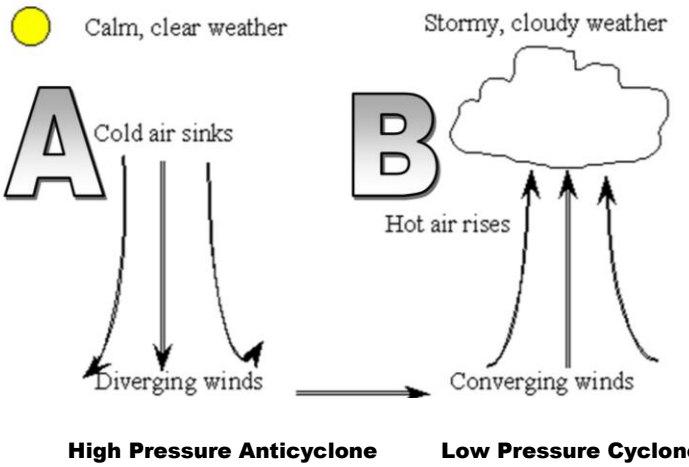
Name _____ Date _____ Period _____ 94

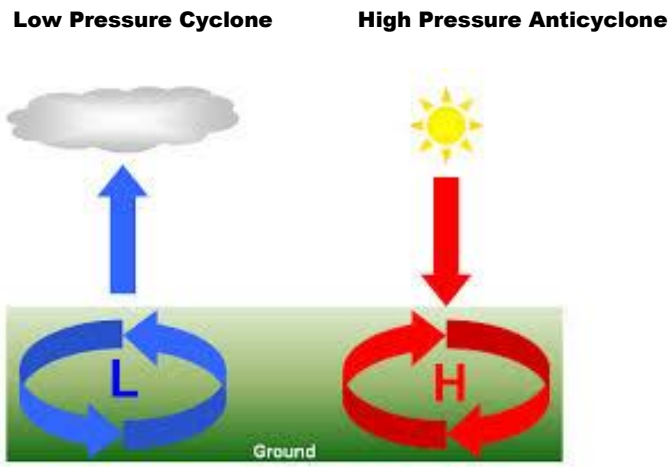
# Wind Formation

## Activity 1 – Air Pressure Diagrams

Use the diagrams to help describe **why** air moves and the weather it can create.




**High Pressure Anticyclone** **Low Pressure Cyclone**




1. What direction does air move at an anticyclone?

2. Would the air be more or less dense at an anticyclone? Explain your answer.

3. What type of weather comes with anticyclone?

4. Why do you think there is high pressure at an anticyclone?

5. What direction does air move at a cyclone?

6. Would the air be more or less dense at a cyclone? Explain your answer.

7. What type of weather comes with a cyclone?

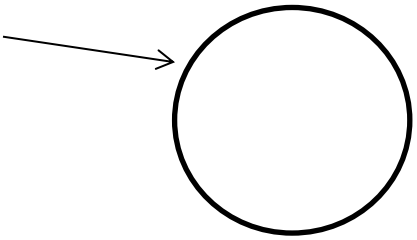
8. Predict why cyclones and anticyclones create different types of weather?

# Activity 2 – The Coriolis Effect

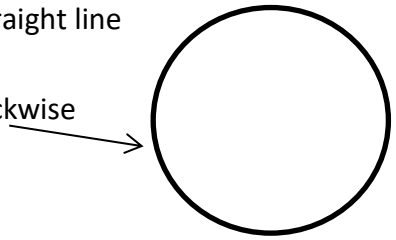
Earth's surface does not heat evenly and it is spinning on its axis. As air around is converging and diverging, we fill it as wind. Follow the procedures to learn **how** wind moves.

**Materials:** Balloon, Marker
**Procedures**:

1. Have one person fill the balloon with carbon dioxide gas (remember, that is the air you exhale) and tie it.
2. One person from the table will hold the balloon while another student attempts to draw a straight line with the marker from **the top** of the balloon **to the bottom**. (Markers are to mark the balloons only)
    a. Draw the path of the marker as it moved across the balloon



3. Repeat step 2, only this time, have the team member holding the balloon slowly spin it counterclockwise while the other team member attempts to draw a straight line with the marker.
    a. Draw the path of the marker as it moved across the counterclockwise spinning balloon



4. **Describe the difference in path of the marker between steps 2 and 3.**

5. **After observing the motion of the marker on the balloon, how do you think the wind moves across Earth's surface?**