

Ages:

8 to 11

Kite: Straw Kite

(Adapted from: *The Fabric/Flight Connection*. See “More Great Resources for Grab and Go with Science Activities” at the end of this publication for more information, including activities for older youth.)

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Main idea: Kites behave differently when made with different materials.

Objectives:

- q Make a kite
- q Learn about kite materials

Materials:

- q Typing Paper
- q Tyvek (a Tyvek mailer yields 2 kites)
- q Tissue Paper

- q Scissors
- q Waterproof paints or markers (optional)
- q 9 plastic straws
- q Cellophane Tape
- q Elmer's white glue
- q Hole punch
- q Kite string, 12 in. (30.5 cm) for bridle; 60 yd. (55m) for flying

Motivator: The first known kite was constructed by the Chinese more than 3000 years ago to frighten their enemies.

Questions:

Before you begin the activity, ask the students:

- q Do you own a kite? Describe it.
- q Do all kites have tails? (A: No.)
- q Do you know what a tail does? (A: Help steer and stabilize.)

Activity:

See diagrams that follow, **Kite 2: Straw Kite.**

1. Cut paper as follows:

q length = length of straw + 2 in. (5 cm)

q width = length of straw.

q Draw colored design if desired.

2. Place one straw lengthwise in center of paper and tape into place.

3. Place second straw on top edge of paper. Glue straw to edge and roll it down paper until it meets center straw tip. Secure with glue.

4. Place third straw on bottom edge, glue, and roll until it meets bottom tip of center straw. Secure with glue.

5. Make bridle by punching two holes near top straw and two holes near bottom straw. Tie bridle string so it is about 4 to 6 in. (10 to 15 cm) from face of kite.

6. Attach kite string to bridle with a slip knot as shown.

7. For tails, cut strips of paper about 1 in. (2.5 cm) wide and glue to kite. In light breezes, use fewer tail sections. In stronger breezes, use more tail strips for added stability.

8. Repeat using different paper.

9. Fly your kites and compare how the different materials behave.

Learning checks:

q What are the finished dimensions of your straw kite?

q How did kites made from different materials behave?

q What would happen if the kite tails were shortened or lengthened?

Background:

Lift keeps the kite in the air. A tail provides drag that helps steer and stabilize the kite.

Vocabulary:

Kite: A light frame covered with thin material that is flown in the wind attached to a string.

Tyvek: Registered trademark of Du Pont for a spunbonded olefin fabric that is tear-resistant and inexpensive. It is used for mailers, protective coveralls, and kites.

Extensions:

Did you know that you can recycle your Tyvek envelopes? Did you know that people wear protective coveralls made of Tyvek when they are removing asbestos from buildings? For additional information on Tyvek, write to E.I. du Pont de Nemours & Co., Wilmington, DE 19898, or search the Internet.

Place holder for Kite 2: Straw Kite

