts of it will feel familiar to you: they are based on capabilities you have and use in your daily work. Sometimes, however, you will feel challenged and get stuck. And it's easy to lose sight of your overall goal once you have begun to explore. All that is perfectly normal. Make sure you regularly take a step back and reconsider where you are. Discuss the challenges you have run into, and think about these moments as valuable learning opportunities. Then, keep looking ahead: optimism is essential in order to get to new ideas.

There is a reason for the sequence—each step of the process builds on the other. And often it makes a lot of sense to follow it in a linear way. But don't feel restricted by that: only you know how to best use this toolkit. Use it along with other methodologies and theories you find useful to develop ideas. Adapt it, annotate it, cut it up, reconstruct it and make it your own. Add new methods to your toolkit as you see fit.

So, plow in. Have fun with it. Discover what happens to your practice as an educator as you begin to think and work like a designer.

Build your own method.



The Design Process

This toolkit guides you through the design process in five phases and twelve steps. Every phase has a distinct purpose and feel to it. That's why you find a brief introduction to each one of them, and an outline of which steps to take and when.

The methods are the core piece of this toolkit: they offer the actual instructions that help you put Design Thinking to action. Each method includes concise explanations, useful suggestions and tips to make it work.

PHASES

DISCOVERY

I have a challenge.
How do I approach it?

INTERPRETATION

I learned something.
How do I interpret it?

IDEATION

I see an opportunity.
What do I create?

EXPERIMENTATION

I have an idea.
How do I build it?

EVOLUTION

I tried something new.
How do I evolve it?

STEPS

1. Define the Challenge

2. Prepare Research

3. Gather Inspiration

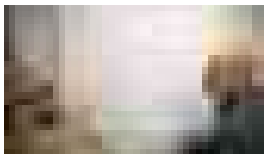
4. Tell Stories

5. Search for Meaning

6. Frame Opportunities

7. Generate Ideas

8. Refine Ideas



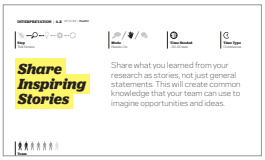
9. Make Prototypes

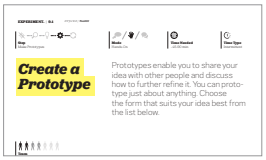
10. Get Feedback

11. Evaluate Learnings

12. Build the Experience

METHODS





Method Pages

Some methods are hands-on, others are more reflective, and some involve people outside of your team

Adjust to fit your schedule

DISCOVERY | **1.4** *DT for Ed* | ***Toolkit***

Step
Define Challenge

Mode
Reflective

Time Needed
~30-45 min

Time Type
Intermittent

Some methods need focused time, others can be used in shorter intervals

Cut up and reassemble as you see fit

Share What You Know

Chances are good that you already have some knowledge about the topic. Share and document this knowledge, so you can build on it and are free to focus on discovering what you don't yet know.

what and why

Some methods require larger teams, others are easier to do with a small group

Team
2-6 People

Fold in half

What it gets you
An overview of the team's knowledge and its open questions.

These tips can be helpful when you're stuck

What to keep in mind
Keep notes and look back on how your point of view has changed after your field research.

1. **Share what you know**
   Post the design challenge where everyone can see it. With your team, write down what you know about the topic. Use one piece of information per Post-it Note. Read your notes out loud, and post them under the design challenge. Ask others for feedback and discuss any of the assumptions that come up.
2. **Define what you don't know**
   Write down and share what you don't know or yet understand about the challenge. Post these questions in a different area.
3. **Build on your knowledge and fill in the gaps**
   Group the Post-it Notes into themes and use them to plan your research. Write down questions you want to explore.

How To

Plenty of white space to write notes

This overview lists all the methods you will find in the next section of this document. There are many, in order to provide you with a rich variety to choose from: every challenge requires a different approach and a different set of methods. You should select the ones that are most valuable for you.

Method Index

PHASES

DISCOVERY

INTERPRETATION

IDEATION

EXPERIMENTATION

EVOLUTION

METHODS

1. Define the Challenge

1.1 Understand the challenge
1.2 Define your audience
1.3 Build a team
1.4 Share what you know

2. Prepare Research

2.1 Make a plan
2.2 Identify sources of inspiration
2.3 Invite research participants
2.4 Build a question guide
2.5 Prepare for fieldwork
2.6 Practice research techniques

3. Gather Inspiration

3.1 Immerse yourself in context
3.2 Learn from individuals
3.3 Learn from groups
3.4 Learn from experts
3.5 Learn from peers observing peers
3.6 Learn from peoples' self-documentation
3.7 Seek inspiration in new places

4. Tell Stories

4.1 Capture your learnings
4.2 Share inspiring stories

5. Search for Meaning

5.1 Find themes
5.2 Make sense of findings
5.3 Define insights

6. Frame Opportunities

6.1 Create a visual reminder
6.2 Make insights actionable

7. Generate Ideas

7.1 Prepare for brainstorming
7.2 Facilitate brainstorming
7.3 Select promising ideas
7.4 Build to think

8. Refine Ideas

8.1 Do a reality check
8.2 Describe your idea

9. Make Prototypes

9.1 Create a prototype

10. Get Feedback

10.1 Make a test plan
10.2 Identify sources for feedback
10.3 Invite feedback participants
10.4 Build a question guide
10.5 Facilitate feedback conversations
10.6 Capture feedback learnings

11. Evaluate Learnings

11.1 Integrate feedback
11.2 Define success

12. Build the Experience

12.1 Identify what's needed
12.2 Pitch your concept
12.3 Build partnerships
12.4 Plan next steps
12.5 Document progress
12.6 Share your story

Method Selection

Are you new to Design Thinking? Do you just have a limited period of time for your design project? Or do you want to give someone else a quick overview?

This page is for you.

To get started, use just the highlighted methods. They are the basic set that will lead you through the design process. As you become more familiar with Design Thinking, explore and add more methods to your selection.

PHASES

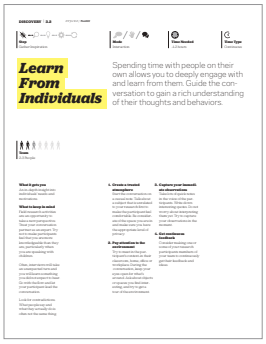
DISCOVERY | **INTERPRETATION** | **IDEATION** | **EXPERIMENTATION** | **EVOLUTION**

METHODS

1. Define the Challenge

2. Prepare Research

3. Gather Inspiration



4. Tell Stories

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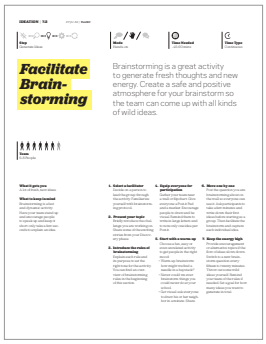


8. Refine Ideas

9. Make Prototypes

10. Get Feedback

11. Evaluate Learnings

12. Build the Experience

Prepare
Choose a Challenge

A design challenge is the starting point of every design process, and the purpose you will work toward. Here are a few examples you can choose from, or use as inspiration to come up with a challenge that matters for you.

How might we design a new teaching module?

How might we adapt the school schedule to the learning rhythms of our students?

How might we engage students more deeply in reading?

How might we build school-family partnerships?

How might we create a space for teacher collaboration?

How might we design our classroom space to be student-centered?

How might we connect more with our neighborhood community?

How might we engage faculty in the hiring process?

How might we...?

Prepare
Integrate Into Your Context


Continous periods of time


Intermittent intervals of time

Once you have decided which challenge to work on, you can start to plan your design project. The first, and likely quite challenging, task will be to find the time for your endeavor. Try to integrate Design Thinking into the existing structures of your school's schedule: That will make it easier to follow through. Here are a few examples:

Professional Development Day. Transform a professional development day into a collaborative design workshop. To make the most of the day, define a challenge, assemble a team and identify sources of inspiration ahead of time. The large amount of time set aside for a PD day is ideal for working through Interpretation, Ideation, and Experimentation. These are intense and productive phases of the process, and will leave the team with tangible ideas as evidence of your progress. A professional development day is also an ideal chance to go out into the world and seek inspiration.

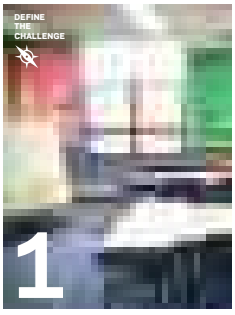
Summer Workshop. Commit time during a prolonged break to dive into the design process. A continuous period of time allows for a deeper engagement with each phase. It's an opportunity to experience the progression between steps. During the rest of the year, you can draw on what you learned during this time.

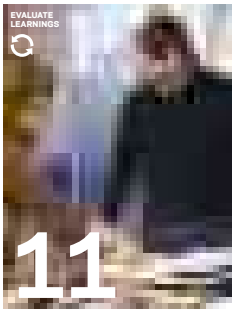
Weekly Meetings. Claim a common prep period or an after school meeting for working on a design project. Use the methods in this toolkit to determine the agenda each week. Meet regularly to build momentum, and provide opportunities for individual work and reflection on the days in between.

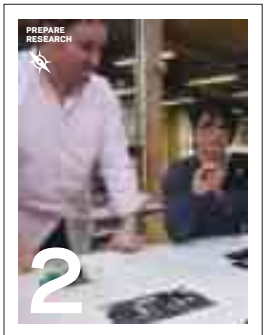
Year-Long Commitment. Decide what challenge is appropriate for a year-long commitment. Consider multiple factors, such as complexity, scope, peoples' involvement and priority. Then make a project calendar and commit to deadlines and goals, as they create a sense of progress. Agree on regular check-ins to keep the momentum going. Be intentional about how best to match the flow of the project to the flow of the school year.

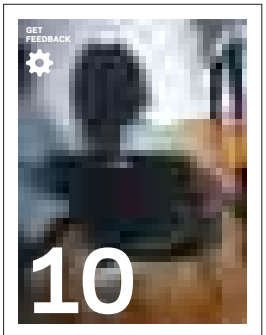
You can use the pages of this toolkit to create a visual overview of the design process for your team. Then, choose the methods you want to use for each step.

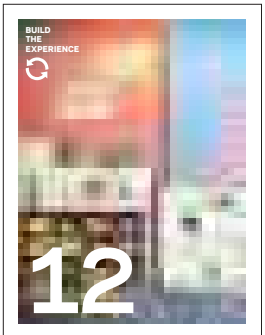
Prepare
Build an Overview

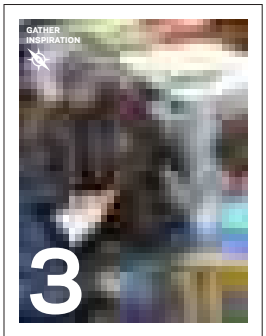


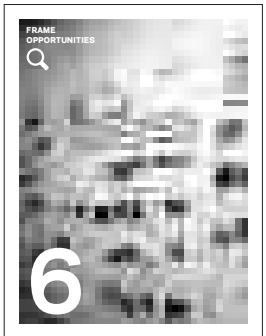












Prepare *Before You Start*

Before you begin, here are a few tips that will help you make the most out of your experience.

