

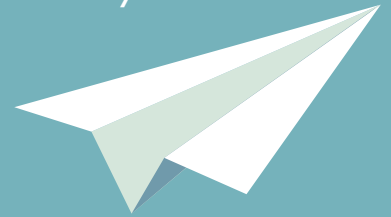


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play • learn • imagine • create

Paper Airplane Launcher

AVIATION DAY | AUGUST 19

In our last activity, we made a couple different types of paper airplanes. Now, create your own launcher to see just how far your planes can fly!



1



Gather materials:

- Cardboard
- Scissors
- Rubber Band
- Paper Clip
- Tape / Stapler
- Paper Airplanes

2



Cut your cardboard into a rectangle about a foot long and 6-8 inches wide. This will be your ramp.



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3



Cut two rectangles $\frac{1}{2}$ - $\frac{3}{4}$ for the length of your ramp and about 2 inches wide.

4



Cut a slit in the middle of these two smaller rectangles leaving about an inch from the edge.

5



Slide your ramp into the slits of the rectangle so that there is one rectangle on either side of your ramp. Leave about an inch from the edges of your ramp.

6



Cut a small slit at the front of each of your smaller rectangles that is about $\frac{1}{2}$ inch deep and 1 inch from the top.





7



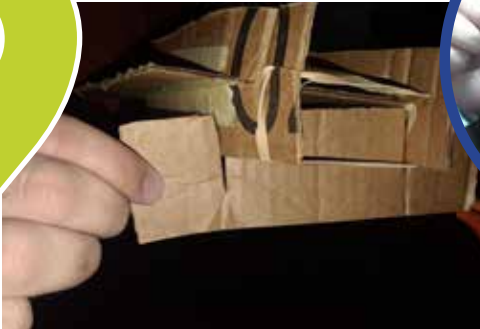
Slide your rubber band into both slits and wrap the bottom of your band underneath the base of your smaller rectangles. It should create a stretched loop.

8



Cut another rectangle the same width as your ramp, but only 1-2 inches long.

9



Cut two slits at either end of your rectangle that will allow each of the smaller rectangles from steps 5-6 to connect together. Make sure your slits are the same distance as your two smaller rectangles or else they will not fit together. This will hold up the ramp and keep it standing.



10



Take your paperclip and push out the end so that it sticks out a bit.



11



Stick the paperclip into the front of your paper airplane so that the "hook" sticks out at the bottom. Secure with tape or a stapler.



12



Test your launcher by hooking the paper clip to the rubber band, and pulling back as far as you can.

13



Let go and see how far your paper airplane flies. Ours flew 6 feet!



DISCUSSION

Try throwing your paper airplane without your launcher. Does your launcher help your airplane fly farther? That is because when you are pulling back your rubber band, you are storing something called potential energy. When you let it go, all that potential energy changes into kinetic energy (motion energy). All the energy that is released, gives your airplane a boost when flying!