Crazy Kites

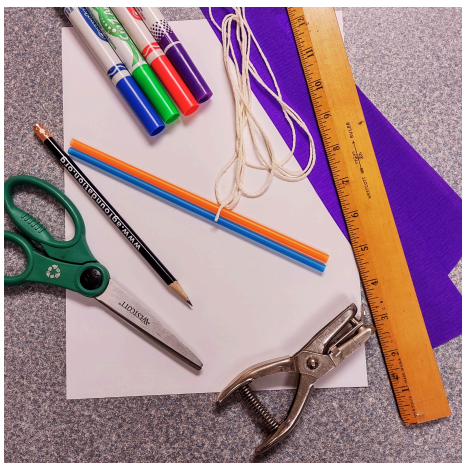
UConn 4-H Summer S.T.E.M.

Background

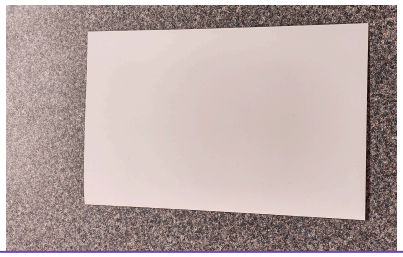
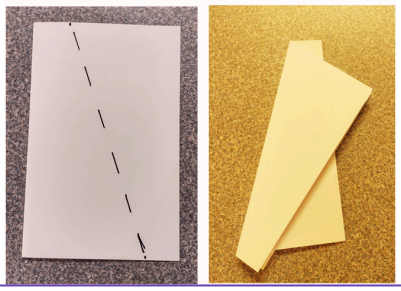
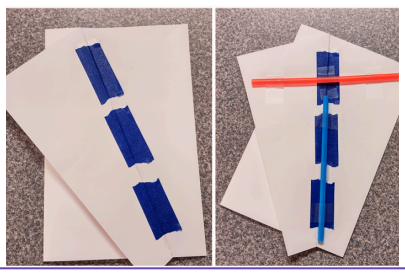
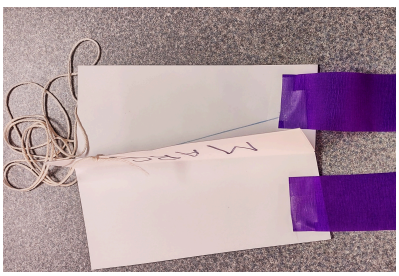
Kites have been constructed and flown for thousands of years. They have been used for fun, military exercises, and scientific purposes. In this activity, you will use engineering design skills to make a kite of your very own. Kites stay aloft through a combination of lift and air pressure. Lift generated by the wind flowing over and under the kites surface, helps to overcome gravity, while drag on the tail and the string's tension balance the forces to keep the kite in the air.

Supplies and Tools

8.5" x 11" sheet of paper
Plastic straws, string & paper streamer
Scotch tape, scissors, markers, a ruler
A breezy day or a fan



Activity Steps

Notes	Visuals
1. Place the sheet of paper on a surface landscape orientation. Fold the paper in half on the short side.	
2. Make a mark at the top of the paper about 1 inch from the fold. Make a mark at the bottom of the page about 1 inch from the open side. Draw a line connecting the two marks. Fold the paper along the line you just drew. Repeat on the other side.	
3. Tape along the middle seam. Lay straws across the top and down the middle and tape in place. You may need to cut the straws to get the correct length.	
4. Cut the streamer in half and attach at the smaller end of the kite. Use markers or crayons to decorate your kite to make it your own design.	
5. Flip the kite over and mark a spot on the spine about ⅓ of the way from the top and ½ inch from the edge. Cover with a piece of scotch tape and then punch a hole over the mark through the spine. Attach your string with a strong knot. You are now ready to test your kite in the wind.	

Bonus Activity: Design, build and fly a kite of your own design. Use what you learned from flying this small kite to help you in creating your own unique design. Try different shapes, sizes and materials to see what you can come up with.

Career Connection: Damon Vander Lind is using his love of kites to help develop renewable energy technology. Damon is a kite designer for Makani Power, a wind power generation company owned by Google. He leads a team that creates high-altitude kites that generate more power than standard wind turbines. Through his work he does everything from create computer simulations to engineering designs and test flying kites. He is excited by the potential of these kites to provide power to future generations.

https://www.kqed.org/quest/64346/career-spotlight-kite-designer

If you enjoyed this project, visit **4-h.extension.uconn.edu** to learn more about **UConn 4-H.** Check out the **UConn Extension YouTube** page to view the video associated with this activity.

You can also find more fun, hands-on learning activities at **Clover by 4-H.** To discover a wide selection of 4-H activities and online courses, visit **4-H.org/Clover**.

Lesson adapted from “Crazy Kites” by HughesNet & University of Illinois Extension through the Clover by 4-H online learning platform.

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