

Toy Hacking [SKILL UP]

PROJECT STEPS	WAYS OF PROBLEM SOLVING AND SHARING YOUR PROJECT		
Dream It!	SOLOIST We/I had no need for brainstorming ideas, we only listened to one person who had a pretty good idea How many ideas did you explore?	COLLABORATOR We/I took turns brainstorming and discussed various solutions according to our constraints and time and different perspectives How did you choose an idea to explore deeper?	INNOVATOR We/I studied other ideas for inspiration, brainstormed and discussed multiple options, then came up with a unique solution How did you choose an idea to explore deeper?
Draw It!	EXPLORING My model or drawing can be explained by the makers	EVOLVING My model drawing can be understood by anyone because it is clearly labeled, to scale	EXPANDING I used 3D sculpting tools, like TinkerCAD, Fusion 360
Build It!	EXPLORING This is all new for me, I am trying new tools or materials and I am not sure what will happen	EVOLVING I am experienced with the tools and materials, I am able to make several iterations of my idea with ease	EXPANDING I am experienced with the tools and materials, I am able to make several meaningful iterations of my idea based on testing and feedback
Share It!	PEER CRITIQUE Share your project with someone who did not make it, ask them for their feedback and suggestions on how to improve the design	COMMUNITY SHOWCASE Share your project in a school wide or online family share showcase where you can explain the process of how you made your design	DIGITAL CITIZEN Why not share things you have made that you are proud of, like your latest project, slime recipes or invention? TikTok, Instagram, Tumblr and Twitter are good places to start if you are over 13
Expand It!	ONE AND DONE This project was fun, but I hope I never have to do it again	ABOVE & BEYOND I found my own tutorials on how to complete this project and learned new skills all on my own	GRIT AND GLORY I am obsessed with this new technique of creative work. I cant stop searching for new ways to improve my projects and skills
Makers Choice Is there a criteria that you feel your project or efforts should be evaluated on that is not listed yet? If so, write it here:			

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RATE THIS PROBLEM:

How hard was this project over all? (Check appropriate box)

1	2	3	4	5	6	7	8
EASY							HARD
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

REFLECT ON YOUR PROBLEM:

What made it hard (lack of ideas, knowledge, time, materials, help, tools, etc.)?



All designers and engineers get stuck when making something for the first time. When I got stuck or needed inspiration what did I do?

- ☐ Did I use a tutorial? (listen and watch to learn)
- ☐ Did I discuss my ideas with others in person or online? (discuss to learn)
- ☐ Did I start to build even before I totally knew what I was doing? (tinker to learn)

1 What surprised you about the inside of your toy once you took it apart?

2 Toys are made of various materials, can you sort the materials that your toy is made out of into different categories such as natural or synthetic?

3 Why is it important to use the same amount of battery power in your toy remix as the original toy? What might happen if you used less power or more power?