



THE GREAT OUTDOORS

Lesson: Flying Kites

CURRICULUM REFERENCE: Movement, Air and Water in the Environment

LESSON OBJECTIVE

By creating a kite, we can see how air and wind work together.

THE SCIENCE BEHIND

There are always four forces at play on any flying object: thrust, drag, weight and lift. To fly a kite, we must harness all four of these forces and have them work together so our kite is stable in the air.

VIDEO: <https://youtu.be/OiICDWoVoko>

FOLLOW-UP QUESTIONS

1. When have you felt the force or pressure of air?
2. How does your device use the principles of flight?
3. What were some challenges in getting your device off the ground?
4. How might you change your device to make it fly better?



LEARNING OUTCOMES

- Use scientific inquiry/experimentation skills to investigate the properties of air.
- Use technological problem-solving skills to design, build, and test a flying device.
- Identify the properties of air that make flight possible.



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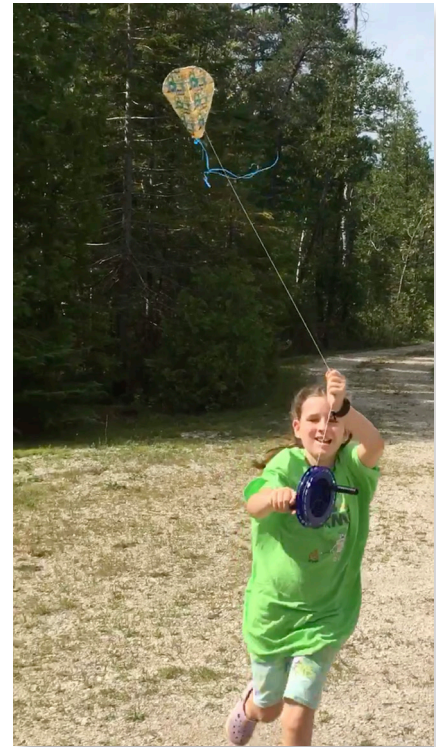
Lesson: Flying Kites

MATERIALS (PER PERSON)

- 2 Dowel rods
- Wrapping paper
- String
- Tape
- Scissors

INSTRUCTIONS

1. Cross the sticks over one another making a plus symbol. Secure using tape.
2. Place the sticks over the wrapping paper and trace around these sticks, creating a diamond shape.
3. Cut out your wrapping paper diamond shape.
4. Place sticks on one side of your paper and tape to paper (decorative side facing the table).
5. Cut a string the length of about a third of the size of your stick, but place in the middle across the horizontal stick. Tie the string down to each side on the stick but pull the string through the paper across to the other side and through the paper once again to be tied around the stick at the other end.
6. Take more string and tie it a quarter of the way down the vertical stick from the center cross.
7. Use extra wrapping paper or ribbon as tails to the bottom of the kite. This will help keep the kite balanced.



VIDEOS:

Step 1: <https://youtu.be/FtHKLMGtojU>

Step 2: <https://youtu.be/2QtmA-T6Amw>

Step 3: <https://youtu.be/okmfxw2IKXA>

Step 4: <https://youtu.be/Jb1mHwZE8tk>