

Looking for Lift

You need

- ★ kite materials (2 drinking straws, sticky tape, scissors, string, a hole punch, a paper clip, paper)
- ★ a metre ruler
- ★ classmates

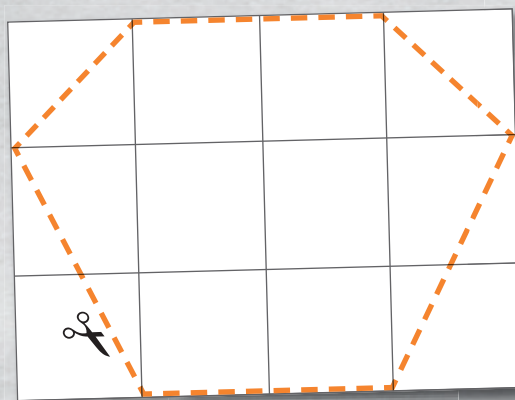
TECHNOLOGY

Lift is the force that gets a kite off the ground and keeps it in the air. A kite gains lift from air flowing over and under its wings.

Activity

Hasini is making a sled kite using instructions from the Internet.

1. With a classmate, follow the instructions to make a small sled kite.



add three layers of sticky tape before punching the hole

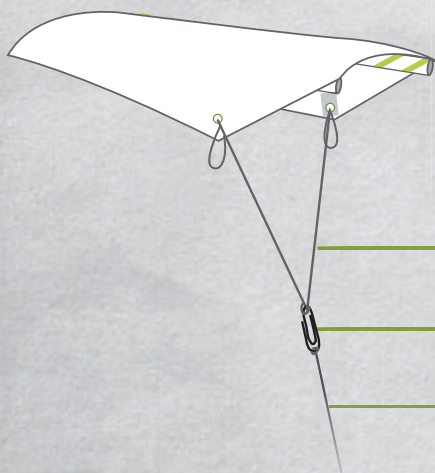
straw or skewer

underside of kite

tape

punched hole

45 cm of string



45 cm

paper clip

5 m

It's very small. Will it fly? If it does, it won't have much lift.

2. Fly the kite outside on a day with a steady breeze (not in a gale). Have fun!

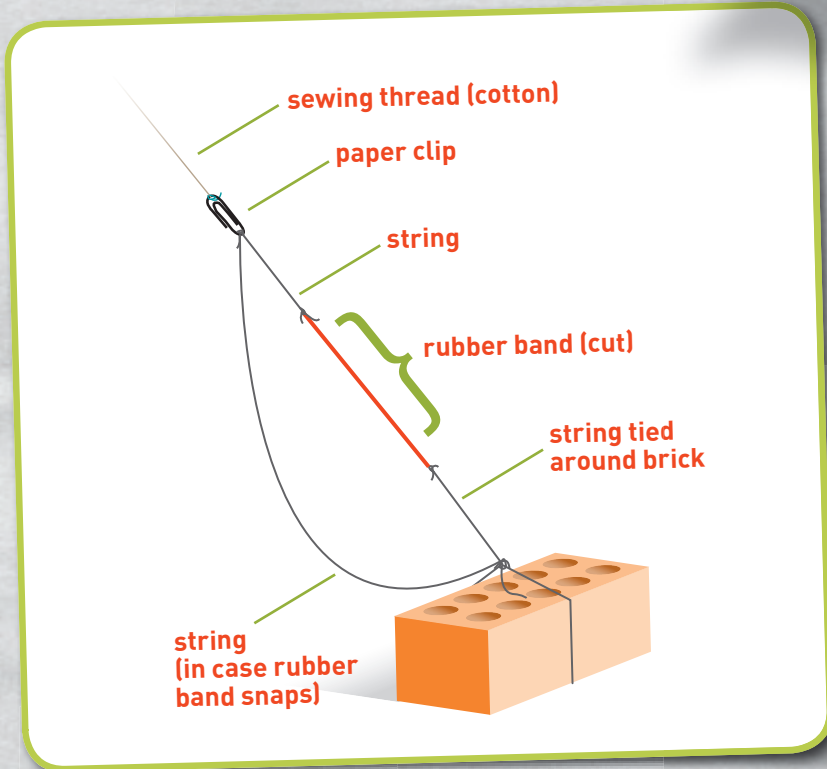
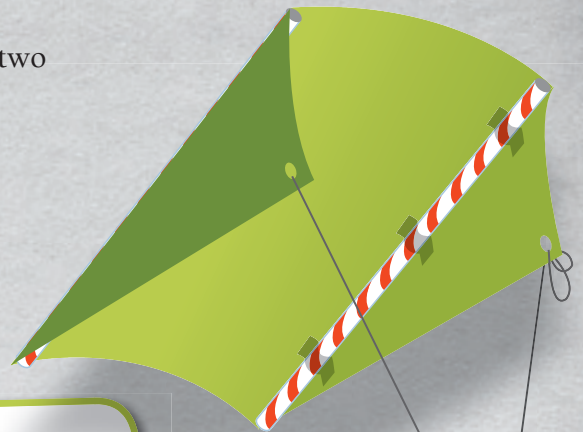
3.