Teams. The team is stronger than any individual—you know this well as a guiding principle of education. And collaboration is inherent to Design Thinking: having a team of people who offer different strengths and perspectives will enable you to solve complex challenges. But teamwork isn't always easy. Team dynamics can be as limiting as they are empowering. Here's how to build a great team:

Start small: a team will work best if it consists of a core group of two to five individuals. The smaller size will make it easier to coordinate schedules and make decisions. Invite others to join for brainstorms, give feedback or help you get unstuck when it's most useful.

Invite variety: select people who can contribute from different angles. Consider involving an administrator, or a teacher you have never worked with. You'll have a better chance of coming up with unexpected solutions.

Assign roles: it helps everyone navigate the project if there is a clear understanding of what to contribute to the team. This is particularly helpful when you can't choose who to work with: make agreements about which responsibilities people can take on that brings out their strengths. Who will be the coordinator, keeping everything organized? Who will be the enthusiast, inspiring the team with big dreams? Who is the nagger, making sure things keep moving forward? Who will lead the team?

Allow for alone time: while most of this work should be done as a team, make sure to allow for individual work time. Sometimes the best progress comes from solitary thinking, planning and creating.

Spaces. A dedicated space, even if it's just a wall, gives the team a physical reminder of their work. It allows them to put up inspiring imagery or notes from their research and to be continuously immersed in their learnings. Shared visual reminders help track the progress of the project and stay focused on the challenge.

To spark new ideas and get unstuck when the work gets more challenging, consider changing the space from time to time.

Materials. This process is visual, tactile and experiential. You often will create an overview that's visible for everyone on the team, or come up with a quick sketch to explain your idea. Make sure you have supplies on hand that make it easy to work in that fashion.

Most of the methods require Post-it Notes, large Post-it pads or a flipchart and felt markers.

Other supplies that will be useful are:
Adhesives
Construction paper
Foam core boards
Markers
Scissors
Digital Cameras
Video cameras


Discovery

Discovery builds a solid foundation for your ideas. Creating meaningful solutions for students, parents, teachers, colleagues and administrators begins with a deep understanding for their needs. Discovery means opening up to new opportunities, and getting inspired to create new ideas. With the right preparation, this can be eye-opening and will give you a good understanding of your design challenge.

DEFINE THE CHALLENGE

1

Step
Define Challenge

Mode
Reflective

Time Needed
~1-2 hours

Time Type
Continuous

Understand the Challenge

A clearly defined challenge will guide your questions and help you stay on track throughout the process. Spend time with your team to create a common understanding of what you are working toward.

Team
2-3 People

What it gets you
A clear design challenge expressed in one sentence.

What to keep in mind
A good challenge is phrased with a sense of possibility. Make it broad enough to allow you to discover areas of unexpected value, and narrow enough to make the topic manageable.

1. **Collect thoughts**
   As a team, collect and write down thoughts about your challenge. Start with a broad view: ask yourself why people might need, want, or engage with your topic.

2. **Establish constraints**
   Make a list of criteria and constraints for the challenge. Does it need to fit into a certain timeframe? Can it be integrated with an existing structure or initiative?

3. **Frame the challenge**
   Based on the thoughts you have collected, frame the challenge as one sentence starting with an action verb, such as: "create," "define," or "adapt."

   Or, phrase the challenge as an engaging and imaginative question starting with: "How might we...?" or "What if...?"

   Keep rewriting your statement until it feels approachable, understandable and actionable to everyone on the team.

4. **Create a visible reminder**
   Post the challenge in a place that everyone on the team can see, to be reminded of your focus throughout the process.

Step
Define Challenge

Mode
Hands-On

Time Needed
~20-30 min

Time Type
Intermittent

Define Your Audience

A deep understanding of peoples' motivations and needs is the best foundation for any design solution. Engage with the broad spectrum of people who will be touched by what you design.

Team
2-3 People

What it gets you
A visual overview of all the people relevant to your challenge.

What to keep in mind
There may be groups of people you will not engage with in your first attempt at approaching your challenge that could be important later on. Your overview will be a reminder not to lose sight of these opportunities.

1. **List immediate contacts**
   With your team, collect and write down the people or groups that are directly involved in or reached by your topic. Are you designing for parents? Will you need to connect with administrators? Use Post-it Notes, so you can adapt your overview throughout the conversation.

2. **Think more broadly**
   Add people or groups who are peripherally relevant, or are associated with your direct audience.

3. **Build an overview**
   Think about the connections these people have with your topic. Who are the fans? Who are the skeptics? Who do you need the most? Create a visual overview of those who you consider to be your main audience, as opposed to more peripheral contacts.

4. **Create a visible reminder**
   Keep a map of the people involved in a visible place for you to revisit over the course of the project.

Step
Define Challenge

Mode
Reflective

Time Needed
~60-90 min

Time Type
Intermittent

Build a Team

Several great minds are always stronger when solving a challenge than just one. Put effort into understanding the skills and motivations of your collaborators to create a strong team.

Team
2-6 People

What it gets you
An agreement on the team members' roles.

What to keep in mind
The various phases of the design process require different skills and respond to different passions. Remember to adjust your team structure over time.

1. **Share who you are**
   Spend time as a team getting to know each other. Make this a casual and friendly experience. Give everyone a few minutes to write down his or her skills, one skill on each Post-it Note–then share back with the team.
2. **Define your individual and team goals**
   Talk about the ambitions of each person on your team. Continue to write them down and post them on the wall. Find out about your shared goals. Match both skills and passions with what your challenge requires.
3. **Agree on roles**
   Define each person's role. Consider letting your team members self-identify how they want to contribute. Keep a visual reminder of your conversations by taking notes or photos.
4. **Give feedback**
   Revisit the agreement about your team structure on a regular basis. Support each other by giving constructive feedback about everyone's contributions.

Step
Define Challenge

Mode
Reflective

Time Needed
~30-45 min

Time Type
Intermittent

Share What You Know

Chances are good that you already have some knowledge about the topic. Share and document this knowledge, so you can build on it and are free to focus on discovering what you don't yet know.

Team
2-6 People

What it gets you
An overview of the team's knowledge and its open questions.

What to keep in mind
Keep notes and look back on how your point of view has changed after your field research.

1. **Share what you know**
   Post the design challenge where everyone can see it. With your team, write down what you know about the topic. Use one piece of information per Post-it Note. Read your notes out loud, and post them under the design challenge. Ask others for feedback and discuss any of the assumptions that come up.
2. **Define what you don't know**
   Write down and share what you don't know or yet understand about the challenge. Post these questions in a different area.
3. **Build on your knowledge and fill in the gaps**
   Group the Post-it Notes into themes and use them to plan your research. Write down questions you want to explore.

PREPARE RESEARCH

2

Step
Prepare Research

Mode
Hands-On

Time Needed
~45-60 min

Time Type
Continuous

Make a Plan

A solid plan will help you make decisions along the way. Set goals and commit to deadlines in order to keep moving forward. Make agreements so everyone on the team can organize their time effectively.

Team
2-6 People

What it gets you
A calendar with agreements on team members' involvement and set timing.

What to keep in mind
Be prepared to frequently adjust your plan. Often, new ideas will take you in a different direction from what you initially anticipated. The process of planning is as important as its result.

Consider setting up a regular, informal get-together for the team to share thoughts, ideas and concerns–for example, a weekly, 30-minute, afternoon-tea.

1. **Sketch a calendar**
   Sketch out a large paper calendar that everyone can see. Write down tasks, meetings and finish dates on Post-it Notes, then affix them to the paper calendar to allow for mobility.

2. **Form agreements**
   As a team, define which times you can best collaborate. Put these dates on everyone's calendars.

3. **Create a visual reminder**
   Keep your paper calendar in a space visible for everyone to see, or create a shared online document with access for all team members.

Step
Prepare Research

Mode
Reflective

Time Needed
~30-60 min

Time Type
Intermittent

Identify Sources of Inspiration

Inspiration is the fuel for your ideas. Plan activities to learn from multiple peoples' perspectives and explore unfamiliar contexts.

Team
2-3 People

What it gets you
A research plan listing activities and people you want to learn from.

What to keep in mind
Inspiration is found in places that excite you. Dare to plan activities that will invigorate the team, even if you are not certain what exactly you may learn from them.

Remember that at this point, you are looking for inspiration, not validation. Spend more time with a select group of people rather than trying to meet many. It will likely help you learn more.

1. **Imagine interesting people to meet**
   Draw a map of all the people involved in your topic. Think of characteristics that would make them interesting to meet. As a team, choose who you want to learn from. Plan how to get in contact with them.

2. **Think of extremes**
   Consider meeting people who represent "extremes": people that are either completely familiar with and involved in your topic, or don't have anything to do with it. Extreme participants will help you understand unarticulated behaviors, desires, and needs of the rest of the population that they feel or express more powerfully than others.

3. **Make a list of activities you want to do**
   Choose which activities will best help you learn and get inspired (find more information about each activity on the respective method pages):
   - » Learn from individuals
   - » Learn from groups
   - » Learn from experts
   - » Learn from peers observing peers
   - » Learn from peoples' self-documentation
   - » Immerse yourself in context
   - » Seek inspiration in new places

Step
Prepare Research

Mode
Interaction

Time Needed
~30 min - 2 hours

Time Type
Intermittent

Invite Research Partici-pants

People are often your most valuable source of inspiration. Imagine specific characteristics of the people you would like to meet. This will help you navigate the process of finding and engaging with interesting individuals.

Team
2-3 People

What it gets you
Appointments to meet and learn from interesting people.

What to keep in mind
When planning your interviews, consider the number of people that will be appropriate to attend. Too many interviewers can make people feel uneasy, particularly when adults speak with kids.

It is very powerful to see people in their own environment, as you can learn a lot from observation. You might detect an object or a note that triggers a conversation that otherwise may never have come up.

Try to participate in what your research participants do. Ask them to instruct you and talk to them about the experience of their activities in the moment.

You will learn from everyone you meet, even if everyone does not exactly fit the descriptions you have thought up. Focus on finding participants who are articulate and comfortable with having others at their home or workplace.

1. **Describe the people you want to meet**
   Create specific descriptions of the people you want to engage with. Picture the characters of people you are looking for. Do you need to speak with a quiet child? Is it a very dedicated administrator you are looking for? Could you learn the most from someone who just started their career? Make sure you also cover a variety of gender, experience, ethnicity, etc. Work as a team and build a visual overview of your thoughts, using a large piece of paper or Post-it Notes.
2. **Plan the interaction and logistics**
   Think about what exactly you want to do with each participant. Where do you want to meet them? How much time will you spend with them? Is there an activity you can do together to enrich the conversation? What will you ask them to show you? Write down your plans for all research activities.
3. **Invite participants**
   Connect with the people you want to meet. Prepare a script for your initial conversations that helps them understand the purpose of your research. Don't be afraid to tap into your personal networks: people are generally happy to share what they know.
4. **Track your recruiting progress**
   Take notes when you speak with people, so you remember the details of each conversation. Create a checklist that helps everyone on your team keep an overview of the progress and scheduling.

Step
Prepare Research

Mode
Hands-On

Time Needed
~30-60 min

Time Type
Continuous

Build a Question Guide

Having a good conversation with a stranger is not always easy. When speaking with research participants, you have to both build trust and help them feel comfortable while collecting relevant information. Carefully prepare for your conversations in order to manage this delicate balance.

Team
2-3 People

What it gets you
A question guide for a valuable research conversation.

What to keep in mind
The most valuable aspect of a question guide is the thought process that goes into writing it. During the actual conversation, let the person you are speaking with lead you to what matters to them. Use the question guide as a checklist to ensure you have covered everything—not as a script for the conversation.

