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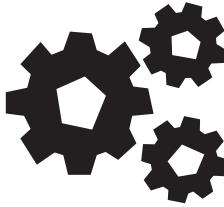
CHANGE

AGENT

A DESIGN THINKING TOOLKIT FOR THE CLASSROOM

The image features a black background with a pattern of numerous thin, vertical white dashed lines. Overlaid on this background are several large, white, stylized arrows of varying sizes and orientations. These arrows are arranged in a dynamic, overlapping fashion, pointing in various directions such as up, down, left, and right. The overall composition is abstract and energetic.

DESIGN DECK



UN/WELCOMING PORTALS

Entryways are the first thing you see when you approach an unfamiliar place. The entryway is an important threshold. The way it is designed influences how you feel as you pass through it. Some portals are designed to welcome people in, others to keep people out.

EMPATHY

SPATIAL & KINESTHETIC LEARNING

UN/WELCOMING PORTALS



small groups of 4-8 people each



classroom furniture, cardboard boxes & other recycled materials, scissors, pencils, paper

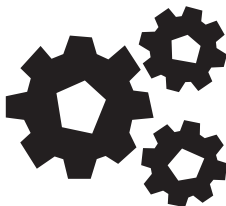
THINK As a class, list spaces that feel welcoming or unwelcoming. What qualities make them feel that way? Discuss.

DESIGN In this activity, half the group will design a welcoming entryway, the other half will design one which is open, but *unwelcoming*—one that might make us think twice before walking through. In teams, write down the emotions you'd like those entering your space to feel—warmth and generosity; fear and alienation? Each team will build their entryway based on the qualities they identified during the initial class brainstorm above.

BUILD Look around the classroom for things that can be used to build your entryway—desks, chairs, books, and boxes are all fair game! Consider how the color, feel, or arrangement of materials could aid your design. What would people walking toward your space see? What might they smell? What's under their feet or over their head? How easy or difficult will it be for them to move through the entryway? What might a person see when they get to the other side? Teams may not use signage or words in their design.

TEST Once both teams are finished, each is invited to walk through the other's entryway and record their feelings on paper, quietly.

REFLECT Discuss the experience as a class. How closely did the other team's experience match with your team's intentions? Was your design successful? How might you improve it?



MOOD MAPPING

Often when we're seeking to transform a space or place, we focus more on noticing the problems we see, rather than on what's already working well. Mapping *all* the moods associated with a place can help us figure out how best to identify and address the challenges present there.

EMPATHY

OBSERVATION

MOOD MAPPING



small groups of 3-6 people



paper, assorted colored markers

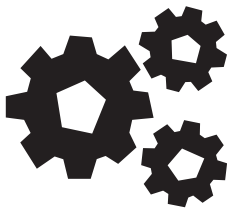
GET OUT THERE In small groups, walk slowly through a building or neighborhood you're hoping to improve. As you go, pay attention to how the environment affects how you're feeling—from room to room, street to street, block to block.

MAP IT Working as a group, use different colored markers to represent shifting moods on your map. Does one block or room feel particularly lonely? Trace it in black. Is another lively and vibrant? Mark it with a warm color, like red.

Make notes on your map with all of the factors that contribute to the moods you've identified. What makes one block lonely—are there a lot of parking lots or abandoned buildings? Are there no street lights? What makes another block vibrant—are there places for people to gather and play? List as many assets and problems as you can, and mark them in the appropriate places on your map.

PIN IT UP Back in your classroom, pin up and compare all the groups' maps. Identify the areas that your group finds problematic and the areas that are working well. Where do they overlap?

PLAN IT OUT Make a list of possible places for intervention—sites that will allow you to make the most of the great stuff that exists, while minimizing the negative elements. Once you've figured out what issues you'd like to address as a group, you're ready to move on to exploring possible solutions!



BOARD WALK

Getting people to share personal stories about their experiences can reveal very specific and often useful information. When told in a group setting, you can identify themes and patterns *between* the stories as well. This activity also works well as an icebreaker!

