

# Plastic Bag Holder

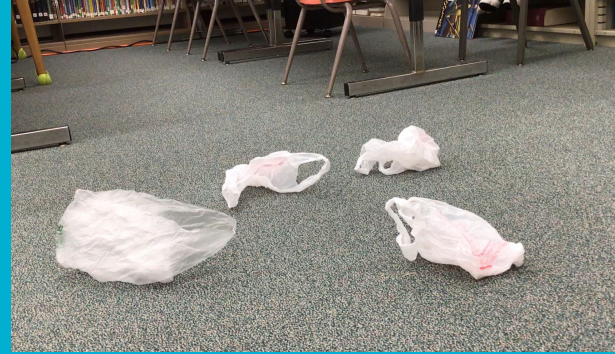
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10142A Green Tigers

# Problem

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Do you have plastic bags from restaurant take out orders or grocery shopping? Do you also have past VEX IQ Challenge elements that you don't know what to do with? Let's solve the plastic bag problem by repurposing the elements and making a container to hold the bags! We want to make a plastic bag holder because we have a lot of loose bags around our house and classroom. It should easily store these plastic bags. It should also keep all of our bags in one place so you could get them conveniently. Our other goal is to make a holder that everyone can make.



# Design 1

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Our first design used a ring from 2016 Ringmaster taped to the top of a hub from 2017 Next Level. The bottom was left open. The problem that we encountered in our first design was that you could fit 2-3 small bags inside, which wasn't the amount of bags we wanted it to hold.



# Design 2

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In our second design, we added another hub on top of the first hub to add more capacity. The new problem was that the bags that went to the bottom were out of reach. The only way to get the bags out was lifting the holder which would make all the bags fall out. This happened because the bottom was left open.



# Design 3

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In design 3 we wanted to make a holder that could take out bags from both sides. To do this we made the same ring setup on the other end of the hub. This design worked because it could fit a good amount of bags and the way you use the holder was easy. We needed to improve this design because it did everything we wanted it to do but the rings were coming off when you tried to pull out a bag.





# Design 4

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For design 4 we tried using stronger tape. Our first design used painters tape and in this design we added gorilla tape. We put gorilla tape on top of the painters tape but the gorilla tape did nothing. We found out that this didn't work because there was still weak tape under the strong tape.



# Design 5

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For design 5 we took off all of the painters tape and only used gorilla tape. A problem we encountered was that the gorilla tape kept getting stuck on the plastic bags. The gorilla tape tore the plastic bags and made the ring fall off the hub. It didn't look very nice either.

# Design 6

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For design 6 we chose not to use any type of tape because we encountered all of these problems. We chose to use hot glue because it wouldn't stick to the plastic bags and it also looked cleaner.





# Final Product

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Design 6 was our final product. It was able to meet all of our goals. It was able to easily store plastic bags, keep all of our bags in one place neatly, and it was easy to make. We hope you can repurpose your unused elements into a bag holder too!



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Repurpose sponsored by the REC Foundation

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