

WIND POWER

DAY FIVE: CRAZY KITES



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KRAZY KITES

Welcome to Wind Power Day Five!

Kites have been constructed and flown for thousands of years. They have been used for fun, for military exercises and for scientific purposes. You may know that Benjamin Franklin used a kite to show that lightning is electricity. There is also historical evidence that the Chinese government used kites to measure distance in China more than 2,200 years ago. Kites have been used to make deliveries across difficult to maneuver distances and very large kites have even carried people.

Kites are flown in the wind on a line. Lift caused by changes in air pressure overcomes gravity and the line keeps the kite from moving away, so it moves up. Kites come in many shapes and the lines attached are in a variety of positions. The earliest kites were flat kites that fly at a low angle. In the late 1800s, the box kite design appeared, followed by delta kites.

For today's activity, you will make a simple flat kite and then use your engineering design skills to make and build a kite of your own design. After you complete the activity, show us your kite on Flipgrid and let us know what you learned on the Microsoft Form linked at the end of this handout.

Vocabulary:

- Benjamin Franklin - One of the eight founding fathers of the United States, who used a kite in an experiment to demonstrate that lightning is a form of electricity.
- Lift - The force pushing the kite away from the surface of the earth. It is produced by air moving over the top of the kite at a faster speed than the air that is moving over the bottom of the kite.
- Kite Tail - Adds stability to kites in strong winds by adding drag to the kite, making it fly better.
- Bridle - The arrangement of strings that go between a kite and the flying line. The bridle holds the kite at a certain angle to the flying line and affects how the kite flies, and whether it flies at all.
- Tow Point - The point where the bridle attaches to the flying line.



FLAT KITE



DELTA KITE



BOX KITE



Resources: PublicLab.Org Diamond Kite Bridles



KRAZY KITES

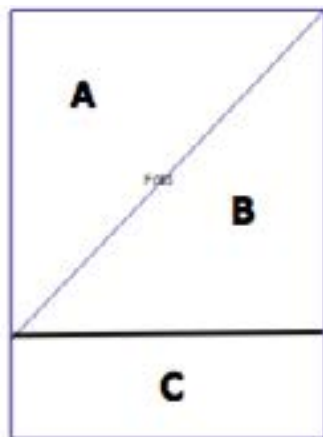
Materials:

- 8.5 x 11 Sheet of Paper
- Lightweight String
- Tape
- Scissors
- Wind Outside or Fan
- Decoration Materials

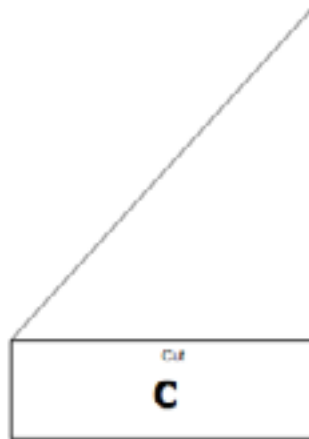
Instructions:

- Fold one corner (A) to the opposite side (B) of a sheet of standard paper. There will be a 2.5" border remaining at the bottom (C)
- Cut off bottom (C) and set aside for later.
- Fold corner (D) to left side (E). Crease. Turn over and repeat on the other side.
- Fold piece (F) down over longer triangle. (D) Turn over and repeat on other side.
- Make a hole and attach the tail at the end of the kite (at the red circle). Use sewing thread to make a bridle and attach the rest of the spool to the bridle to make the line and to complete the kite.
- Go fly your kite by going outside in a windy area or by using a powerful fan!

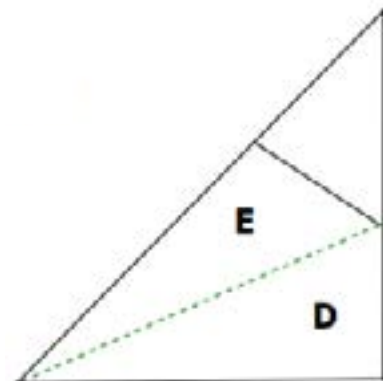
STEP ONE



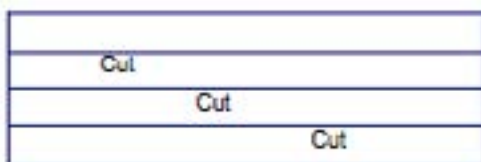
STEP TWO



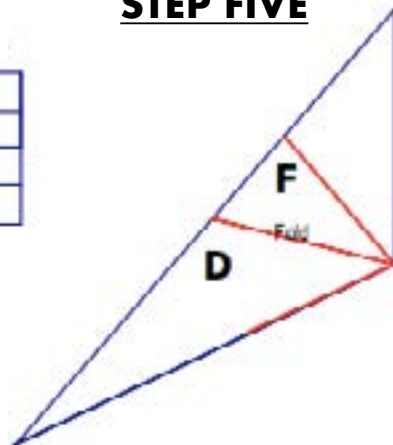
STEP THREE



STEP FOUR



STEP FIVE



STEP SIX