ANALYSIS & EVALUATION

VERBAL COMMUNICATION

SYNTHESIS

BOARD WALK



4-30 people



poster boards, ideally 11 x 17" or larger, one for each participant;
sticky notes; markers or pens

DEFINE Identify 3-4 key questions that will help you better understand the challenge you're addressing. Keep them open-ended, and wherever possible, allow people opportunities to share their individual experiences.

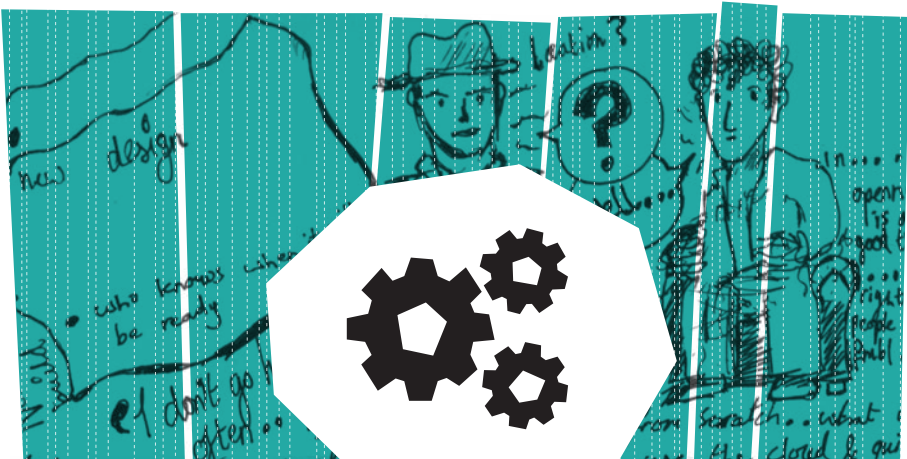
PAIR UP Everyone is given a poster board. The facilitator invites people to partner with someone they don't yet know, or assigns partners randomly. The first question is read aloud, and each partner is given a set amount of time (usually 1-3 minutes each) to respond in turn.

LISTEN While each participant is sharing their story, their partner is listening attentively and writing down the key words or phrases they hear on individual sticky notes, which are then stuck to the speaker's board.

SWAP After both partners have shared their responses, the facilitator signals a swap, and everyone takes their boards with them and finds a new partner for the next question.

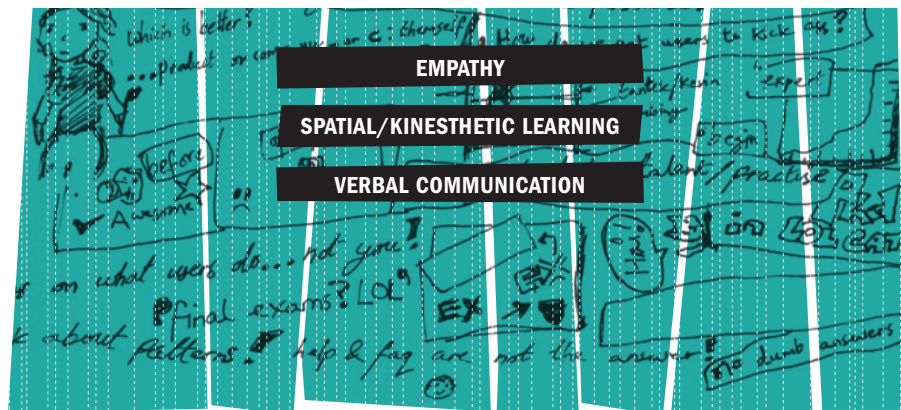
BOARDWALK After the questions are complete, the boards are displayed and the entire group takes 5-10 minutes to do a "Board Walk" of the room and review the key ideas that have emerged.

SHARE The facilitator leads a quick share-out of ideas and asks the group to sort their keywords into thematic clusters to see what patterns emerge. To take this activity one step further, invite the group to steal key words from any board and use them to craft a sentence or poem about the challenge being addressed.



