

# Making a Cold Front

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## Materials:

- Water
- Food Coloring
- Ice Cube Tray
- Transparent Plastic Shoe Box

## Instructions:

1. Freeze water in the ice cube tray with blue food coloring in it. Plan Ahead! Step 1 will take a few hours.
  2. Fill the plastic shoe box with warm water. Don't get it too hot.
  3. Put a few drops of the red food coloring at one end of the plastic shoe box. DO NOT mix.
  4. Place a couple of blue ice cubes in the opposite end of the shoe box.
  5. Watch your cold front form!
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## The Science

The food coloring disperses into the surrounding water, while the ice slowly melts sending very cold blue water into the container, and chilling the surrounding water. Red and blue together make purple, right? Well, not this time. And it's because of the temperature of the waters as they collide. Cold water is denser than the warm water, so the blue water will tend to sink underneath the red water, forcing it up. The same happens with a cold front, which also serves to lift the atmosphere, which can help to create thunderstorms.



## Did you complete this experiment?

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[kaaltv.com/weatherlab](http://kaaltv.com/weatherlab).

The Weather Lab Assistant of the week is announced on  
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