



WIND: Living in Kansas, we are no stranger to strong wind gusts.

- Depending on how strong the wind is, it will either heighten or reduce the amount of friction on a baseball.
- The wind impacts the pitcher and batter in good and bad ways. An outfielder is also greatly affected. If the wind is blowing toward home plate, the ball can travel faster which is great for the pitcher.
- With the wind blowing toward home plate, it can be harder for a batter to hit a home run because the ball will travel a shorter distance.
- Cross winds can also play into a foul or fair ball.
- How the winds circulate, given the baseball stadium's structure, could also help or make an outfielder's job of catching a ball much more difficult.

TEMPERATURE: Baseball is played over several seasons where temperature will change.

- A baseball travels farther in warm air than the cold. Warm air is less dense than cold air. A ball hit in April may not travel as far as a ball in August due to temperature.
- Warm or cold air affects a pitcher's grip. A pitcher may sweat in warmer weather, making it harder to grip the ball and may need to use a rosin bag. A pitcher's fingers can go numb in colder weather which will affect the throw.



HUMIDITY: Kansas summers can be quite humid!

- Air is thinner in a high humidity environment than a dry one. In a humid environment, a baseball weighs more than a dry atmosphere. Therefore, hitting a ball far is harder to do when it is humid. But, it can travel farther because the air is less dense.

AIR PRESSURE: There is a constant parade of high and low pressure systems around the globe.

- The ball will travel farther in an area of low pressure because the air is thinner and less dense. The opposite, a high pressure system is more dense and thicker.
- Baseballs tend to carry farther in higher elevations compared to those closer to sea level. If a pitcher is good at a curveball or a slider, an elevation closer to sea level or an area of high pressure would be preferred. The denser air would help change the ball's direction.

CLOUD COVER: A gray day in Kansas easily turns to sunshine in 2.2 seconds! Both greatly affect how the game is played.

- Depth perception will be altered for a fly ball on a bright day due to no clouds.
- More clouds than sunshine could affect how a player sees the ball coming off the bat.