CHANGE AGENT TEA PARTY

This activity helps us discover how to ask the right questions in a way that encourages others to share their knowledge. It makes us aware of the covert or unintended messages our bodies broadcast and gives us practice capturing juicy bits of information shared by our “informants”.



CHANGE AGENT TEA PARTY



4-30 people



refreshments; paper and pencils

DEFINE What information do you need in order to better understand your problem, and how can the questions you ask provide rich, detailed answers in return? Open-ended questions give people a chance to share their full stories, rather than simple one-word responses. So before you begin the conversation, take some time to craft your questions.

PAIR UP Take turns asking each other your first question; each partner has two minutes to respond. Practice listening to your partner with with your whole body, showing them that you care about their response. Follow-up with “Why?” or “Tell me more...” to press for more details. Discreetly record key information in your notebook.

SWAP With a new partner, carry on asking questions. Once you're comfortable using these interview techniques, you're ready to get out there and talk with the people who know the most about the challenge you've chosen to take on. Don't forget to interview the people who need to give you permission to make your project a reality.

SNACK This activity works best with tasty snacks and drinks. Add tea and cookies (or mocktails and mixed nuts) to the mix, and boom! It's a party. You can even invite your guests to adopt secret identities and come dressed as spies.



ALIEN ARCHAEOLOGIST

By paying close attention to what we see around us, we can begin to understand how things work and how we might actively design change. Alien Archaeologist helps us practice ignoring what we *think* we know so that we can see more clearly what's right under our noses!



CREATIVE PROBLEM SOLVING

EMPATHY

OBSERVATION

ALIEN ARCHAEOLOGIST



two or more small groups of 3-5 people



unique objects that serve (or served) a purpose (it's best if they are unfamiliar to most of the group; antique tools or unusual kitchen implements work well); paper and pencils

SET THE SCENE The year is 3985. You are an alien archaeologist whose mission is to study human activity of the past, primarily through the recovery and analysis of the material culture that was left behind on Earth. The objects before you are all that remains of an unknown, and rather odd civilization.

OBSERVE Each team receives one object. Your team's job is to record your observations, then deduce each object's purpose. Examine your object and list as many physical characteristics as you can: texture, color, size, shape, weight, material choice, connection methods, structure, aesthetic, age, cost, etc. As a trained scientist, of course you understand the importance of holding back judgment until you've made thorough observations, knowing that there are usually hidden details that will lead to more informed guesses.

IDENTIFY What was the purpose of this object? How did humans on earth use it? What did they use it for? It's less important to correctly guess the function than to be able to support your guess with evidence based on your observations.

DEBRIEF Once everyone has made their guesses, each objects' purpose is revealed. As a group, discuss the decisions that the object's designer made so that it would fulfill its purpose and be easy to use.



BUMPING MOLECULES

The best ideas are sometimes combinations of other, not-as-great, ideas. Just as groups of atoms come together to form everything in this world, random collisions of unrelated ideas can spark magic.

COLLABORATION

CREATIVE PROBLEM SOLVING

FLEXIBLE THINKING

BUMPING MOLECULES



one large group of 12-30 people



your feet, your arms

SPIN Everybody comes up with their own idea in response to a question or problem, and figures out how to say it in just a few words. The whole group is blindfolded and set loose to spin around the room like atoms.

BUMP Every time two atoms bump into each other, they each share their idea. If they think there's a way their two ideas could work together, they link arms and become a molecule. The pair continues spinning around the room until they bump into another atom. They share their ideas again, and if the new atom's idea fits, they join forces to become a trio. If they can't think of a plausible way to link their ideas, the atoms spin off in their own directions.

SHARE When it seems like everyone likely to link up has done so, the molecules stand in clusters and present their ideas in chains—with each atom sharing their individual idea and one 'spokes-atom' explaining how those ideas might work together.



BRAIN DASH

Quick sprints get your blood pumping, focus the mind, and clear it of preconceptions. This active brainstorming session encourages quantity of ideas over quality. When you're moving too fast to criticize others' ideas (no matter how outlandish!) you may just wind up sparking some innovative and imaginative leaps of your own.

