

A Kite

[New: Video instructions for building this kite.](#)

Hila Science Camp - <http://hilaroad.com>

This project supports Ontario's [science curriculum](#) .

[Maple Leaf Kite](#)

Building and flying kites is a wonderful hobby and a good way to learn about air, wind and flight. This type of kite is called a **sled kite**, it is constructed from a single sheet of light plastic, tape and straws. It is a reliable flier, performing well in most wind conditions.

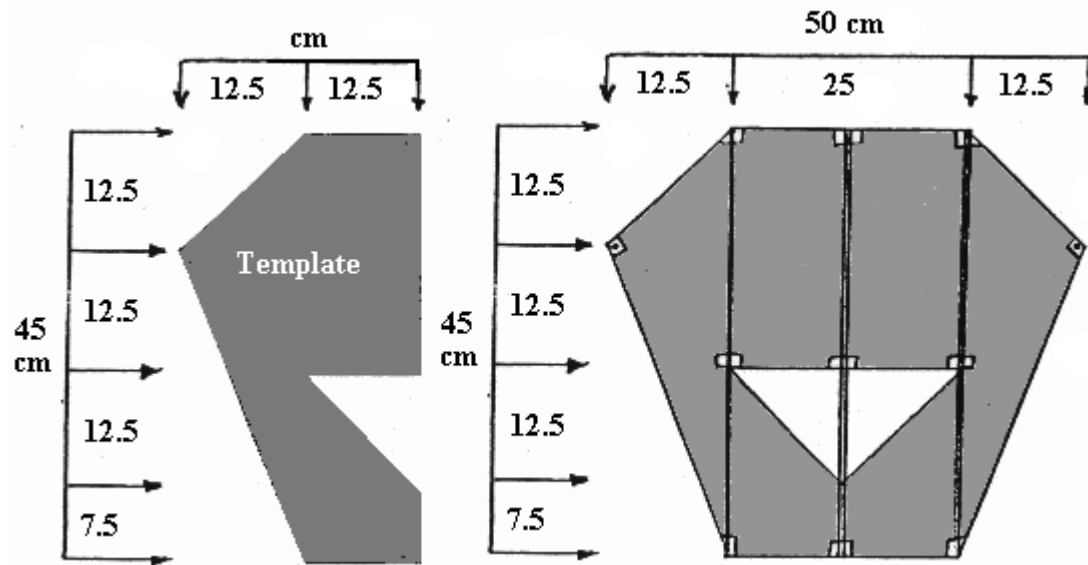
This project supports many aspects of state or provincial curriculum. Schools have used this simple kite to support science and technology teaching in grades ranging from Kindergarten to Grade 6. For grades 6, 7 and 8 this kite can be used as the basis for a design challenge, see "Experimenting with Kites" at the bottom.

Supplies:

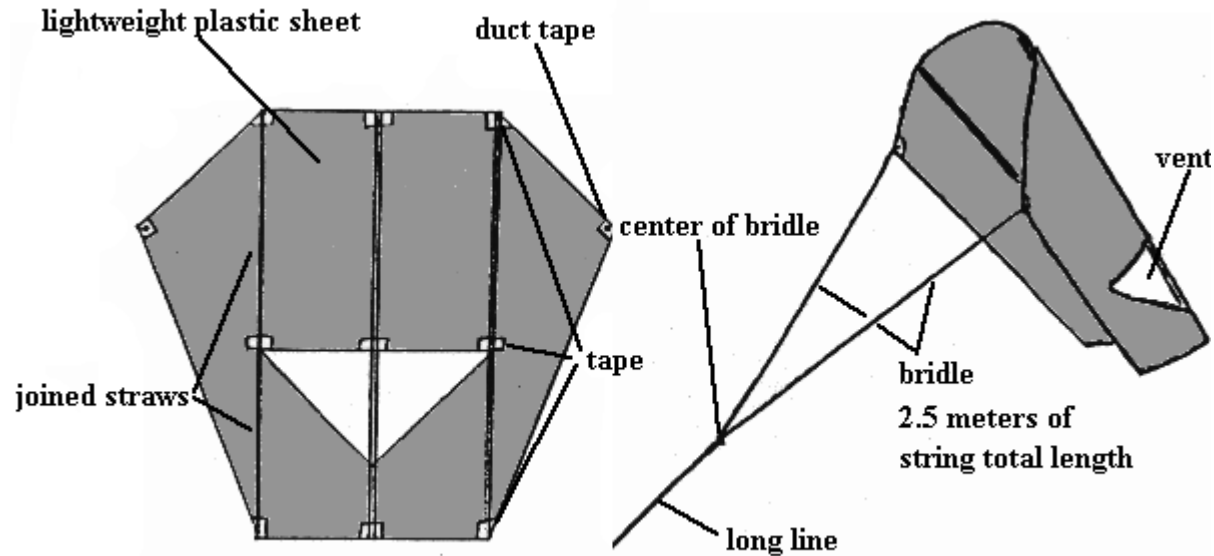
- 1 - large plastic bag (garbage bags work well)
- 6 - 25 cm straws (join them to create 3, 45 cm straws)
- 1 roll of clear tape
- 1 roll of duct tape
- string (fishing line is ideal)
- scissors
- hole punch
- marker

Building your kite:

- A good way to start your kite is to create a template, a cardboard shape that looks like your kite.
- Because your kite is symmetrical you only need to make 1/2 of a template.
- To create the template use the dimensions shown (all dimensions in cm)



- Use a marker to trace the shape of your kite on the plastic sheet.
- Flip your template to create both halves of the kite.
- Cut out the kite and cut out the **vent** in the center.
- Join two straws by pushing the end of one straw into another.
- Tape the straws as shown, using three pieces of clear tape on each straw.
- Put a tab of duct tape on each side of the kite as shown.
- Punch a hole through each of the duct tape tabs.
- Tie each end of a 2.5 meter string to the holes (this is the **bridle**).
- Tie a loop in the center of the bridle.



Flying your kite:

Test fly your kite by holding the loop in the bridle and running. Hold your hand high and the kite should follow along behind you. To fly higher, tie a long string to the loop in the bridle.

Kite Eating Trees:

Flying kites close to trees or buildings is difficult, this is because air behaves strangely when it moves past objects, swirling in unpredictable directions and taking your kite with it. An open field is the best place to fly a kite.

DON'T FLY KITES NEAR POWER LINES! Power lines are very dangerous!

Experimenting with Kites:

Try creating your own sled kite. Create a larger or smaller version of this same kite. Try different shapes for the vent. Does a tail improve the performance of your kite?

This project supports these strands from Ontario's Science Curriculum:

Energy and Control: Grade 2 – Energy From Wind and Moving Water

2s55- design and construct a device propelled by air (e.g., a kite, a pinwheel, a balloon rocket);

Matter and Materials: Grade 6 – Properties of Air and Characteristics of Flight

6s35- design, construct, and test a structure that can fly (e.g., a kite, a paper airplane, a hot air balloon);

Maple Leaf Kite



Construct this kite using the same dimensions as the standard sled kite above.

Instead of a triangular vent, cut a maple leaf at the same location.

[Pattern for Maple Leaf - CorelDraw 10 File](#)

[Pattern for Maple Leaf - JPG image](#)

Try using bright, plastic gift wrap for the material.

Eliminate the center straw.

[More Projects at Hila Science Camp - follow "Projects" link.](#)