1. **Identify topics**
   As a team, brainstorm themes you want to learn about in your conversations with research participants. What do you need to learn about your challenge? What are you hoping to understand about people's motivations and frustrations? What do you want to learn about their activities? Is the role they play in their network of importance? Write these topics on Post-it Notes or a flipchart.

2. **Develop questions**
   Formulate questions that explore these topics. Frame them as open-ended questions, such as:
   - "Tell me about an experience..."
   - "What are the best/worst parts about...?"
   - "Can you help me understand more about...?"

   Encourage people to tell you their whole story and avoid yes/no questions.

3. **Organize your questions**
   Organize your questions using the following structure:
   - Start specific: begin with questions your participants are comfortable answering.
   - Go broad: ask more profound questions about hopes, fears and ambitions.
   - Probe deep: explore your challenge or any interesting theme you picked up on during the conversation in more depth. Consider prompting thoughts with "what if" scenarios.

   Then create a question guide that is very readable, so you can glance at it quickly during your conversation.

4. **Build tangible conversation starters**
   It can be helpful to share early ideas or concepts in your conversation, particularly when you are working on an abstract challenge. You can create a sketch, build a simple cardboard representation or describe a scenario that your participants can respond to. Your idea does not have to be realistic–it only serves the purpose of gaining a better understanding of your topic.

Step
Prepare Research

Mode
Hands-On

Time Needed
~45-60 mins

Time Type
Intermittent

Prepare For Fieldwork

Whether you are meeting a group of students in the cafeteria or traveling across town to visit a company, fieldwork activities run smoother with thoughtful preparation. Assign responsibilities to team members ahead of time so everyone knows what to focus on.

Team
2-3 People

What it gets you
A solid plan for your fieldwork activities.

What to keep in mind
It is important to assign roles ahead of time, however, it feels more natural for all team members to engage in the conversation to some degree.

1. **Confirm your plans**
   Confirm date, time and location for your research activities. Agree on logistics, including transportation, with your team.

2. **Prepare your equipment**
   Make sure to gather materials for your fieldwork ahead of time:
   - Question guide
   - Participants' contact details
   - Team members' contact details
   - Directions to location
   - Notepads and pens
   - Camera (load batteries!)
   - Mobile phones
   - Thank you gifts for participants (if applicable)
   - Post-it Notes, Sharpie markers

3. **Assign roles**
   Designate one person to lead the conversation. Select a second person who will focus on watching participants' body language and facial expressions. Decide which team member will take notes, and choose a photographer. Remember to ask permission before taking any photos.

Step
Prepare Research

Mode
Hands-on

Time Needed
~45-60 mins

Time Type
Intermittent

Practice Research Techniques

There are many impressions to take in during a field visit. Use the following research techniques to draw out interesting stories and keep track of what's important.

Team
2-5 People

What it gets you
The skills you need to make the most of your fieldwork.

What to keep in mind
To be well prepared for your field visit, experiment with your team first: choose a topic and have conversations with each other or various other people around you. Try to find out something you did not yet know using these techniques. Consider doing a workshop with your team to practice.

1. **Establish trust with participants**
   Practice creating an atmosphere in which people feel comfortable enough to open up. Build on the skills you have developed in the school context.
   - Listen patiently. Do not interrupt, and allow for pauses to give participants time to think.
   - Use non-verbal gestures, such as eye contact, nodding, and smiling, to reassure participants you are engaged and interested in what they are saying.

2. **Get the most out of your interactions**
   Encourage people to reveal what really matters to them.
   - Ask participants to show you the object or space they are talking about, or suggest to participate in their activities.
   - Have participants draw what they are talking about.
   - Keep asking "why?" in response to consecutive answers.

3. **Know what to look for**
   Look for indications that reveal what people care about–and keep in mind, that they may contradict themselves.
   - Look for cues in the things that people surround themselves with or the way they carry themselves.
   - Notice workarounds and adaptations people have made to make a system or tool serve their needs better, for example: lowering the height of bulletin boards to make it easier for children to read them.
   - Explore things that prompt certain behaviors, for example: a line printed around a track field that causes people to run within a certain area.

4. **Capture what you see**
   Take lots of notes and photos of what you see, hear, feel, smell and taste during a field visit. Capture direct quotes. Write down your immediate thoughts without worrying about an interpretation.


GATHER
INSPIRATION
3
Sandy
MASTERMIND

Step
Gather Inspiration

Mode
Hands-On

Time Needed
~30-60 min

Time Type
Intermittent

Immerse Yourself In Context

With a curious mindset, inspiration and new perspectives can be found in many places and without much preparation. Sharpen your skills in observing the world around you.

Team
2-6 People

What it gets you
Skills for learning from what's around you.

What to keep in mind
A firsthand observation is great preparation for your field interviews and a team activity that does not require much preparation.

Approach your observation with an open mind and imagine this as the first time of you have gone through this experience. Look for details you may have overlooked before.

Consider the entire journey of your activity. Think about the actual start and end points of this experience, even if they are not happening in the space you are in.

1. **Plan your observations**
   Choose a place where you can have an experience that is relevant to your challenge. For example, if you are looking for new ideas on arrival and departure procedures at your school, drive up to the drop off area, just as parents do, and try to stop, wait and go.
   Think of certain aspects of your experience you want to capture, such as:
   - What emotions do you experience (surprises, frustrations, motivations, decision making factors), and why?
   - What interactions do you observe, and how do they feel?
   - What is the mood of the room? What is the lighting like? What is the temperature? How is it affecting everyone?
   - What are peoples' moving patterns in space?

   Prepare a notebook with prompts so you remember what to look for.

2. **Explore and take notes**
   Try to blend in with everyone else during your observation. Find a spot that's out of the way.
   Take notes and photos. Capture interesting quotes. Draw sketches, plans and layouts.

3. **Capture what you have seen**
   Immediately after your observation, take some time to capture the things you found most interesting, and write them on Post-it Notes so you will be able to reorganize them later.

Step
Gather Inspiration

Mode
Interaction

Time Needed
~1-2 hours

Time Type
Continuous

Learn From Individuals

Spending time with people on their own allows you to deeply engage with and learn from them. Guide the conversation to gain a rich understanding of their thoughts and behaviors.

Team
2-3 People

What it gets you
An in-depth insight into individuals' needs and motivations.

What to keep in mind
Field research activities are an opportunity to take a new perspective. Treat your conversation partner as an expert. Try not to make participants feel that you are more knowledgeable than they are, particularly when you are speaking with children.

Often, interviews will take an unexpected turn and you will learn something you did not expect to hear. Go with the flow and let your participant lead the conversation.

Look for contradictions. What people say and what they actually do is often not the same thing.

1. **Create a trusted atmosphere**
   Start the conversation on a casual note. Talk about a subject that is unrelated to your research first to make the participant feel comfortable. Be considerate of the space you are in and make sure you have the appropriate level of privacy.

2. **Pay attention to the environment**
   Try to meet in the participant's context–in their classroom, home, office or workplace. During the conversation, keep your eyes open for what's around. Ask about objects or spaces you find interesting, and try to get a tour of the environment.

3. **Capture your immediate observations**
   Take lots of quick notes in the voice of the participants. Write down interesting quotes. Do not worry about interpreting them yet. Try to capture your observations in the moment.

4. **Get continuous feedback**
   Consider making one or some of your research participants members of your team to continuously get their feedback and ideas.

Step
Gather Inspiration

Mode
Interaction

Time Needed
~1-2 hours

Time Type
Continuous

Learn From Groups

Bringing together groups of people allows you to observe the interactions between them, to recognize community dynamics and issues, and to understand their different opinions. Arrange group sessions and guide them with a clear intention of what you want to understand.

Team
2-6 People

What it gets you
An understanding of the shared motivations and differing opinions within a group.

What to keep in mind
Group sessions will give you a good overview of a topic. If you are trying to gain a deeper understanding of peoples' motivations, however, choose an individual interview.

Particularly when working with kids, group interviews can be a great format to help them feel comfortable with an adult team.

Facilitating a group session and observing participants' interactions at the same time is challenging. Make sure enough people on your team can focus on the observation itself.

1. **Choose the participants**
   Consider what you are looking for: to make participants comfortable enough to share details about their passions, bring together groups of like-minded individuals. To find out about individuals' opinions, invite people with contradicting opinions to stimulate discussions.

2. **Plan an agenda with activities**
   Think carefully about what you want to achieve within the session. Consider involving the participants in practical activities. Draft an agenda. Assign facilitators' responsibilities. Prepare materials.

3. **Set up for a conversational atmosphere**
   Prepare a space for an informal discussion over food and drinks. Start t he conversation on a casual note. Talk about a subject that is unrelated to your research first to make the participants feel comfortable.

4. **Listen to the group's conversations**
   Encourage conversations between participants and consider dividing people into smaller groups to better facilitate these discussions.

5. **Capture your immediate observations**
   Take lots of quick notes in the participants' voices. Write down interesting quotes. Do not worry about interpreting them yet. Try to capture your observations in the moment.

6. **Get continuous feedback**
   Consider setting up a panel of participants that you engage with throughout your project to continuously receive feedback on your ideas.

Step
Gather Inspiration

Mode
Interaction

Time Needed
~1-2 hours

Time Type
Continuous

Learn From Experts

Experts can provide in-depth information about a topic and can be especially helpful when you need to learn a large amount of information in a short amount of time.

Team
2-3 People

What it gets you
Access to in-depth knowledge in a certain area of expertise.

What to keep in mind
Find the balance between using experts to get a good understanding of the current situation and preserving space to think beyond the existing models.

Experts may overstate their expertise or develop their own assumptions. Make sure to also learn from direct interactions with research participants.

1. **Choose the participants**
   Choose experts based on your objective: are you looking to learn about their field of study? Would you like someone's opinion on your topic who has rich knowledge of its context?

2. **Set up for a productive conversation**
   Carefully plan how you want the conversation to flow. Consider asking the expert to actively help you work on an early concept.

Step
Gather Inspiration

Mode
Interaction

Time Needed
~1-2 hours

Time Type
Intermittent

Learn From Peers Observing Peers

There is a level of understanding between peers that you can't immediately get as an outside observer. Make select participants part of your research team. Ask them to speak with and observe their peers.

Team
2-3 People

What it gets you
Access to opinions that would likely not be shared with you directly.

What to keep in mind
This method is particularly helpful when you are trying learn about a group that you are not part of. It can help you learn about children: they will share very different information with each other than with an adult.

Be careful to not create the impression of your researchers spying on their peers. Ask them to be transparent and only share what their peers are comfortable with. Consider inviting the entire group to share each other's stories and make it a fun activity for everyone.

1. **Select your research partners**
   Choose people that are trusted and respected amongst their peers as well as articulate and excited to participate. Invite them to become part of your research team.

2. **Decide on compensation**
   Decide how you will thank your research partners, and prepare accordingly.

3. **Guide their research**
   Together with your new team members, define what you are trying to learn about, and think of activities to source and record this information.

4. **Meet frequently**
   Create regular interactions with your research team and integrate them in a structured way.

Step
Gather Inspiration

Mode
Interaction

Time Needed
~1-2 hours

Time Type
Intermittent

Learn From Peoples' Self-Documentation

Asking participants to record their own experiences allows you to learn about them over an extended period of time. Guide participants to capture and share their thoughts, decisions and emotions.