CREATIVE PROBLEM SOLVING

FLEXIBLE THINKING

KINESTHETIC LEARNING

BRAIN DASH



two or more small groups of 3-10 people



big pads/roll of paper or whiteboard; markers; ; small prizes for the winning team

ON YOUR MARK If you're inside, clear the furniture to the sides of the room. Find a space where your group can comfortably fit and line up the teams side by side, a few feet apart. Decide how far your group should run, and set up the pads or roll of paper that far away from the starting line. Each team should have a clear shot at the paper. If you want to keep things quick, you're working with young children, or you have a snug classroom, a 8-10' sprint is fine. If you have a group of energetic teens or adults, and some room to spread out in, 30-50' dashes can be more challenging.

GET SET Define your question carefully, striving to keep it focused but open to many responses. Remind the group that negativity is the death of creativity, and ask them not to mock others' ideas. Set a time limit. 5 minutes if you're pressed for time, up to 15 minutes if you want your group to dig deep and generate a ton of ideas.

DASH When you say *DASH!*, one member of each group starts the race, marker in hand. They dash to the roll of paper, record one idea, and run back to pass the marker to a teammate, who does the same. The dash continues until time runs out (call out time warnings as the clock winds down to add drama). Each group counts the total number of ideas generated by their group, and the group with the highest count wins! Award that team a prize.



PICTIONARY BRAINSTORM

Sometimes misunderstandings can provoke moments of creative genius. When you're sharing ideas, other people may form a picture in their head that misses the mark but is interesting in its own way. Pay attention to the wrong guesses, they may be way more interesting than the right ones.

CREATIVE PROBLEM SOLVING

VISUAL COMMUNICATION

DICTIONARY BRAINSTORM



one group of 4-30 people



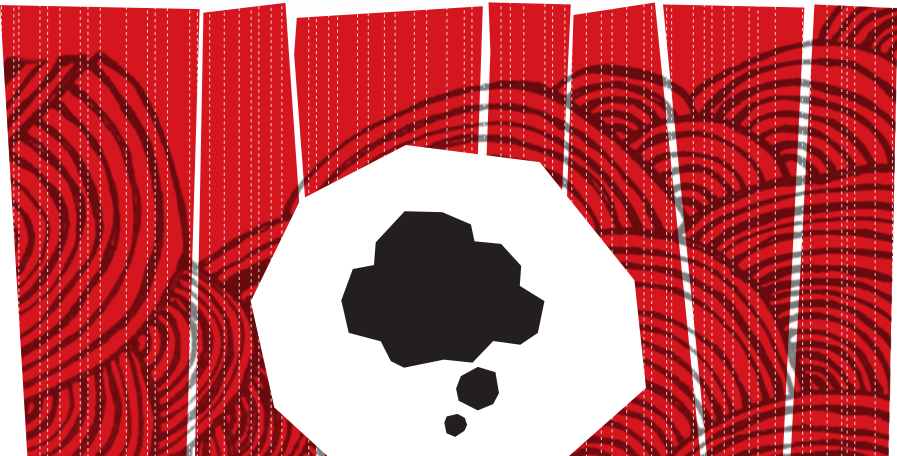
paper or whiteboard; markers

DEFINE State your central problem or question in clear terms.

DRAW An *Imaginer* is chosen to lead each round. He/she comes up with a possible solution to the problem, but has to keep it to himself. The *Imaginer* is forbidden to speak, and has to use a marker and paper to communicate to the rest of the group without using words.

GUESS The group guesses at what the *Imaginer* is trying to share. As the guesses are shouted out, they are recorded in writing by the *Imaginer* so they can be mined later for other great ideas. Once someone guesses the solution being presented, the next *Imaginer* steps up and draws her own solution for the group. Play as long as time allows, coming up with as many intentional and unexpected solutions to the problem as possible.

ADAPT You can also try playing Charades, with the *Imaginer* acting out a solution while the rest of the team guesses.



