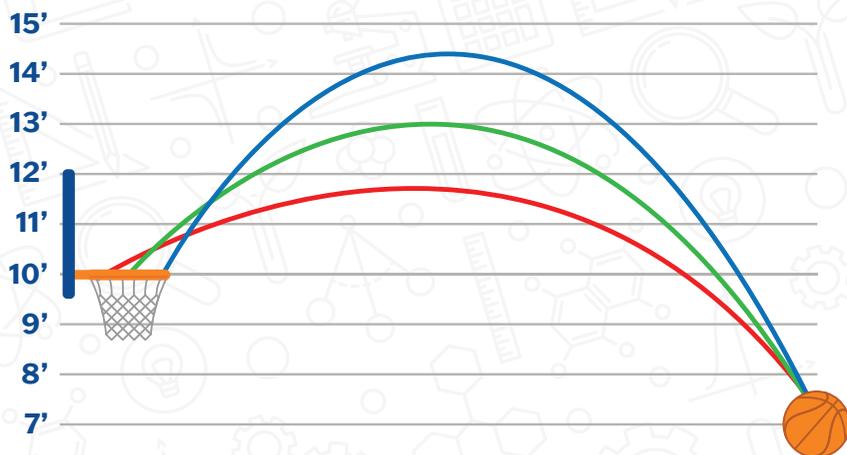


# Basketball: Science of Shooting a Basketball

**Activity:** There are multiple factors that go into shooting a basketball, including body position, the shooting angle, and force applied to the ball. Practice shooting a basketball from the free throw line at multiple angles. Record your data and observations in the table below.



A high arching shot is more difficult to control – especially from farther away. As such, these shots tend to be short.

Optimal shooting arc is  $45^\circ$ , plus or minus  $2^\circ$ .

A flat arching shot reduces the amount of space for the ball to go through the hoop. This shot tends to be long (but can also end up front rimming).

<https://www.coachdavelove.com/how-to-get-perfect-arc-on-the-basketball-and-make-more-shots/>

Degree of Angle	Make or Miss	Observations
35		
45		
55		

- Why is shooting with a specific arc important in basketball? \_\_\_\_\_
- How does force play a role in shooting a basketball? \_\_\_\_\_
- Explain how release angle and force affect the ball's trajectory. \_\_\_\_\_

