

## An Unlikely Invention

When was the last time you really thought about a paperclip? For most of us, probably never. I mean, it clips paper... what's there to think about?

We're surrounded every day by hundreds of objects that we never notice or think about. We use most of those objects for one or two things.

What would the world look like if we understood that every boring old object in our lives could be used in a thousand ways? What possibilities - or new inventions - could be unlocked to us that had been sitting right there in front of us this whole time?

### Materials:

- (1) paper clip
- (1) paper towel roll

**Time required:** 20-45 minutes

### Learning objectives:

- Brainstorming
- Sketch prototyping
- Material exploration
- Critical thinking

## Context:

Most of our brains are wired to pay attention to things that are new and novel. Evolutionarily speaking, we do this so that we can figure out whether the new thing is dangerous to us or something useful for us to survive. As a result of this, we are also wired to stop paying attention to the things we see all the time. If our brain were trying to pay attention to everything, all the time, it'd be like five people talking to you at once - you end up not being able to understand what any of them are saying.

This tendency of our brain to ignore what is familiar to us is called "habituation." It's like when you get a new toy or shirt: you're so excited about it at first (what does this switch do? How does this shirt look on me?) but then it's old news, and two months later you probably use it without even thinking about it. That candy wrapper that's been sitting on your floor for weeks? Or a pile of "stuff" in the corner of your room that's been there for months? You're habituated to it, so you don't even notice it anymore.

## Context:

Sometimes, and especially in the field of design, it can be really cool and interesting to break that process. We can take an object we're habituated to, and use it in a totally new and unexpected way. We might also discover some solutions with this approach that can support sustainability and be good to our planet (if we think of a new use for an old object, we can reuse it in that way!)

This activity is also about practicing coming up with ideas when you have a lot of constraints. Constraints are limitations or guidelines. But when we're designing, they can actually be a big help for coming up with creative and unexpected solutions. In this activity, you'll be given tight constraints on what materials to use, and how much you can use. Play with it, and see what you can come up with within those guidelines.

## Activity:

1. Start with your (1) paperclip. Yes, only one. Come up with a new invention or new use for that paperclip. If you'd like, you can set a timer for 5 minutes.
2. Awesome! Put your new paperclip invention aside and get your (1) paper towel roll. Now come up with a new invention or new use for the paper towel roll!
3. Nice work! Now, choose your own object to make a third invention. Make sure it's something that you have permission to use/modify. Try to pick an object that you can modify (rip, fold, disassemble, etc).
4. Now do round #3 with the object you chose: go!
5. Make sure to show off your new inventions to friends and/or family. Share your ideas and see what other kids have created by posting a photo to #MadeToHack.

## **Reflection:**

What did you think about this activity? Do you feel like you see paper clips and paper towel rolls differently than before?

What material or object would you want to try this with next?

How might we use this approach to support sustainability and reuse?

Happy Modeling!

-Team Hack