SOMEONE ELSE'S BRAIN(STORM)

One of the most important traits we can cultivate is empathy—the ability to see the world through another’s eyes, without judging what we see. Empathy helps us understand what people need, and design with those needs in mind. Seeing a problem from another’s perspective can give us new clues for solving it.

COMMUNICATION

CREATIVE PROBLEM SOLVING

EMPATHY

SOMEONE ELSE'S BRAIN (STORM)



4-30 people



clothes and accessories for costumes

GET INTO CHARACTER Take on an alter ego of your choosing.

Fun ways to decide who to be:

- 1) choose costumes from a giant bin of dress up clothes
- 2) spin a wheel to pick different character traits
- 3) pick professions, habits and opinions from a hat and weave them together into a character

NARRATE In writing or out loud, narrate a story about your character. What did they have for breakfast this morning? Where do they live, and how did they get here from there? What are their likes and dislikes? Why are they interested in the problem you've come together to investigate, and how do they feel about it?

CONVERSE Agree on the problem or question you want to investigate as a group. Each character shares a potential solution and everyone discusses that idea from their character's unique perspective. Record the observations and ideas the characters come up with.

ADAPT You can also use any of the other IMAGINE design activities found in this toolkit to come up with ideas through the brain of your new persona.



DRAWING SOLUTIONS

Brainstorming sessions generate a ton of ideas, but most are just fragments. Drawing an idea out on paper allows you to investigate an idea more fully, figuring out details and addressing potential pitfalls or challenges as you go.

CREATIVE PROBLEM SOLVING

EMPATHY

VERBAL COMMUNICATION

VISUAL COMMUNICATION

DRAWING SOLUTIONS



individual work within a group of 4-30 people



large sheets of paper, ideally 11 x 17" or larger; pencils, markers

CHOOSE IT Choose an idea that excited you from a previous brainstorm session. Make a quick list of all the questions you and others have about that idea, and the things that might keep your solution from working. Spend some time figuring out how you can refine your idea to work around or through those problems.

DRAW IT Reserve at least 10 minutes for drawing your idea. Using as much detail as possible, show your solution in action. It might help to use a storyboard or comic book format to show people interacting with your solution and/or show how it develops over time. You can choose to use words to explain details, or push yourself to represent your idea using only images.

SHARE Share your drawing, either with a partner or within the larger group. You can explain your idea, or for a bigger challenge, ask them to describe your idea just by looking at your picture. Have your partner(s) ask lots of questions and point out other possible problems.

REDRAW Now re-draw your solution, using the feedback you got to make it even stronger and more detailed.



MODEL SWAP

It's not easy to come up with great ideas. Sometimes it helps to collaborate with other people and trust that the results will be inspiring. This collaborative model-making game is something like the *Exquisite Corpse* drawing game. It helps you to quickly create several models, then evaluate and choose the best elements of each.

COLLABORATION

CREATIVE PROBLEM SOLVING

SPATIAL & KINESTHETIC LEARNING

MODEL SWAP



teams of 4-5 people, around small tables



clay, recycled materials, glue

THE BRIEF Each team gets a design brief describing the problem, site, context, and constraints. Ideally the briefs come directly from the interviews, mapping exercises, and research that this group did in the IDENTIFY and EXPLORE phases of the design thinking process. Each team is given some thought provoking questions about their design brief, and invited to discuss it for 5-10 minutes within their group.

MODEL Everybody makes a small-scale sculpture or model of a possible solution to the design challenge they were presented. Depending on how much time you have, you can give as little as one minute or as long as 20 minutes to work on each round of the game. Every participant works on every round, and passes their model to the person on their left after each round.

ROUND ONE Use clay or recycled materials to shape a basic structure or mass out a foundation. Don't worry about details, we don't need them yet!

ROUND TWO Take the structure you are passed and make improvements to it, based on the design brief.

ROUND THREE Take away one element of the previous person's design. Tell them not to take it personally.

ROUND FOUR Finishing touches—add the details that make it special.



