



FWA CLASSROOM RESOURCES

MIDDLE YEARS

Up in the Air!

GRADE 5

LESSON DESCRIPTION

Understanding the interaction of cold and warm fronts is key to understanding weather. This demonstration creates a model of a cold front, often showing a form resembling a cumulonimbus cloud.

SUGGESTED CURRICULUM LINKS

Weather: 5-4-03, 5-4-04

How do you say “**cloud**” in Anishinaabemowin?



Aanakwad (on-a-quad)

LESSON

Though invisible, air has volume and mass. It exerts pressure, holds moisture, and moves in masses known as fronts. When two fronts (masses of air with different characteristics) meet, changes in weather occur.

Complete a learning assignment that teaches students about different types of weather fronts. Some other suggested air experiments are in the weblinks below.

Making a Storm Experiment

Materials Needed:

- Pitcher of room temperature water
- Clear plastic container (about the size of shoebox)
- Red food colouring
- Ice cubes made with blue food colouring
- Dump bucket



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Instructions:

1. Fill the plastic container two-thirds full with room temperature water.
2. Place 2 or 3 blue ice cubes at one end of the plastic container.
3. Add 3 or 4 drops of red food colouring to the water at the other end of the plastic container.
4. Watch what happens.

Explanation:

The blue water represents cold air, which sinks, while the red food colouring represents warm air, which rises. This experiment is a model of what happens when a cold air mass meets an unstable, warm air mass in the atmosphere.

This type of interaction causes some of our most impressive summer weather events: thunderstorms. Observe how the blue water pushes underneath, and how the red water pushes up and becomes anvil-shaped, like a cumulonimbus cloud.

[Science Projects for Kids: Air Pressure](#)

[All About Air: Experiments](#)

[Types of Weather Fronts: A lesson with a guide to weather fronts](#)

[Cloud Chart](#)