Team
2-3 People

What it gets you
Insight into peoples' experiences over an extended period of time.

What to keep in mind
Often teenagers and young people find self-documentary exercises less intimidating than adults and enjoy expressing themselves in new ways.

Make the documentation as simple as possible for participants. Consider using online tools that enable recording impressions in the moment. The easier it is to self-document, the more likely it is that participants will complete the exercise.

Consider showing examples of how other people have done self-documentation, or spend time with participants to explain how to capture information.

1. **Plan the documentation activities**
   Decide what you would like people to document: feelings, activities, behaviors? Choose the best mode for collecting that information: photographs, diaries, voice recordings, videos?

2. **Invite and instruct participants**
   Give participants tools and instructions to document themselves for several days or weeks. Explicitly explain why and how to record their activities. Clarify what you are looking for.

3. **Review with participants**
   Look at the materials together with participants after their documentation phase. Ask them not just what the things are that they documented, but also why they chose these details and how they felt about them.

Step
Gather Inspiration

Mode
Hands-On

Time Needed
~20-90 min

Time Type
Intermittent

Seek Inspiration In New Places

Looking for inspiration in a different context outside of the education world opens the mind and can help you find a fresh perspective. Dare to go out of your comfort zone and explore.

Team
2-3 People

What it gets you
A new perspective on the challenge you work on, inspiration and energy.

What to keep in mind
Explore with an open mind, even if you do not immediately understand how to apply your experiences. After you return, spend time relating what you found interesting to the challenge you are working on.

As the number of places you have visited grows, keep a running list of your favorite destinations and notes on why they stand out to share with your colleagues. A steady stream of inspiration is a great way to continuously rethink and evolve your ideas.

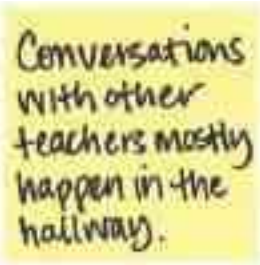
1. **Think of analogies that connect with your challenge**
   With your team, list all the activities, emotions, and behaviors that make up the experience of your challenge. Next to each of these areas, write down other situations where in similar experiences occur. As a team, select the scenarios that you would like to observe. For example, if you are looking to re-envision arrival and departure procedures at your school, consider observing the lobby of a busy yet elegant hotel.
2. **Make arrangements for your activities**
   Plan the logistics of your activities. Connect with the people you want to visit and explain the purpose of your search for inspiration.
3. **Absorb the experience**
   During your visit, first observe peoples' activities and their environments. Then, when appropriate, ask questions about what you have noticed.

Interpre-tation

Interpretation transforms your stories into meaningful insights. Observations, field visits, or just a simple conversation can be great inspiration—but finding meaning in that and turning it into actionable opportunities for design is not an easy task. It involves storytelling, as well as sorting and condensing thoughts until you've found a compelling point of view and clear direction for ideation.

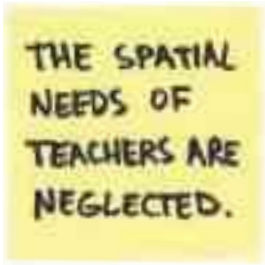
The Evolution of Your Notes

Throughout the Interpretation phase, your perspective will evolve and change. As you gain a clearer understanding of what your observations mean, you can relate them to your challenge and use them as inspiration. This part of the process can be confusing. Use the examples below to navigate the development of your notes from early thoughts to ideas.

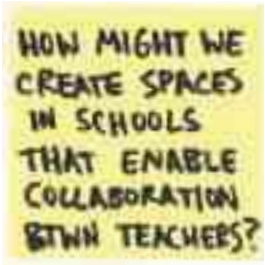


Learnings
Learnings are the recollections of what stood out during a conversation or observation: direct quotes, anecdotes, notes on sounds, smells, textures, colors, etc. They are communicated in full sentences to capture the story.

Themes
Themes are created after you have organized your stories from field research into categories. They are the headlines for clusters of similar learnings.



Insights
Insights are a succinct expression of what you have learned from your field research activities. They always offer a new perspective, even if they are not new discoveries. They are inspiring and relevant to your challenge.



How Might We's
"How might we" questions are the starting point for a brainstorm session. They are written in direct response to an insight. These questions feel optimistic and exciting and help you think of ideas right away.

Ideas
Ideas are generated during a brainstorm session. They can be very practical and simple or wild and crazy–judgment is deferred, as the goal is to come up with as many ideas as possible. Ideas are best communicated with quick sketches.

TELL STORIES

4

Step
Tell Stories

Mode
Reflective

Time Needed
~20-30 min

Time Type
Continuous

Capture Your Learnings

When you step out of an observation, it's easy to feel overwhelmed by the amount of information you have taken in. Use the half hour immediately after the session to start capturing what you have learned.

Team
2-3 People

What it gets you
An authentic recollection of your learnings from the research activities.

What to keep in mind
Getting into the habit of capturing highlights while everything is still fresh will make it a lot easier to connect and process your learnings later on.

1. **Find a space and time**
   Plan extra time so that you can share your thoughts and impressions right after your observation. This may often happen in a coffee shop or while in transit.

2. **Share your impressions**
   With your team, share the things you found most interesting. Do not worry about interpreting these stories yet. Listen to each others' recollections of the observation. Compare experiences and impressions.

   To cover the most important topics, consider using these prompts:
   - Personal details: who did you meet (profession, age, location, etc)?
   - Interesting stories: what was the most memorable and surprising story?
   - Motivations: what did this participant care about the most? What motivates him/her?
   - Frustrations: what frustrated him/her?
   - Interactions: what was interesting about the way he/she interacted with his/her environment?
   - Remaining Questions: what questions would you like to explore in your next conversation?

3. **Document your thoughts**
   Capture your observations in a notebook or on Post-it Notes. Writing them on Post-it Notes will make them easier to reorganize them later. Illustrate your thoughts with drawings.

Step
Tell Stories

Mode
Hands-On

Time Needed
~30-60 min

Time Type
Continuous

Share Inspiring Stories

Share what you learned from your research as stories, not just general statements. This will create common knowledge that your team can use to imagine opportunities and ideas.

Team
2-6 People

What it gets you
A shared understanding of all the stories your team collected.

What to keep in mind
Tell stories person by person, one at a time.

Use vivid details and describe your immediate experiences. This is not the time to generalize or judge.

1. **Set up a space**
   Plan your storytelling session in a room with plenty of wall space. Distribute Post-it Notes and markers. Have a flip chart pad or large sheets of paper nearby, as well as tape to attach these sheets to the wall.

2. **Take turns**
   Describe the individuals you met and the places you visited. Be specific and talk about what actually happened. Revisit the notes you took right after your observation. Print out your photos and use them to illustrate your stories.

   Tell the story of each person following these prompts (you may have already used them when capturing your first impressions):

   - Personal details: who did you meet? (profession, age, location etc)
   - Interesting stories: what was the most memorable and surprising story?
   - Motivations: what did this participant care about the most? What motivates him/her?
   - Barriers: what frustrated him/her?
   - Interactions: what was interesting about the way he/she interacted with his/her environment?
   - Remaining Questions: what questions would you like to explore in your next conversation?

3. **Actively listen**
   While you are listening to each other, compare and contrast the things you have learned. Explore areas where you find different opinions and contradictions. Begin to look for recurring themes.

4. **Capture the information in small pieces**
   Write down notes and observations on Post-it Notes while listening to a story. Use concise and complete sentences that everyone on your team can easily understand. Capture quotes–they are a powerful way of representing the voice of a participant.

5. **Surround yourself with stories**
   Write large enough so that everyone can read your notes. Put all Post-its up on the wall on large sheets of paper. Use one sheet per story, so you have an overview of all your experiences and the people you have met.

SEARCH FOR MEANING

5

Step
Search for Meaning

Mode
Reflective

Time Needed
~45-90 min

Time Type
Continuous

Find Themes

After having collected and shared stories from your fieldwork, begin to make sense of all that information and inspiration. This part of the process can take some time. A good first step is to identify themes.

Team
2-5 People

What it gets you
An overview of the larger themes that you found in your research.

What to keep in mind
Clustering can become difficult when there are many people involved. Consider splitting into smaller groups, or have a few people work on the themes first and then present back and discuss.

1. **Cluster related information**
   Group findings from your field research into categories or buckets. You can start by having every team member choose three Post-its they find most interesting. Place each of them on a large sheet of paper and begin to look for more evidence of the same theme. What did many people mention? Did someone else say the opposite? Are there behaviors you saw repeatedly? Which issues were obvious? Rearrange the Post-its into these new buckets.
2. **Find headlines**
   Name the clusters you have defined, e.g., "lack of space." Continue to sort and rearrange the information until you feel you have picked the interesting bits out.
3. **Turn headlines into statements**
   Have a closer look at your themes and the stories that support them, and express them in a meaningful way, e.g., "There is a lack of space for teachers to do their work." Write a full sentence. Use a new Post-it and label your cluster with that statement.

Step
Search for Meaning

Mode
Reflective

Time Needed
~45-90 min

Time Type
Continuous

Make Sense of Findings

Once you have created themes as an overview of your research findings, begin to take a closer look at what they mean. Sort and analyze them until they help you build a clear point of view.

Team
2-5 People

What it gets you
An understanding of what your learnings from the research really mean.

What to keep in mind
This part of the process can feel uncomfortable, as you must repeatedly question what you have learned in order to get to the actual meaning of your findings. Getting through this period of ambivalence, however, will give you clear direction and purpose for the next steps.

Make sure to work as a team. Engage everyone actively in this phase so you can benefit from different opinions and observations.

Allow for different work styles and plan for both individual time and team time during this part of the process.

1. **Look for links between themes**
   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 contra-dictions do you find? What feels surprising and why?

   Continue to move around your Post-it Notes and sheets. Make sure to group supporting stories with more abstract themes.

2. **Dig deeper**
   With your team, take a step back and discuss what you have discovered. Are there themes that you have different opinions about? What are you most excited about? Can you begin to see the relevance of your challenge?

   Regroup the information and add new versions of your headlines until they feel strong. For example, you might group the themes "there is a lack of space for teachers to do their work" and "tthe faculty room does not encourage collaboration" together as "there is little consideration for teachers' spatial needs."

3. **Get input from the outside**
   Explain the themes to someone who is not part of your team. Learn from their feedback and try alternative ways of organizing the information.

4. **Be prepared to let go**
   Leave behind stories that don't seem important. Clean up your space and only keep the information you are still using.

Step
Search for Meaning

Mode
Reflective

Time Needed
~45-90 min

Time Type
Continuous

Define Insights

Insights are a concise expression of what you have learned from your research and inspiration activities. They are the unexpected information that makes you sit up and pay attention. Insights allow you to see the world in a new way and are a catalyst for new ideas.

Team
2-3 People

What it gets you
Insights that concisely communicate your research learnings.

What to keep in mind
It can be a challenge to identify relevant pieces of information. Be patient and try out various versions until you find a satisfying set.

Not every insight is entirely new information. Often, you will find things that you knew about before, but your research may have given you a new perspective. Don't be shy about retelling these stories.

In the process of identifying insights, you will probably come up with a lot of ideas. Create an "idea parking lot" and revisit them later on.