ITERATION STATION

This activity introduces students to iteration, which means making many versions of an object or idea in order to make it work really well. Paper airplanes are a great vehicle for teaching this process because they are simple to make, can be designed and redesigned in many different ways, and can be immediately tested and evaluated.

ANALYSIS & EVALUATION

KINESTHETIC LEARNING

PERSISTENCE

ITERATION STATION



2-30 people



paper, tape, paperclips

MAKE Invite everyone to make a paper airplane, using whatever technique they like best. Mark your runway, ideally 20+ feet long; hallways and cafeterias make great runways.

LET 'EM FLY Release your planes—either all together or one at a time. Record how many seconds each plane is aloft, and measure how far they fly. Post the results on a big scoreboard to make it exciting, or record the stats in your notebooks.

IMPROVE Choose one quality of your plane to develop further. Let everyone decide what quality they want to pursue—longer hang-time, greater distance, better spiral, etc. The category is not important; what is essential is that you are working toward a specific goal with each new model you create.

REPEAT Make a new airplane after each throw, improving your design to help reach your goal. Make sure to record stats for each throw you make, including what changes you've made to your new model and why you've made those particular changes.

DEBRIEF Reflect on your insights from the process, then use what you've learned about iteration to help improve the solution(s) your group has generated for your main design problem.



YES, AND DRAWINGS

“No” is the biggest creativity squasher out there. Which is why in the world of improv comedy, there’s no such thing as “no”. Instead, you have to build on what other actors come up with—taking something crazy (YES!) and making it even crazier (YES, AND). This activity invites you to do the same through a collaborative drawing process.



COLLABORATION

IMAGINATION

VISUAL COMMUNICATION



YES, AND DRAWINGS



4-30 people



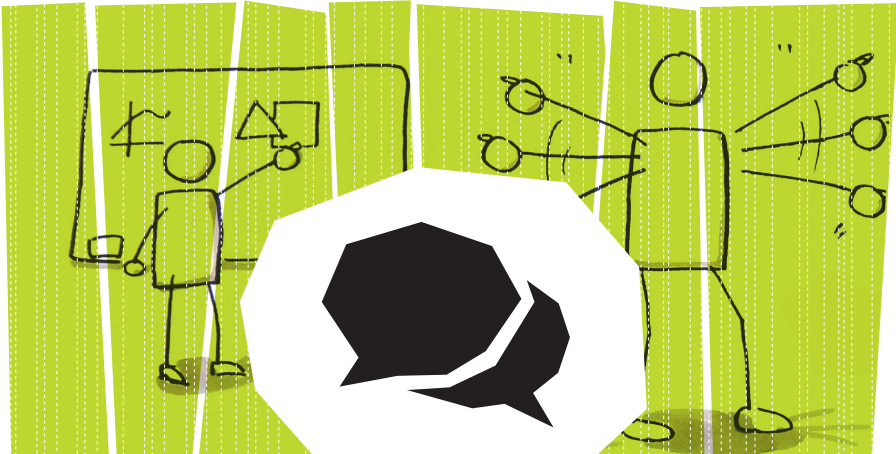
materials: paper, permanent markers, clear acetate or drawing paper, bell, tape

DRAW Everyone imagines one possible solution to the problem at hand and draws it with permanent markers on clear acetate or tracing paper.

PASS After a few minutes of drawing time, the leader rings the bell and everyone passes their drawing to the person on their left. Take a minute to understand the drawing you've been passed (without asking any questions of your neighbor).

