

A BIG DAY FOR BASEBALL

A Magic Tree House Adventure

Forces/Motion

Grade Level(s): Grade 4

Subject: Science

Florida Standards: SC.4.P.12.1, SC.4.P.12.2

Duration: 30-40 minutes

Activity: Students will learn about the motion of objects that is always changing due to its position.

Vocabulary: Push, pull, direction, position, gravity, magnetism, friction

Objectives:

- Recognize that an object in motion always changes its position and may change its direction. Investigate and describe that the speed of an object is determined by the distance it travels in a unit of time and that objects can move at different speeds.

Materials:

- Whiteboard or paper
- Dry Erase Marker or pencil
- Student investigation worksheet

Procedures:

1. Pass out the student energy worksheet.
 2. Watch the short YouTube Video: [Let's Chat about Newton's Third Law of Motion!](#)
 3. Watch the YouTube Video about Friction when throwing a baseball. (You don't need to watch the entire video. [Friction and Baseball](#))
 3. Prezi on Forces used in Baseball:
https://prezi.com/amvzfsxjhp1/_forces-of-baseball/
- List of Forces used in Baseball: Gravity, Friction, Velocity, Acceleration, Newton's Third Law (direction of 2 objects hitting each other)

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3. Have a discussion about when Jackie Robinson was up to bat throughout the book.
4. Have the students complete the worksheet either individually or in groups/partners.

Assessment:

1. Assess students on the completion of the worksheet.

Forces/Motion

Name _____ Date _____

1. How is Friction used in baseball?

2. When Jackie Robinson would throw the baseball, what type of force would he be applying?

3. What role does gravity play in the game of baseball?

4. Explain what happens to the baseball when the pitcher throws a curveball.
