

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

Class: \_\_\_\_\_

# Softballs vs. Baseballs

GRADES 6-8

Data Collection

|       | Softball          |                | Baseball          |                |
|-------|-------------------|----------------|-------------------|----------------|
|       | Distance (meters) | Time (seconds) | Distance (meters) | Time (seconds) |
| Hit 1 |                   |                |                   |                |
| Hit 2 |                   |                |                   |                |
| Hit 3 |                   |                |                   |                |

Calculations:

## SOFTBALL

|             | Initial speed | Final Speed (distance divided by time) | Acceleration (initial-final divided by time) | Mass of ball | Force Acting on ball (Mass times Acceleration) |
|-------------|---------------|--|--|--------------|--|
| Tennis ball | 0 m/s         |  |  | .08 kg       |  |
| Golf ball   | 0 m/s         |  |  | .05 kg       |  |
| Baseball    | 0 m/s         |  |  | .14 kg       |  |

## BASEBALL

|             | Initial speed | Final Speed (distance divided by time) | Acceleration (initial-final divided by time) | Mass of ball | Force Acting on ball (Mass times Acceleration) |
|-------------|---------------|--|--|--------------|--|
| Tennis ball | 0 m/s         |  |  | .08 kg       |  |
| Golf ball   | 0 m/s         |  |  | .05 kg       |  |
| Softball    | 0 m/s         |  |  | .25 kg       |  |

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**Extend only:**

**Diagrams:** Draw a diagram that shows the amount of force acting on each ball and how it affects the motion.

| Underhand Throw/Pitch | Overhand Throw/Pitch |
|-----------------------|----------------------|
|                       |                      |