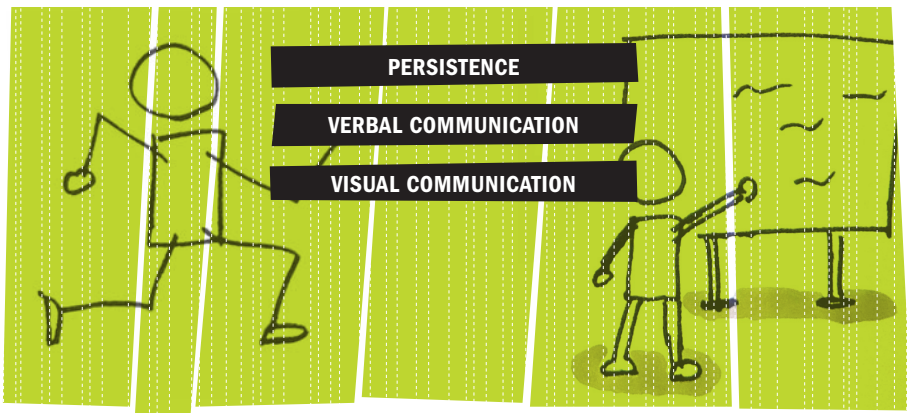
DRAW Tape a fresh sheet of acetate over the original drawing and add to it on this new layer. Pass again and again, adding complexity with each round of drawing.

SHARE After a few rounds, reflect on the drawings. How do they change by removing a layer or two, selectively? What happens when you add a layer from a completely separate drawing set? What new ideas pop up?



CLIENT PRESENTATION

Before you invest too much time in creating a final product for a challenge you're facing, it's important to get feedback from the people who will be using it. Sharing your process will help clarify your ideas and give others a chance to give constructive feedback that will make your idea stronger.



CLIENT PRESENTATION



2-30 people



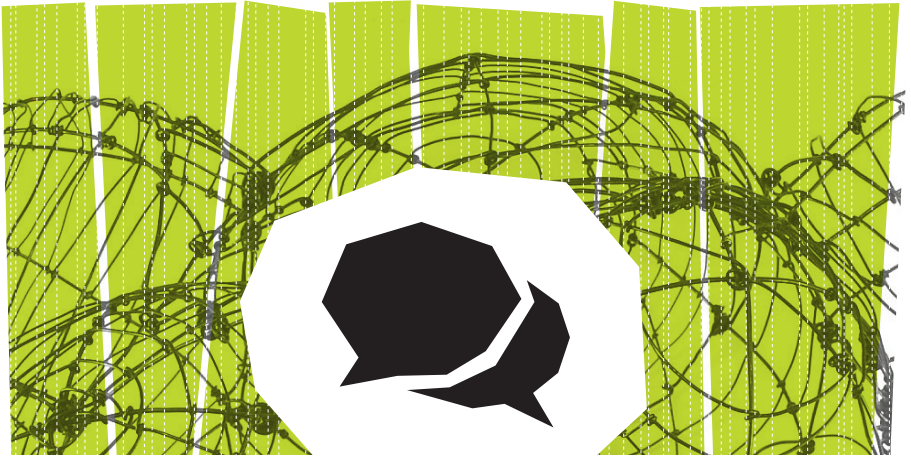
models, drawings, laptop and projector (optional)

REFLECT Write out a few sentences about each step of the design process you've engaged in so far. What challenges did you encounter, and how did you work through them? What breakthroughs or successes did you have, and what prompted them? Leading your client through your creative process—even the messy or difficult parts—will help them better understand and appreciate the solution you have arrived at.

SHOW Find images (photographs, early sketches, models and drawings) to illustrate your written presentation. A slide presentation can be an effective way to share visual information while you talk. Having 3D models in front of you will also allow you and your client(s) to move things around and try new possibilities on the spot.

PRACTICE Decide who will speak about each step of the process. It's great if everyone who participated has some role. Rehearse your presentation a few times so that everyone feels comfortable with their role, and can give each other feedback on both content and delivery.

LISTEN Ask questions to help your client give you useful feedback, and remind them that you need to hear honest feedback in order to make your solution as strong as possible. Listen carefully to your client's responses. It may help to have one or more people from the group record feedback, since different people will hear different things. Then use that feedback to return to the EVOLVE stage and refine your prototype, making changes to your design to address any issues that came up.



SOLUTION SIMULATION

Sometimes there are issues with your solution that are only revealed once you put it into action. But by then, it may be too late to fix them! One way to anticipate potential pitfalls is to imagine that your idea has been realized, and act out what it would look and feel like, with as much detail as possible.

