



ALL GIRL CHALLENGE

collaborate. create. innovate.

INTRODUCTION TO DESIGN THINKING

You've got a problem to solve, but don't have any great ideas on how? Design thinking can help.

There are seven basic stages to design thinking. They are not linear steps, and you may end up at each stage in a random or circular order or even doing some of the steps at the same time: this is perfectly normal! The creative process can be hard to predict.

DEFINE

- ✓ What specific problems are you going to solve?
- ✓ Who are you going to solve it for?
- ✓ How will you know when you've solved it?

RESEARCH

- ✓ Learn about the history of the problem.
- ✓ Has anyone else tried to solve a similar problem? How did they solve it?
- ✓ Talk to the people you're going to solve the problem for - how does it affect them?

IDEATE

- ✓ Explore the needs of the people you will help solve the problem for.
- ✓ Brainstorm as many ideas as possible - no idea is stupid! Even silly ideas make good brain food!
- ✓ Keep track of all of the ideas you've generated.

PROTOTYPE

- ✓ Sketch out or diagram your ideas; document them visually.
- ✓ Combine / expand / refine the ideas.
- ✓ Test your ideas by sharing them with others. What issues did they find? Incorporate their feedback.

CHOOSE

- ✓ Review your problem statement from the DEFINE phase.
- ✓ Select the most compelling and powerful ideas that solve the problem.

IMPLEMENT

- ✓ List out everything you need to do.
- ✓ Assign tasks from your list to your team members & do them!
- ✓ Present your final solution to your customer.

LEARN

- ✓ Collect data about your solution and document it.
- ✓ Determine if your solution helped solve the problem.
- ✓ Go back again and improve your solution!

It's hard to understand the process fully without trying it first-hand. So let's do that to prepare for our upcoming All-Girl Challenge! We'll go through part of the process by walking through a scenario, defining the problem, researching the problem, and brainstorming some ideas!

SCENARIO

The Greater Boston area has been hit with a deluge of snow! It's causing all sorts of problems for people in your town – especially the elderly and disabled. They need help to clear snow and ice from their roofs and gutters, or their roof could leak or even collapse from the weight of the snow!

Can you come up with an idea for an app that allows these homeowners to find people to remove the snow for them?

DEFINE THE PROBLEM

Let's fill out the chart below to define what we're going to do and scope it out:

Specific Problems to Solve	Who to Solve it for	How will I know when it's solved?
<ul style="list-style-type: none">Alerting homeowners that their roof is at risk and should be clearedGetting homeowners in contact with people who can remove the snow & ice	<ul style="list-style-type: none">Elderly & disabled (who can't clear the snow & ice from roof safely)People removing snow & ice (who need to know where to remove the snow & ice)	<ul style="list-style-type: none">Less roof collapses in townLess roof leaks in townLess insurance claims on roof collapses and leaks

RESEARCH

Let's learn more about this problem – it can help us come up with good ideas. With your parent's permission, research the answers to the following questions online and/or interview people you know. Come up with your own question and research the answer, too:

1. What do your parents currently do about snow and ice on the roof? Your neighbors?
2. What are the warning signs you might need to worry about a roof leak or collapse?
3. Who can help clear snow and ice from someone's roof? How much does it cost?

4. What's the easiest way for the elderly and/or disabled to ask for help to find someone to help?

5. Write your own question here and answer it!

IDEATE + PROTOTYPE

Now that you've researched the problem a bit and thought about the situation more, let's do a brainstorming exercise to generate some ideas. We're going to design a magazine ad for a product or service that solves the problem.

1. Come up with at least 5 potential names for your product or service:

_____	_____
_____	_____
_____	_____

2. Who is going to use your product or service? Who is going to buy it?

3. Below, list out some possible features, functions, or other details about your product or service that will help sell it to your potential customers / users. We've given you an example:

Uses your phone's GPS to send your location to a snow removal service.

4. **What tagline or slogan are you going to use for your product or service?** You may want to take a look at some magazine, newspaper, or online ads to get some inspiration and see how other products & services advertise. Don't be afraid to use what you learned in your research.

5. **What imagery would catch your target buyers / users attention?** Again, feel free to draw inspiration from other advertisements.

6. **Sketch out your ideas for the advertisement!** Design at least two versions of your advertisement. Use a fresh sheet of paper for each. You can use pencils, pens, markers, crayons – whatever you want!

LEARN

We're going to skip a few steps here and do some testing of your advertisement ideas. Show your advertisement designs to a friend or family member, and ask them for their feedback. Here's some questions you might try:

- Do you think this product/service is important? Why or why not?
- Would you buy this product/service for an elderly or disabled friend/family member? Why or why not?
- How does this ad make you feel?

IN CONCLUSION

You've just completed a mini-design thinking process on solving a real-world problem. Congrats! You're going to learn more design thinking and brainstorming techniques and use them to solve more real-world problems on an all-girl team at the All-Girl Challenge! See you there!