

## Pre-Kite

### Activity Objectives

- To provide the students the opportunity to observe the effects of air
- To demonstrate that objects fly only when the upward force of air (lift) is greater than the downward force (gravity)
- To have students construct a simple pre-kite
- To enhance group discussion skills

### Materials

- ✓ Paper bag
- ✓ Tissue paper (or crepe paper) streamers
- ✓ String
- ✓ Glue

### Background

Explain to the students that the Chinese invented the kite over 2,000 years ago. Some people think the first kites were huge, man-carrying kites that lifted people high enough to see what their enemies were doing. Ask the students a question similar to the one below and wait for responses.

#### Question:

Why do you think people have been interested in flying kites for the past 2,000 years?

#### Possible answers:

People wish they could fly kites.

People were interested in how things fly.

Flying kites is fun.

Kites teach you how things fly.

### Instructions

Decorate a paper bag:

1. Glue four tissue or crepe paper streamers (one on each bottom corner) to the bag.
2. Punch holes in both sides near the open end of the bag.

3. Attach a piece of string to form a loop.
4. Attach a long piece of string to the loop. This will become the flying line.
5. Take students to an outdoor play area and allow the students to fly their pre-kite.
6. Allow the students to observe the pre-kite fill with air and float as they hold the string and run.
7. Allow ample time for student experimentation.

**Extension**

Ask the students questions similar to the following:

- Why do you think some kites fly better than others?
- Why do you think kites fly better on some days than on other days?

Have students construct and fly pre-kites made out of different sizes and weights of paper bags. Compare and explain the differences.