Hasini thinks that lift is related to size: the bigger the kite, the greater the lift. She decides to find out whether this is true.

- Make a second kite in which all lengths are double (or half) those in your first kite.
- Compare the perimeters and areas of the two kites. What relationship can you see?
- Fly your second kite. Does it have more (or less) lift? How do you know?

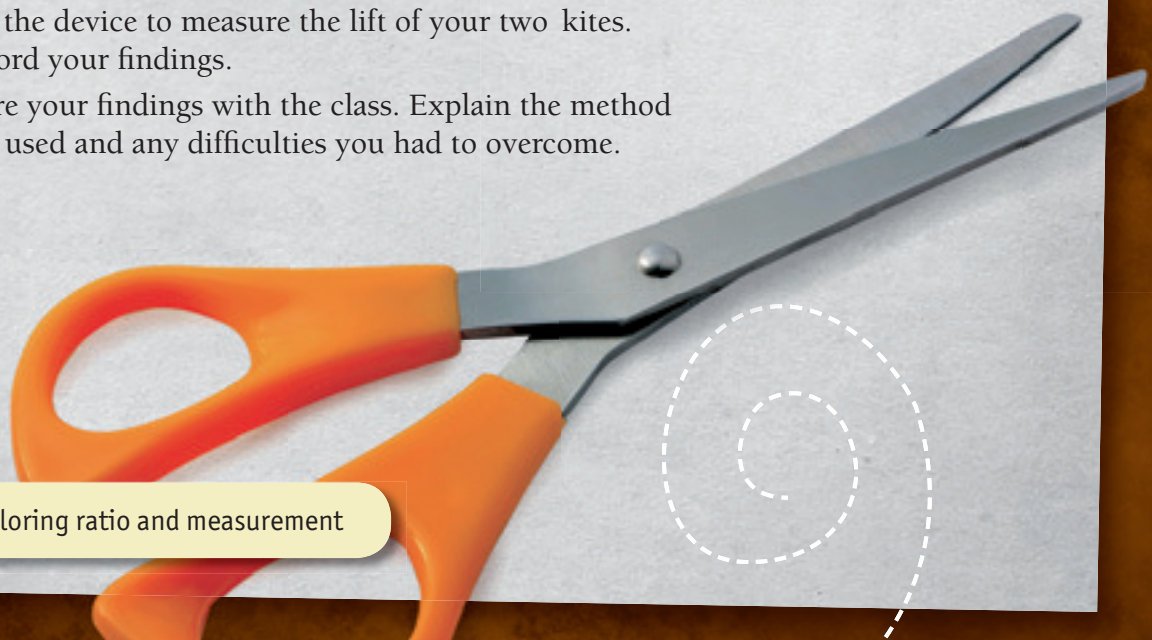
4.

Hasini invents a way to measure lift. How do you think Hasini's device works? How can it provide data on lift?



5.

- Using this idea or your own, make a device to measure lift.
- Use the device to measure the lift of your two kites. Record your findings.
- Share your findings with the class. Explain the method you used and any difficulties you had to overcome.



Focus

Exploring ratio and measurement