



Lift-Off

Science – Grade 4-6

Students build and fly their own Diamond kite and experiment with “pullers” and “floaters.”

Materials:

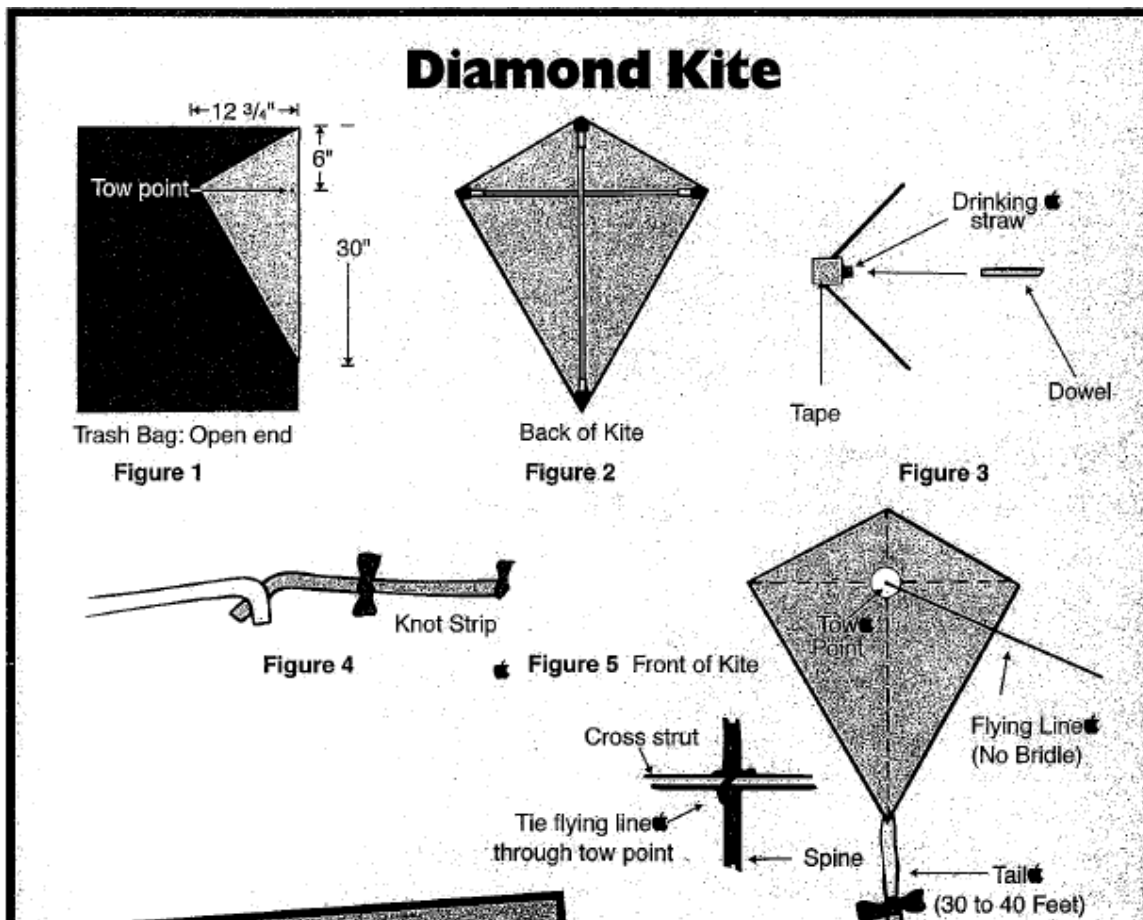
- One trash bag (sail)
- One 25 ½” x 3/16” dowel (cross strut)
- One 30” x 3/16” dowel (spine)
- Two ¾” pieces of drinking straw
- Strips of trash bag (tail)
- 3/4” reinforced nylon packaging tape

Instructions:

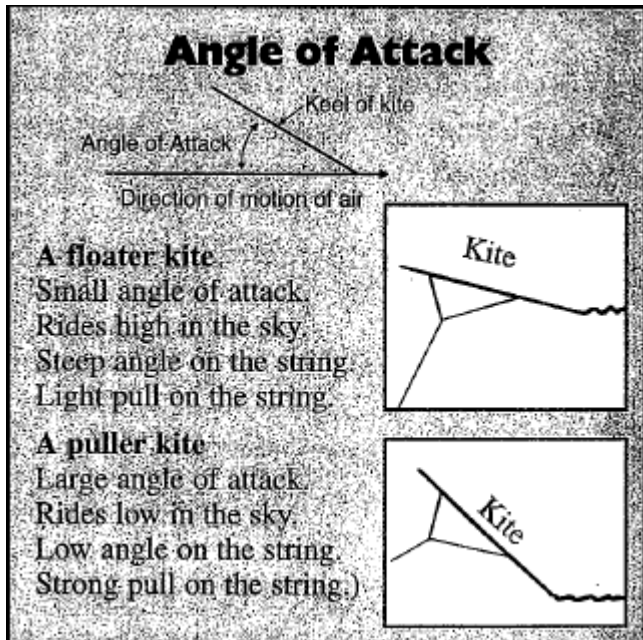
Ask students if they’ve ever flown a kite and felt it tug on their arms so hard their feet began to move and it felt like they were going to be lifted off the ground. If so, they probably had a very large “angle of attack.” Kite flying enthusiasts call this a “puller.” In this activity, students build and fly their own Diamond kite and experiment with pullers and floaters.

1. Have students follow the directions (see following page) to build their own Diamond kite.
2. With a helper, have students fly their kite with a small “angle of attack” and then with a large “angle of attack” (see following page). Have students use the chart (see following page) to record what they saw, felt, and heard while flying their kite.
3. On a separate paper, have students draw a picture of what their kite looked like when it flew best.

Diamond Kite Instructions:



Angle of Attack Diagram:



A float kite: Small angle of attack. Rides high in the sky. Steep angle on the string. Light pull on the string.

A puller kite: Large angle of attack. Rides low in the sky. Low angle on the string. Strong pull on the string.



Kite Observation Chart

What I...	Puller	Floater
Saw		
Felt		
Heard		