1. **Select what surprised you**
   Look across your buckets and themes and choose the information that you find most surprising, interesting, or worth pursuing. What have you learned that had not occurred to you before? What did you find most inspiring? What sparked the most ideas?

2. **Reconnect the learnings to your challenge**
   Revisit the questions that you started out with: how do your findings relate to your challenge? Narrow down the information to those insights that are relevant and find new clusters. Be prepared to let go of details that are less important. Try to limit your insights to the three to five most important.

3. **Craft your insights**
   Experiment with the wording and structure to best communicate your insights. Create short and memorable sentences that get to the point. Make sure your insights convey the sense of a new perspective or possibility.

4. **Get an outside perspective**
   Invite someone who is not part of your team to read your insights and check whether they resonate with an outside audience.

FRAME OPPORTUNITIES

6

Step
Frame Opportunities

Mode
Hands-On

Time Needed
~45-90 min

Time Type
Intermittent

Create a Visual Reminder

Just as you use visuals in the classroom to make complex information more accessible, illustrations, diagrams and frameworks are great tools to communicate your insights.

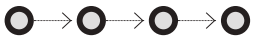
Team
2-3 People

What it gets you
A visual representation of your insights.

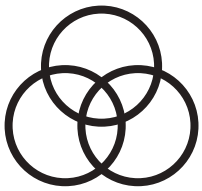
What to keep in mind
Not every set of insights needs to be represented as frameworks or visuals–use them only if they make it easier to communicate your message.

1. **Experiment with various visualizations**
   Try to express your learnings through different frameworks. Here are a few examples:
   - Journeys are great for looking at an experience over time. You can map peoples' moods, experiences or needs.
   - Venn diagrams help you express a few important themes and the relationships between them.
   - Two-by-twos help emphasize tensions and create different categories.
   - Maps help visually explain relationships.

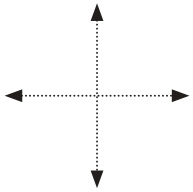
Journey map



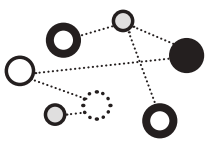
Venn diagram



Two-by-two



Relationship map



2. **Test your framework**
   Share your visualizations with someone who is not part of your team and get an outsider's point of view as to whether they make sense.

Step
Frame Opportunities

Mode
Reflective

Time Needed
~45-90 min

Time Type
Continuous

Make Insights Actionable

Insights only become valuable when you can act on them as inspiring opportunities. Turn them into brainstorm questions, the springboard for your ideas.

Team
2-3 People

What it gets you
Brainstorm questions that respond to the insights you found.

What to keep in mind
Avoid brainstorm questions that already imply a solution. Ask yourself: "Why do we want to do that?" This will help you reframe your question more broadly.

For example:

"How might we create a teachers' lounge with large couches?" implies the solution is a room with large couches.

"Why do we want to do that?" surfaces the actual need of a space for teachers to be able to wind down in between classes. The brainstorm question would then be:

"How might we create a space for teachers to unwind between classes?"

This expands possible solutions beyond the idea of a room with couches.

1. **Develop "how might we" statements**
   Create generative questions around your insights. Start each statement with "How might we...?" or "What if...?" as an invitation for input, suggestions and exploration. Generate multiple questions for every insight. Write them in plain language, simple and concise.

2. **Choose brainstorm questions**
   Select three to five of these questions for your brainstorm session. Trust your gut feeling: choose those questions that feel exciting and help you think of ideas right away. Also, select the questions that are most important to address, even if they feel difficult to solve for.

Ideation

Ideation means generating lots of ideas. Brainstorming encourages you to think expansively and without constraints. It's often the wild ideas that spark visionary thoughts. With careful preparation and a clear set of rules, a brain-storm session can yield hundreds of fresh ideas.

Brain-storming Rules

These seven rules will make your brainstorming session focused, effective and fun. Introduce them at the start of every brainstorm, even if they merely serve as a reminder for experience participants.

Defer judgement. There are no bad ideas at this point. There will be plenty of time to narrow them down later.

Encourage wild ideas. Even if an idea doesn't seem realistic, it may spark a great idea for someone else.

Build on the ideas of others. Think "and" rather than "but."

Stay focused on topic. To get more out of your session, keep your brain-storm question in sight.

One conversation at a time. All ideas need to be heard, so that they may be built upon.

Be visual. Draw your ideas, as opposed to just writing them down. Stick figures and simple sketches can say more than many words.

Go for quantity. Set an outrageous goal—then surpass it. The best way to find one good idea is to come up with lots of ideas.

GENERATE IDEAS

7

Step
Generate Ideas

Mode
Hands-on

Time Needed
~20-45 min

Time Type
Intermittent

Prepare for Brain-storming

Brainstorming may often be thought of as wild and unstructured, but it in fact is a focused activity that involves a lot of discipline. Take the time to set up appropriately in order to get the most out of your session.

Team
1-2 People

What it gets you
The setup for a dynamic brainstorming session.

What to keep in mind
When you make brainstorming part of another activity, lesson or meeting, remember that generating ideas is a mode that participants need a little time to get into. Create the time and space for a transition into that mindset.

1. **Start with a well-defined topic**
   Think about what you want to get out of the session. Select several focused brainstorm questions.

2. **Choose an appropriate space**
   Reserve a room with sufficient wall space, where participants can comfortably get up from their chairs and move around.

3. **Provide tools to capture ideas**
   Gather materials like Post-it Notes, markers, paper and snacks: don't underestimate the power of sugar in a brainstorming session.

4. **Invite a diverse group of people**
   Consider involving people who are not part of your team, as they'll have a fresh perspective. Include six to eight people.

5. **Plan for 45-60 minutes**
   Keep brainstorming sessions to an hour at most, to maintain focus and energy.

Step
Generate Ideas

Mode
Hands-on

Time Needed
~45-60 mins

Time Type
Continuous

Facilitate Brain-storming

Brainstorming is a great activity to generate fresh thoughts and new energy. Create a safe and positive atmosphere for your brainstorm so the team can come up with all kinds of wild ideas.

Team
6-8 People

What it gets you
A lot of fresh, new ideas.

What to keep in mind
Brainstorming is a fast and dynamic activity. Have your team stand up and encourage people to speak up and keep it short: only take a few seconds to explain an idea.

1. **Select a facilitator**
   Decide on a person to lead the group through the activity. Familiarize yourself with brainstorming protocol.

2. **Present your topic**
   Briefly ntroduce the challenge you are working on. Share some of the exciting stories from your Discovery phase.

3. **Introduce the rules of brainstorming**
   Explain each rule and its purpose to set the right tone for the activity. You can find an overview of brainstorming rules in the beginning of this section.

4. **Equip everyone for participation**
   Gather your team near a wall or flipchart. Give everyone a Post-it Pad and a marker. Encourage people to draw and be visual. Remind them to write in large letters and to note only one idea per Post-it.

5. **Start with a warm-up**
   Choose a fun, easy or even unrelated activity to get people in the right mood:
   - Warm-up brainstorm: how might we find a needle in a haystack?
   - Never could we ever: brainstorm things you could never do at your school.
   - Get visual: ask everyone to draw his or her neighbor in a minute. Share.

6. **Move one by one**
   Post the question you are brainstorming about on the wall so everyone can see it. Ask participants to take a few minutes and write down their first ideas before starting as a group. Then facilitate the brainstorm and capture each individual idea.

7. **Keep the energy high**
   Provide encouragement or alternative topics if the flow of ideas slows down. Switch to a new brainstorm question every fifteen to twenty minutes. Throw out some wild ideas yourself. Remind your team of the rules if needed. Set a goal for how many ideas you want to generate in total.

Step
Refine Ideas

Mode
Hands-On

Time Needed
~10-20 min

Time Type
Continuous

Select Promising Ideas

It is the passion and energy of a team that makes the development of an idea successful. To get a sense of which brainstorming ideas generate excitement, let everyone on the team vote on their favorites while they are still fresh in their minds.

Team
6-8 People

What it gets you
A selection of ideas that the whole team is excited about taking forward.

What to keep in mind
Don't spend too much time trying to identify the best thing to do. Trust your gut feeling—as long as there is excitement about an idea, it will be a good basis to work from.

Dare to leave behind some ideas at this point. You can always come back to your larger pool of brainstorm ideas and try out a new one if your first choice does not lead to success.

1. **Cluster the ideas**
   Spend a few minutes immediately after a brainstorming session grouping together similar ideas.

2. **Vote for favorite ideas**
   Ask the brainstorm participants to each select an idea that is their personal favorite, the one they want to work on, or the one they believe is most promising. Give everyone a limited number of choices. Let people decide in silence first, so that they are not swayed by others' opinions. Vote directly on the brainstorm Post-its, either using sticky dots or simply drawing a dot.

3. **Discuss the results**
   Count the votes and determine the most popular ideas. As a team, take the most promising ideas and decide which ones to develop further. Be realistic about the number you can pursue—aim for three ideas to start with.

Step
Refine Ideas

Mode
Hands-On

Time Needed
~30-60 min

Time Type
Intermittent

Build to Think

Prototypes are a great tool to learn more about an idea: building even a simple representation of an idea makes you think through a lot of details. Prototype early to decide whether you want to take an idea further.

Team
2-8 People

What it gets you
A first, tangible expression of your idea.

What to keep in mind
Seeing an idea come to life, even in a very basic form, injects enthusiasm and energy into a team's work. It is an opportunity to experiment and have fun while learning about your idea.

1. **Pick an idea**
   Right after your brainstorming session, form several groups of two to four people and pick ideas to prototype. Provide the teams with basic materials, such as paper, markers, scissors and glue.

2. **Build a prototype**
   In twenty minutes, create a simple expression of your idea. Draw from the various prototyping options in Create a Prototype, build a quick paper model, do a role-play, or draw a storyboard. Keep it simple and only focus on the most important aspects of your idea.

3. **Share back**
   Present your ideas to each other. Ask the other group members for feedback about their favorite parts of your prototype as well as aspects where they see room for improvement.

REFINE IDEAS

8

Step
Refine Ideas

Mode
Reflective

Time Needed
~45-60 mins

Time Type
Continuous

Do a Reality Check

So far, you have (hopefully) been developing your idea without giving much thought to the constraints you may face while attempting to realize it. It makes sense to now do a reality check: look at what's most important about your idea and find ways to evolve and develop it further.

Team
2-4 People

What it gets you
A first step toward bringing your idea to life.

What to keep in mind
A reality check might seem discouraging, as you may have to let go of some ideas. Focus on the possibility of actually building an idea in the long term to keep up your collective energy.

Consider doing these check-ins on a regular basis as you move forward with idea development.

1. **Find out what your idea really is about**
   As a team, examine what's 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?

   Capture your thoughts on Post-it Notes or a piece of paper. For example, if your idea is creating a teachers' lounge with large couches, the real value is in allowing teachers to relax.

2. **List constraints**
   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? Put the list up on the wall so it is visible to the team.

3. **Brainstorm new solutions**
   First, start from the list you created in step one of this method, describing the core values of your idea. Think up other possibilities that might satisfy the needs your idea responds to. Consider facilitating a quick brainstorm to come up with more ideas.

   For example: how might we create spaces for teachers to unwind between classes?

   Then revisit your list of constraints. Brainstorm how you might address some of these challenges. For example: how might we raise money to acquire furniture for our common space?

4. **Evolve your idea**
   Discuss how you can change your concept based on your new ideas. How can you address the need differently? How can you work around the constraints you are facing?

