

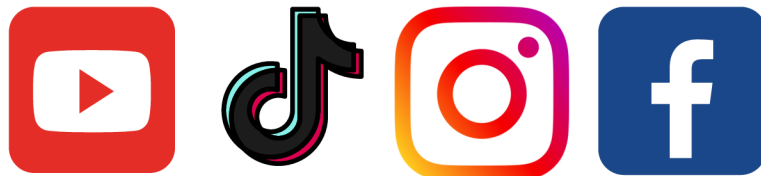


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# Stratollite Study

## Materials:

- 2 balloons
- A small fan (or two fans, if available)
- String or ribbon (about 3 feet)
- Tape
- Markers (to label or decorate your balloons)



## Instructions:

1. Prepare Your Balloons: Blow up two balloons and tie them off. You can draw designs or label one "High" and the other "Low" to represent different altitudes.
2. Create the "Stratosphere" Layer: Set up your fan on a low table or chair, so it points horizontally across a section of the room. This represents the "lower layer" wind current in the stratosphere. If you have two fans, place the second one higher up on another chair or a stack of books to represent a "higher layer" wind.
3. Attach the Strings: Tie a 3-foot string or ribbon to each balloon. This will allow the balloons to hover at different heights. Tape each balloon to the floor so it stays in place.
4. Test the Wind Currents: Turn on the fan(s). Watch how the balloons react to the air currents. Notice how moving the balloons up or down (pulling on the string or letting them rise) changes the way they interact with the air current.
5. Experiment with Altitudes: If you have only one fan, hold one balloon closer to it and let the other hover further back. If you have two fans, adjust each balloon to align with a different fan. Observe how each balloon "hovers" or drifts based on its position.
6. Record Your Observations: Note down how changing the height or position of each balloon affects its movement. Discuss how this relates to how Stratollites change altitude to catch different air currents.

## Why it works:

Stratollites change their altitude to catch different air currents, allowing them to stay over a specific area or move slowly as needed. In this experiment, each fan represents a wind current in a different layer of the atmosphere. By moving your balloons up or down, you're simulating how Stratollites navigate the stratosphere to hover or move slowly over one location.

## Take it Further

Try with Helium Balloons: If you have helium-filled balloons, you can experiment with changing their altitude by adding or removing small weights (such as paperclips). This can help you mimic how a Stratollite might use gas adjustments to change altitude.

Name: \_\_\_\_\_

Date: \_\_\_\_\_

# Experiment: Stratollite Study

Question:

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Hypothesis:

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Observations:

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Conclusions:

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