COLLABORATION

IMAGINATION

SPATIAL & KINESTHETIC LEARNING

SOLUTION SIMULATION



small groups of 3-8 people



props, costumes, cardboard boxes (all optional)

GATHER any props you may need to simulate your solution. It's helpful to set up at the actual location where your design will be put into action, but if that's not possible try to recreate the setting as best you can.

PREPARE Re-create the experience of using your design solution in real life, as closely as you can. Assign roles to team members. A couple of people should be "typical" users of the product or process you've created, but remember that all kinds of people will encounter your design, and that the atypical ones will present the biggest challenges. Consider creating characters with physical disabilities, characters of different ages (especially very young and very old), characters that speak different languages, characters that like to cause trouble. Wigs, costumes, and props are optional, but can help people get into character.

PRETEND Act out a few different scenarios, and pay close attention to what your actors reveal about your design. What could you change about your design to make it more useful / accessible / sustainable to those folks? Now, go refine your prototype using what you've learned!



GOING UP?

Imagine that you've run into an important person on the elevator and have to convince them that your idea is worth investing in before they step off onto their floor. It's good to have a quick and persuasive speech ready!

PERSISTENCE

SYNTHESIS

VERBAL COMMUNICATION



individual work within a group of 2-30 people



pencil, paper

DISTILL To make your case quickly, first you'll need to identify the most important points about your project. Not sure what to focus on? Try answering these questions in just a few words each: WHO are you trying to help? WHY do they need help, what problem are they facing? WHAT can you do to help them, and WHAT can your listener do to help you?

DRAFT Write your pitch out in full, using those key points to give it structure. You can start by sharing the problem you're trying to solve and giving examples of how it negatively impacts the people who encounter it. Then get right to your solution, and make it pop. Use energizing language, and paint a vivid picture of how things will improve once your solution is in action. Tell your listener exactly what you plan to do, and exactly what they can do to help. Aim to make your pitch in 2-3 minutes.

PRACTICE Remember that a pitch is like a miniature performance. Think about your body language and what it conveys to your audience; well-placed gestures can help make your argument more interesting. Your tone of voice is also important! You should speak slowly and loudly throughout. You may want to try a more somber tone when talking about the problem you're addressing, and switch to a positive, upbeat tone when you present your solution. Rehearse your pitch several times, until you're totally comfortable presenting it in a natural way, without reading your notes.



CHANGEMAKER LETTERS

Now that you've got a great idea, you'll need to convince other people to get behind it. Whether you're asking for technical help, funding, or permission to put your plan in action, a well-crafted letter or email will present your idea in a way that makes people want to be a part of the change you're creating.

PERSISTENCE

PERSUASIVE WRITING

VERBAL COMMUNICATION



individual work within a group of 2-30 people



pencil, paper

IDENTIFY YOUR AUDIENCE Whose help do you most need to make your project a success? Now, practice those empathy skills and try to put yourself in that person's shoes. What do they care most about? What are their top priorities? Make a list, then think about how your project could help them meet some of those needs and priorities.

PERSUADE Write out a draft of your letter. Start by introducing yourself and telling a bit about your group—it always helps to make a personal connection. Next, describe the challenge you've taken on as a team. What problem(s) did you identify, and how do they negatively affect people? Then talk about the solution you are proposing, and describe the impact it will have. Let your reader know what will be improved by your project, with specific details about how your solution will make things better. Be sure to format your letter appropriately—you can find lots of great examples of business letters online. Be polite when addressing your reader, and keep your tone positive.

INVITE Let your reader know how they can help make your solution a reality. Make your request as specific as possible, let them know how they can get in touch with you with any questions they may have, and tell them you will call in a week to follow up on your request.

SEND Before you send your letter, it's always a good idea to get feedback. Swap letters with a friend, or ask your teacher or another adult to give it a read and offer suggestions. Add a stamp, and it's ready to go!



The activities included here are part of the Change Agent toolkit—developed in partnership between DownCity Design and Innovation by Design, and made possible through the generous support of the Rhode Island Innovation Fellowship.