5. **Archive ideas**
   Let go of ideas that feel too difficult to create, or that you are not excited about. Keep your Post-its and notes so you can revisit them later.

Step
Refine Ideas

Mode
Hands-on

Time Needed
~30-60 min

Time Type
Intermittent

Describe Your Idea

Once an idea has started to evolve, you may find it helpful to capture your thoughts in a more structured format. Create a concept description. Consider it a repository for thoughts and questions rather than a finished piece.

Team
2-3 People

What it gets you
A description of your idea that summarizes all of its important aspects.

What to keep in mind
While you may find yourself creating an extensive collection of thoughts or questions in the first place, your concept description will become stronger as you simplify it to a concise summary.

1. **Capture your thoughts**
   With your team, use a large sheet of paper to summarize your idea. Use the following structure to describe its most important aspects:
   - Choose a title for your idea
   - Summarize your idea in a single sentence
   - Describe how your idea would work
   - Name the people it involves, both to build as well as to use it
   - Explain the needs and opportunities identified through field research
   - Illustrate the value and benefit for each person involved
   - List questions and challenges
2. **Evolve your summary**
   Change and adjust your concept description continuously as you prototype and iterate your idea. Keep it in a place that is visible to all team members.


Experimen-
tation

Experimentation brings your ideas to life. Building prototypes means making ideas tangible, learning while building them and sharing them with other people. Even with early and rough prototypes, you can receive a direct response and learn how to further improve and refine an idea.

MAKE PROTOTYPES

9

Step
Make Prototypes

Mode
Hands-On

Time Needed
~45-90 min

Time Type
Intermittent

Create a Prototype

Prototypes enable you to share your idea with other people and discuss how to further refine it. You can prototype just about anything. Choose the form that suits your idea best from the list below.

Team
2-4 People

What it gets you
A tangible representation of your idea that you can share and learn from.

What to keep in mind
Prototyping is not about getting it right the first time: the best prototypes change significantly over time. Give yourself permission to try, and fail, and try again.

Sometimes your worst ideas teach you the most. Prototyping them may lead to new inspiration.

Challenge yourself to come up with at least three different versions of your idea to test multiple aspects of the possible solutions your team has come up with.

Keep a "parking lot" for questions that come up while you build prototypes. Revisit and answer them as you develop your idea further.

Capture the evolution of your prototype over time as you make changes and increase its resolution.

Create a storyboard
Visualize the complete experience of your idea over time through a series of images, sketches, cartoons or even just text blocks. Stick figures are great—you don't need to be an artist. Use Post-it Notes or individual sheets of paper to create the storyboard so you can rearrange their order.

Create a diagram
Map out the structure, network, journey or process of your idea. Try different versions of your visualization.

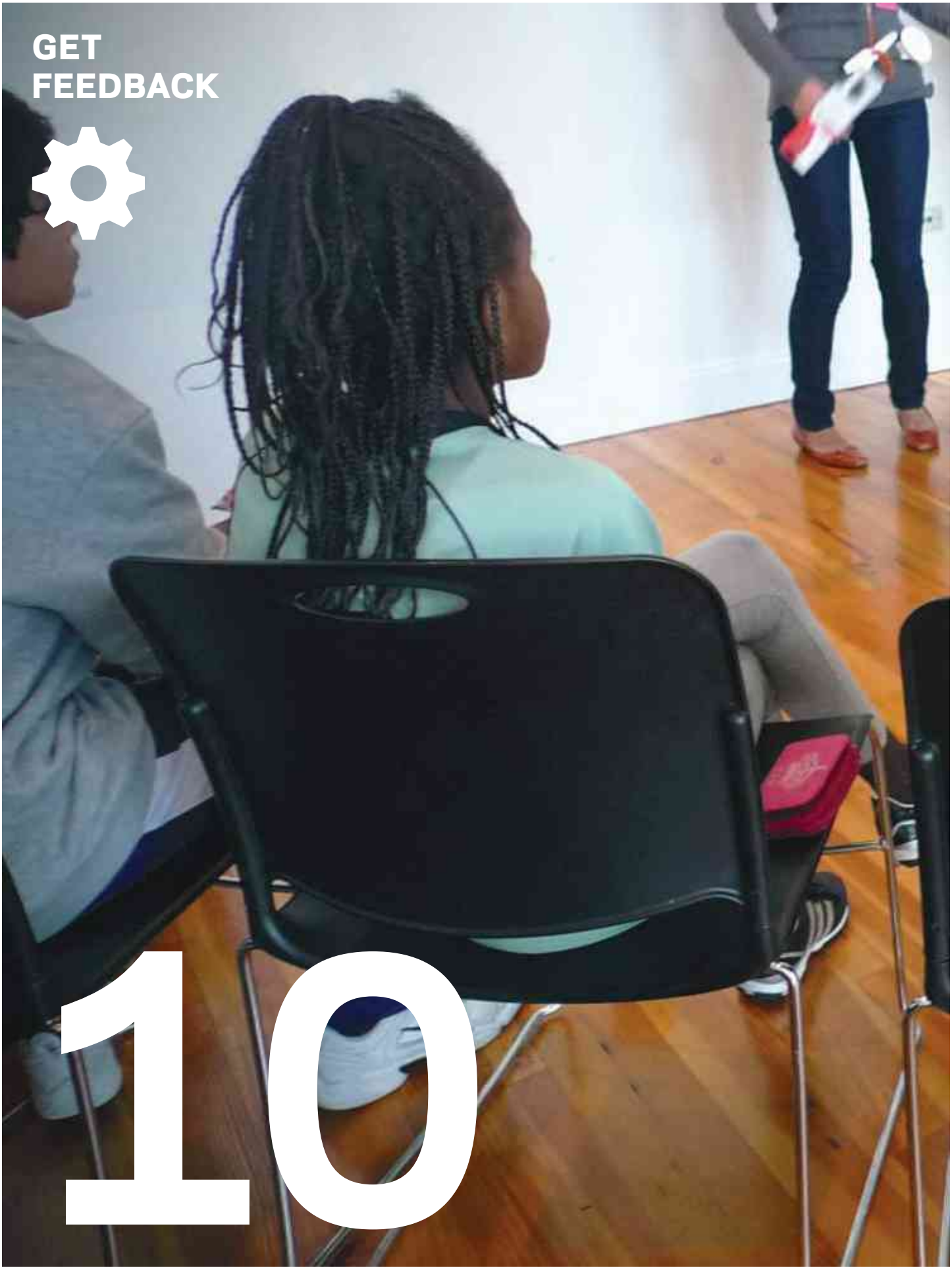
Create a story
Tell the story of your idea from the future. Describe what the experience would be like. Write a newspaper article reporting about your idea. Write a job description. Create a letter to be sent to parents. Describe your idea as if it were published on the school website.

Create an ad
Create a fake advertisement that promotes the best parts of your idea. Have fun with it, and feel free to exaggerate shamelessly.

Create a mock-up
Build mock-ups of digital tools and websites with simple sketches of screens on paper. Paste the paper mock-up to an actual computer screen or mobile phone when demonstrating it.

Create a model
Put together simple three-dimensional representations of your idea. Use paper, cardboard, pipe cleaners, fabric and whatever else you can find. Keep it rough and at a low fidelity to a start, and evolve the resolution over time.

Create a role-play
Act out the experience of your idea. Try on the roles of the people that are part of the situation and uncover questions they might ask.


GET
FEEDBACK
10

Step
Get Feedback

Mode
Hands-On

Time Needed
~30-60 min

Time Type
Intermittent

Make a Test Plan

Feedback is one of the most valuable tools in developing an idea. Sharing prototypes helps you see what really matters to people and which aspects need improvement. Make a solid test plan to elicit responses that help you learn how to build on your idea.

Team
2-4 People

What it gets you
A prototype and goal to receive specific feedback on your idea.

What to keep in mind
Don't invest too much time in perfecting your feedback prototypes. They are meant to start a conversation about how to change and improve them, not to prove that they are right.

1. **Define what to test**
   With your team, evaluate your prototype and determine what kind of feedback you are looking for: what is the most important question you want to ask? Do you want to get feedback on the first impression of your idea? 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? Capture your thoughts and create a list that will remind you of the goals of your research.

2. **Build a prototype to share**
   Create prototypes that communicate a main idea and highlight the aspects you want feedback on. Prepare various versions that emphasize different facets of your idea to find out what resonates with people.

Step
Get Feedback

Mode
Hands-On

Time Needed
~20-30 min

Time Type
Intermittent

Identify Sources for Feedback

It's often eye-opening to see a prototype in context. Choose where and how you want to receive feedback on your idea, depending on the resolution of its development.

Team
2-4 People

What it gets you
A plan for your feedback activities.

Keep in mind
The direct interaction with a feedback participant in a conversation enables you to ask questions immediately, and to test changes to your prototype on the spot. This is particularly helpful when you are trying to move fast.

The responses you receive from participants using your prototype and self-documenting their experience over a period of time can help you understand the longer-term impact of your concept.

1. **Consider the setting**
   Decide what context you want to share your idea in. Is it helpful to first show a rough idea in an informal setting you are familiar with? Will you learn the most from seeing your prototype in the context it will be used in? Can you let people experience your prototype without further explanation in various places?

2. **Define feedback activities**
   Based on what you are trying to learn, carefully plan your feedback activities. Arrange for a conversation if you are interested in a first impression. Set up an activity or service as if it were real if you want to observe peoples' actual behaviors. Consider letting people use a prototype over a period of time if you are interested in its longer-term impact.

   Revisit the following research activities (find more information on their respective method pages):
   - Learn from individuals
   - Learn from groups
   - Learn from experts
   - Learn from peers observing peers
   - Learn from peoples' self-documentation

Step
Get Feedback

Mode
Hands-on

Time Needed
~30-60 min

Time Type
Intermittent

Invite Feedback Partici-pants

People who have continuously seen the development of your idea can provide detailed feedback, while those new to the concept can help you understand which aspects are most appealing and/or difficult. Consider which perspectives are most important to evolve your idea.

Team
2-4 People

What it gets you
Activities and appointments to get feedback on your prototype.

What to keep in mind
Feedback is helpful even if your idea is still rough. It's easier to informally share early prototypes with friends and colleagues first, before setting up feedback sessions.

Don't be afraid of the skeptics: often, you will learn the most from your worst critic.

1. **Decide on who to involve**
   Create a list of people you want to engage in the feedback process. Revisit the overview of your audience. Discuss whom you will learn the most from. Include people you have met during your field research as well as new participants.

2. **Plan the interaction and logistics**
   Determine a meeting place and timeframe for your feedback sessions. Consider asking participants to use your prototype ahead of meeting you.

3. **Invite participants**
   Reconnect with participants you met earlier in the process. They are generally excited to see the progress of your idea development. Identify new participants within and outside of your network.

4. **Track your recruiting progress**
   Create an overview that helps everyone on your team keep track of the activities, progress and scheduling.

Step
Get Feedback

Mode
Hands-On

Time Needed
~30-60 min

Time Type
Continuous

Build a Question Guide

A good feedback conversation is a mix of spontaneous reactions to your prototype as well as structured questions designed to compare various peoples' opinions about the same topic. Prepare a question guide that helps you navigate both sides.

Team
2-4 People

What it gets you
A guide to getting the most out of your feedback conversations.

