

# HOW DOES A BASEBALL CURVE?

## KEEP YOUR EYE ON THE BALL

**DIRECTIONS:** During the course of a Snappers game, pitchers throw many types of pitches to the batters they face. These pitches include a hard, straight pitch, called a fastball, and a wide variety of pitches that move or change course as they approach the plate, like a curveball, slider, or knuckleball. How does a pitcher throw a curveball? Look at the diagram below and then answer the questions.

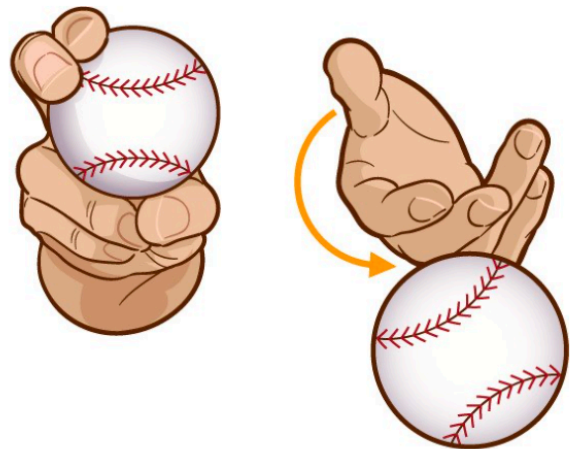
### INTRODUCING...THE CURVEBALL

The diagram shows how you would grip a baseball in order to throw a curveball. When throwing this type of pitch, a pitcher can make a baseball curve up to 17.5 inches in the time it takes a ball to get to the plate. It takes about half a second for a baseball to get to home plate from the pitcher's mound.

A baseball curves because of the 108 red stitches made of waxed red thread that hold a baseball together. In addition to holding the ball together, they hold a thin layer of air around them as they spin.

A curveball is thrown with more top spin, allowing more air to flow around the bottom of the ball than the top. This causes the air to move faster around the bottom of the ball, creating less pressure, allowing the ball to drop or curve.

The curveball generally travels between 70 to 80 miles per hour and will rotate 1,900 times in a minute.



#### **CURVEBALL**

Palm is turned inward with a release like you're pulling down on the ball. Sidespin and backspin should be created with wrist, not elbow.

1. When a pitcher throws a curveball, what is the furthest distance he can make the ball curve?
2. What part of a baseball helps make a ball curve?
3. Creating less \_\_\_\_\_ on the bottom of the baseball allows it to curve.