

# HACK

## The Sketch Prototype Challenge

Usually when we're coming up with ideas, one or two ideas pop into our mind first. What happens when we come up with 5 or 10 or 100 ideas? Sometimes it can help us to get more creative and come up with unexpected solutions when we get the easy or obvious ideas out of the way, and then keep going.

Our ideas aren't precious. Let's see how many you can come up with in this hands-on brainstorm, and learn what it means to sketch in 3D.



**Time required: 20-45 minutes**

### Learning objectives

- Sketch prototyping
- Brainstorming + iteration
- Creative confidence
- Persistence

### Materials

- (10) sheets of paper
- Scotch tape
- Scissors
- (1) toy or object that is no bigger than 5"x5"x5"



## Context

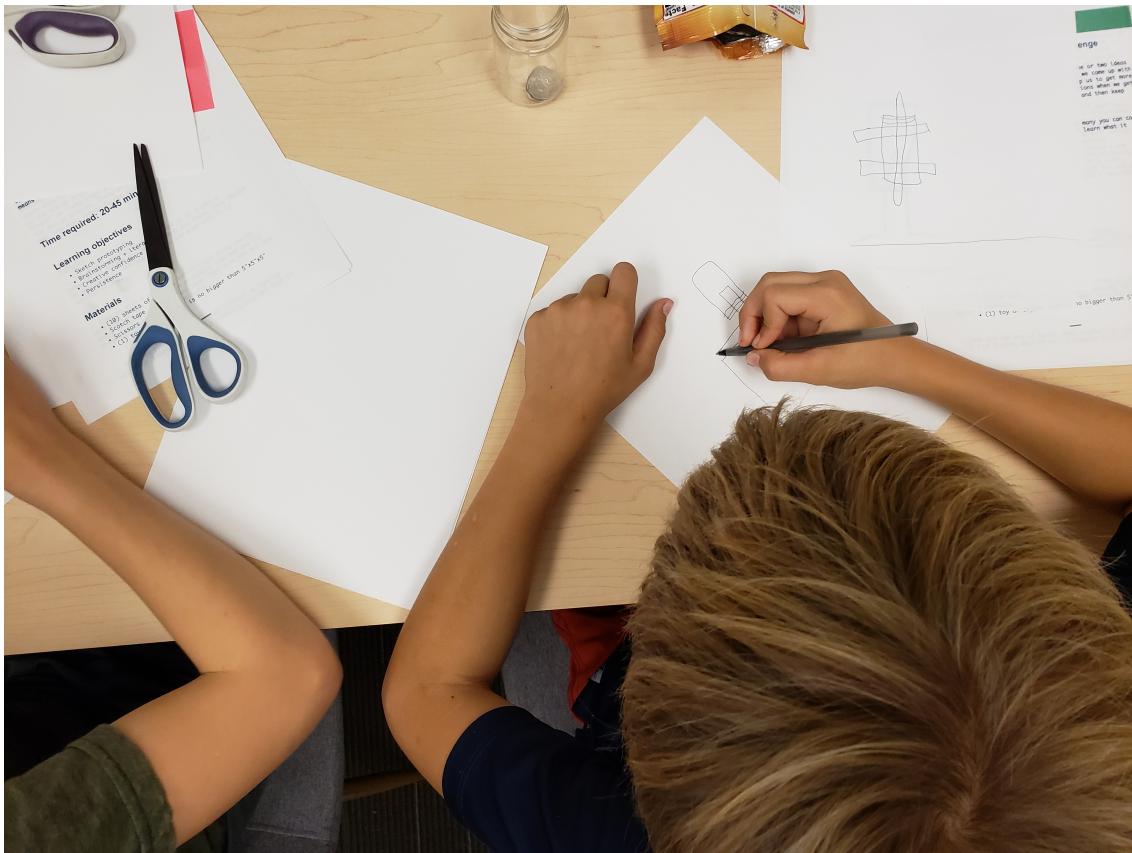
Iteration is one of the most important parts of design. It is when we come up with a lot of versions or variations of a solution. It can be really hard to do, but it helps us to strengthen our creativity skills. Think of it like lifting weights at the gym - it's wouldn't help you too much if you just lifted a weight one time at the gym! You've got to do "reps" or repetitions in order to build up those muscles. Iteration can help us build our creativity "muscles," and help us end up with a better solution.

In this activity, we're going to iterate using paper only, to create sketch models or sketch prototypes. A prototype is something we make to test or show an idea of something we want to create. A "sketch prototype" is something you make when you're brainstorming and coming up with initial ideas. We often make sketch prototypes by cutting, bending, rolling, folding, taping paper to create a new shape with it. If sketch prototypes are at the beginning of the design process when we're coming up with ideas, "final" or "late stage prototypes" are towards the end of the design process. These will use more durable materials and look much closer to the final product.

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## Activity

1. The sketch prototyping challenge is to create a pedestal or holder for the toy that you chose. This should be something to display that toy and show that it is special to you.



2. Come up with 5 to 10 (or more!) ideas using sketch prototyping. For each sketch prototype, you may use (1) sheet of paper, scissors, and tape. Make sure the toy can actually fit in/on your prototypes.

3. Once you run out of ideas, push yourself to come up with 2 or 3 more. What if it's a hanging display? What if it were on the moon? At the bottom of the ocean? Let yourself come up with at least a few CRAZY or impossible ideas.

4. Test out your prototypes! Test them on the shelf or wherever you'd want to display the toy. Which prototype(s) can best support the weight of your toy? Which ones look the coolest / display your toy the best? Which one do you like best?



5. Nice work! Count up how many sketch prototypes you made. Share your favorite(s) and how many ideas you came up with at #MadeToHack.

## Reflection

What was it like coming up with so many ideas? Was it fun? Hard? Frustrating?

Were you surprised by any of the ideas you came up with?

Which one is your favorite idea? Was that the first idea you came up with? If not, how many ideas did you come up with before you came up with that idea?

Happy Making!

-Team Hack

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