What to keep in mind
Create the sense of a collaborative work session to build on and develop your prototype, rather than a critique. Avoid yes/no questions and invite people to think of improvements.

1. **Choose open questions**
   Revisit questions that came up during the development of your idea. Pick those that you want to include in feedback sessions. With your team, discuss other areas to explore.

2. **Frame questions to encourage build**
   Formulate your questions so that they lead to constructive feedback and encourage participants to build on your idea, such as:
   - "Can you describe what excites you the most about this idea, and why?"
   - "If you could change one thing about this prototype, what would it be?"
   - "What would you like to improve about this idea?"

3. **Arrange your question guide**
   Organize your questions according to the following structure:
   - Start with general impressions. Let the participants share their initial thoughts about your concept.
   - Ask for specific feedback about your idea.
   - Open up the discussion and encourage a broader conversation.

   Create a readable format of the question guide, so you can glance at it quickly during your conversation. Be mindful of the timing of your conversation.

Step
Get Feedback

Mode
Interaction

Time Needed
~30-60 min

Time Type
Continuous

Facilitate Feedback Conversations

The most important ingredient in a feedback conversation is honesty: people may feel shy about telling you what they really think of your idea if they know that you are very invested in it. Create a setting that encourages an open conversation.

Team
2-4 People

What it gets you
Constructive feedback on your prototype.

What to keep in mind
Try to let participants experience your concept, rather than just talking about it: let them interact with a prototype in their own context, or integrate them into a roleplay.

1. **Invite honesty and openness**
   Introduce your prototype as a sketch that you are working on. Make it clear that the development of your idea is still in progress, and that you have not spent much time on building the prototype or refining the details.

2. **Provide multiple prototypes**
   Prepare various versions of your prototype to encourage people to compare and contrast.

3. **Stay neutral**
   Present all concepts with a neutral tone. Don't be defensive—listen to all the feedback and take notes both of the positive and negative comments.

4. **Adapt on the fly**
   Encourage participants to build on the idea, and change your prototype right away. Be ready to eliminate or change parts of the idea.

Step
Get Feedback

Mode
Reflective

Time Needed
~30-45 min

Time Type
Continuous

Capture Feedback Learnings

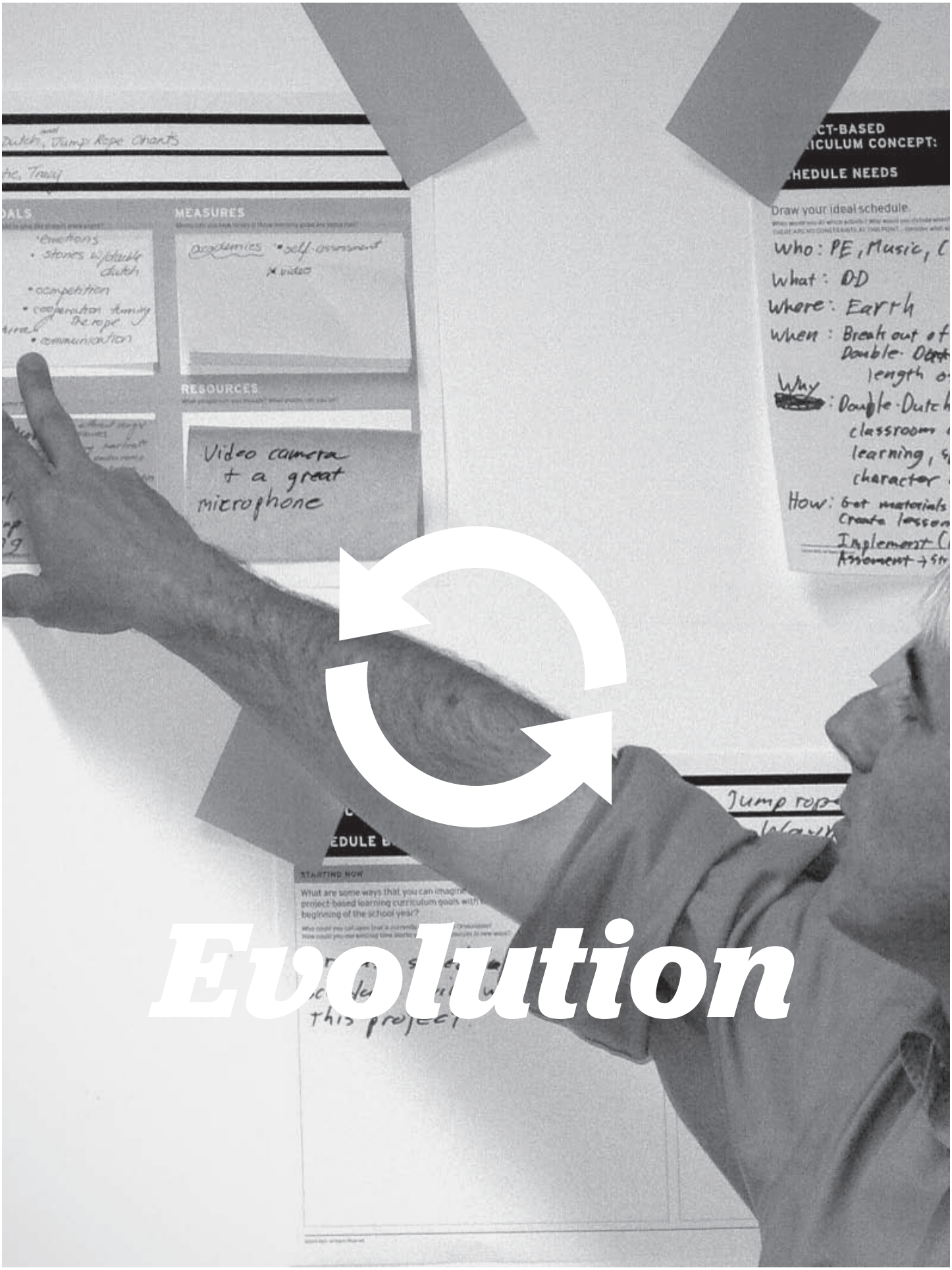
Feedback conversations are rich in information, and the subtle impressions of a participant's reactions are often most important to remember. Take some time right after your session to capture what you have observed.

Team
2-4 People

What it gets you
A summary of new ideas and perspectives on how to improve your concept.

What to keep in mind
Don't shy away from changing your prototype in between feedback conversations. Test your iterations right away.

1. **Find a space and time**
   Plan for some extra time after a feedback session, so you can share your impressions right after your conversation when they are still fresh in your mind.
2. **Share your impressions**
   Discuss the conversation with your team. Compare each other's learnings. Take notes on your conversation. Consider using the following prompts:
   - What did participants value the most?
   - What got them excited?
   - What would convince them about the idea?
   - Which parts would participants like to improve?
   - What did not work?
   - What needs further investigation?
3. **Capture your ideas and design iterations**
   Discuss how to improve your prototype and capture ideas for a next iteration immediately.


MEASURES
academics • self-assessment
× video
RESOURCES
Video camera
+ a great
microphone
Draw your ideal schedule
Who: PE, Music,
What: DD
Where: Earth
Why
STARTING NOW
What are some ways that you can imagine
project-based learning curriculum goals with
beginning of the school year?
this project
Jump rop

Evolution

Evolution is the development of your concept over time. It involves planning next steps, communicating the idea to people who can help you realize it, and documenting the process. Change often happens over time, and reminders of even subtle signs of progress are important.


EVALUATE
LEARNINGS
11

Step
Evaluate Learnings

Mode
Reflective

Time Needed
~30-60 min

Time Type
Continuous

Integrate Feedback

Feedback is invaluable to developing an idea, but can also be quite confusing. It may be contradictory, or may not align with your goals. Sort through the responses you receive and decide on what to integrate in your next iteration.

Team
2-4 People

What it gets you
Iterations of your concept based on feedback.

What to keep in mind
Do not take feedback literally. You don't need to incorporate every suggestion you receive. Look at feedback as an inspiration for better ways of solving the problem. For example, instead of reasoning that "The participants didn't like the couches, so we shouldn't have any," think of it as "They didn't like the couches so maybe the space should offer a more active feel." Then explore what that means and find new ideas.

1. **Cluster the feedback**
   As a team, discuss the reactions you received to your prototypes. Start by sharing the impressions you captured right after your feedback conversations. Take notes on Post-its. Sort and cluster the feedback: what was positively received? What concerns came up? What suggestions and builds did you find?

2. **Evaluate the relevance**
   Take a moment to revisit where you started. Look at your earlier learnings and ideas. What was your original intent? Does it still hold true, based on the feedback you have received?

   Prioritize the feedback: what is most important to making it a success? Sort your notes and create an overview of which feedback you want to respond to.

3. **Iterate your prototype**
   Incorporate valuable feedback into your concept. Make changes where people saw barriers. Emphasize what was well received. Then, create a new prototype that you can share. Go through feedback cycles repeatedly and continue to improve your concept.

Step
Evaluate Learnings

Mode
Reflective

Time Needed
~30-45 min

Time Type
Continuous

Define Success

As your concept evolves, you can begin to measure its impact. Define a set of criteria for success to help guide and evaluate the development as you scale and build on your idea.

Team
2-4 People

What it gets you
Criteria to evaluate the success of your concept.

What to keep in mind
Consider your criteria for success a tool that helps you identify which parts still need further improvement. Don't just rule out ideas.

You might find that a prototype offers some added benefit that you hadn't intentionally considered. Take note of that and consider refining that feature.

1. **Consider the people involved**
   Make a list of all the people your concept touches. Revisit your initial overview of the audience. Consider which values your concept has for each of these groups of people: is the prototype being used by the people you intended it for? What do they appreciate about your concept?

2. **Identify measures for success**
   As a team, discuss what success means for you:
   - Are you hoping to count on a large number of colleagues attending an event?
   - Which stories would you like to hear parents tell?
   - What would a report on the school website say?
   - 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?

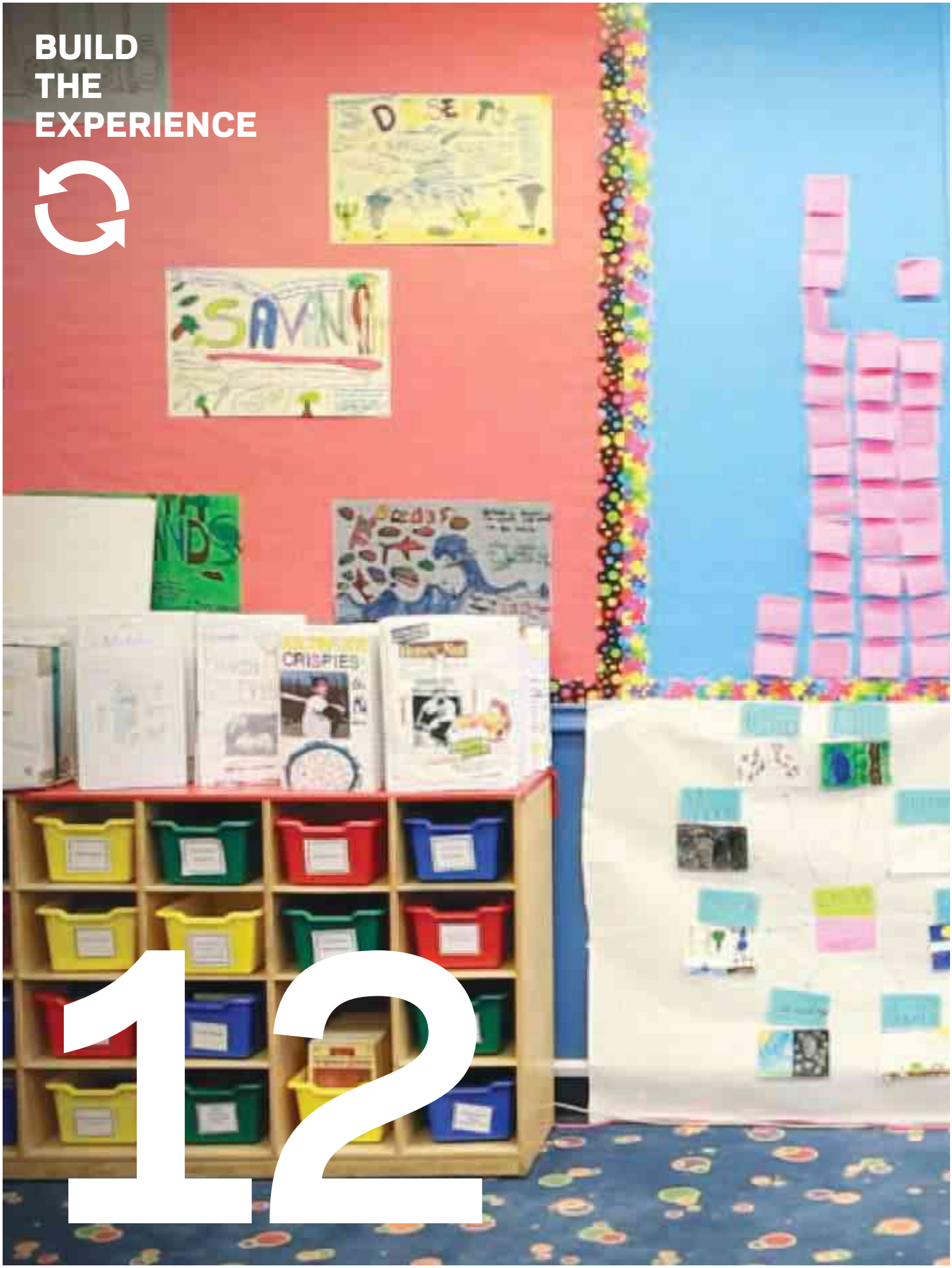
   Write down what kind of impact you are looking for.

3. **Track what happens**
   Think about how you want to measure the impact. Will you actively ask people? Are you waiting for a parent to approach you? Can you count numbers?

   Plan how to track these indicators. Observe and take notes on the impact over time.

4. **Continue**
   Monitor the progress of your idea, periodically reconsidering these criteria.

BUILD THE EXPERIENCE



12

Step
Build the Experience

Mode
Hands-On

Time Needed
~30-45 min

Time Type
Intermittent

Identify What's Needed

In order to realize your concept, you will need various resources and capabilities, namely materials, money, time and people. Specify what exactly it will take to make your idea come to life.

Team
2-4 People

What it gets you
An overview of what it takes to realize your idea.

What to keep in mind
Your needs may be larger than the support you can receive from your school. Don't give up. Find ways to creatively make your concept work within those constraints. Can you involve an extra person to lessen the workload? What can you do with existing materials?

Reflect on how your idea will be sustained over time. Can it scale? Will it live on without your involvement? Build a foundation for longer-term impact.

1. **Specify materials**
   Make a list of all the materials you will need to build your concept. Are these supplies available at your school? Will you need to purchase any new assets?

2. **Calculate funds**
   Money will always be a scarce resource in an educational context. Don't let this discourage you. Think about creative ways to hold a fundraiser. Look into applying for a grant. Consider opportunities to tap into existing budgets. Don't forget to explore how to realize your idea without any money as a brainstorm challenge.

3. **Estimate timeframes**
   Specify the amount of time that you'll need to create your concept. Do you need time for preparation? Does anyone need to be trained? Do you want to use an existing meeting time differently?

4. **Identify people**
   Create an overview of people who can help 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? Capture your needs on Post-its. Sort them and identify which capabilities you have inside your school, and which you'll have to find externally. Think about leveraging the larger network and including parents, alumni and/or neighbors.

Step
Build the Experience

Mode
Interaction

Time Needed
~45-60 mins

Time Type
Continuous

Pitch Your Concept

A credible and inspiring story will help convince others to support your concept. Build your pitch to motivate others to help bring the idea to life.

Team
2-4 People

What it gets you
A story that can convince potential supporters of your concept's strength.

What to keep in mind
Begin by communicating what excites you the most– talk about the opportunity and the bigger ideas rather than small details. This enables others to see the value and contribute to the concept.

1. **Know your audience**
   Think about who you are trying to get excited about your idea. Put yourself in the shoes of the listener: what will get them interested in your idea? What will they be motivated by? For example:
   - For educators: how is it going to help me do my job? How is it going to help my students succeed?
   - For administrators: How does this affect the way our school is viewed?
   - For parents: how is this going to help my child succeed in school?
   - For students: how is it going to make learning more fun?
   - For potential team members: why would I want to be part of this? What's in it for me?
2. **Highlight the potential**
   Create a provocative statement for your idea. Get your audience excited about the opportunities you see. Frame it as "What if...?"
3. **Build a narrative**
   Tell a brief and engaging story, focusing on the most important aspects of your concept. Describe what inspired your idea, and how it responds to the needs you learned about.
4. **Communicate the value**
   Explain the value your idea provides for the various people involved. Be explicit and illustrative in your descriptions.
5. **Be specific about your needs**
   Be clear about what you want from your audience. Draw from your list of needs and communicate what support you need.
6. **Encourage contribution**
   Invite others to join the conversation or help build the concept. Consider engaging your audience in an activity that lets them experience and participate in the design process.

Step
Build the Experience

Mode
Interaction

Time Needed
~30-45 min

Time Type
Intermittent

Build Partner-ships

Often you do not have all the capabilities or resources available to realize an idea. Look outside and find partners who can help you bring a concept to life.

Team
2-4 People

What it gets you
Additional resources, capabilities and inspiration to realize your concept.

What to keep in mind
Don't be intimidated by different work styles that you encounter from your partners: every educational institution has its particular character, and corporate or private organizations operate in their own ways. Look at these differences as a learning opportunity.

1. **Specify your needs**
   Revisit the list of needs you created for your concept. Consider which needs you have the resources for, and which you cannot do yourself.

2. **Identify partners**
   Create an overview of organizations or individuals that have capabilities you are missing. What is your relationship with them? How can you reach out to them? Make a list of who will contact these potential partners.

3. **Structure the collaboration**
   Adapt your pitch story to share the excitement about an idea with new partners and clearly communicate your hopes for the collaboration. Write down goals, meeting times and responsibilities to build a common understanding of everyone's contributions.

4. **Learn from each other**
   Make your interactions with a partner a true exchange of meaningful ideas. Have an open dialogue about your progress, ask lots of questions and actively encourage partners to share their thoughts.

Step
Build the Experience

Mode
Hands-On

Time Needed
~30-45 min

Time Type
Continuous

Plan Next Steps

The implementation of an idea requires a different approach from its generation. When your idea has evolved into a solid concept, it's time to plan the next steps. With your partners and team, create a timeline for bringing the concept to life.

Team
2-4 People

What it gets you
A calendar outlining team members' involvement in realizing your concept.

What to keep in mind
An idea often changes significantly when people start using it and adjust it to their own needs. Consider adaptations as yet another learning opportunity.

The success of a concept largely depends on the people who are invested in bringing it to life. Build a strong team and let people feel ownership of their contributions.

1. **List tasks**
   Create an overview of all the actions that need to be taken to build your concept. Write them down on Post-it Notes. Use different colored Post-its to capture open questions.

2. **Assign champions**
   Appoint a person on your team or a partner to each of the tasks you have identified. Review the questions. Decide who will be responsible for finding an answer. Write the name of the person responsible for a task on that Post-it Note.

3. **Identify gaps**
   Are there activities that you can't assign to anyone, or open questions you can't find an answer to? Create a list of tasks that you need to seek help with.

4. **Create a timeline**
   Map all the tasks to a timeline. Form agreements about the timing and commit to certain dates.

5. **Plan regular check-ins**
   Set up a time for a regular, informal team meeting (for example, a weekly breakfast check-in of 30 minutes) to keep the momentum going. Use this time to share thoughts, ideas and concerns.

Step
Build the Experience

Mode
Hands-On

Time Needed
~30-60 min

Time Type
Intermittent

Document Progress

Once an idea has been implemented and become a part of everyday life, it is easy to lose sight of its impact. Change often happens slowly, and subtle reminders of success are important.

Team
2-4 People

What it gets you
Evidence of the impact your concept is creating over time.

What to keep in mind
Make sure to keep your eyes open for both positive as well as unintended signs of impact. It's often the workarounds and unintentional use of concepts that inform new design challenges.

1. **Track signs of change**
   Use the research skills you acquired during the Discovery phase to observe indicators of change over time. Have you noticed different behavior? Have the relationships between people changed? Did you notice comments from your students? Ask questions, listen to stories and take notes and photos.
2. **Share stories**
   Arrange reflection meetings with your team. Tell each other stories of your observations. Write down quotes and observations and identify common themes.
3. **Discuss effects**
   As a team, reflect on the changes you have noticed. Compare your impressions with initial circumstances. Revisit the learnings from your early discoveries. Consider creating a "before/after" overview.
4. **Celebrate achievements**
   Build an awareness of the changes that have come from your concept. Even if incremental, celebrate with your colleagues and encourage their continued involvement.

Step
Build the Experience

Mode
Reflective

Time Needed
~60-90 min

Time Type
Continuous

Share Your Story

Stories are the most powerful way to communicate the experience of the design process. Craft a story that can be shared broadly.

Team
2-4 People

What it gets you
A compelling story communicating your experience and result.

What to keep in mind
Adapt your story based on which audience you are telling it to. What would you tell your headmaster? What do you want parents to take away from it? How would you present this to the school board?

1. **Collect memories**
   With your team, spend time recollecting the experience of this process. Remember favorite moments, surprising encounters and the most challenging days. Take notes on Post-its.

2. **Build a narrative**
   Create a story about your experience. Use the prompts below to structure your thoughts.

   Create an overview:
   - What challenge did you start out with?
   - Who was part of the team?
   - What partners did you integrate?
   - What needs did you find out about?
   - How did you respond to what you learned?
   - What experience did you create?

   Talk about interesting experiences:
   - What was the most surprising thing you learned while looking for inspiration?
   - What was your most absurd brainstorm idea? The most creative prototype?

   Share your impressions:
   - Which moments of the experience were most rewarding?
   - Which part of the process was most difficult?

   Use photos to illustrate your story.

3. **Spread your story**
   Consider various methods of sharing your story. Create materials that help your team members communicate the story. Craft an email that can be forwarded. Write a short description that can be integrated in a letter to parents or an article for the school's website.

Phase (Circle one)

Step

(Circle one)

Mode

(Shade in)

Time Needed

(Circle one)

Time Type

(Method title)

(Overview)

(Circle number)

Team

Where it gets you

What to keep in mind

(Instructions)

Design Team

Riverdale + IDEO

This toolkit is the result of a close collaboration between Riverdale Country School and IDEO from February-April 2011.

Riverdale Country School is an independent Pre-K through Grade 12 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.

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