



Fielding Percentage Teacher Instructions

Description: Students learn how to calculate fielding percentage by catching baseball cards. Special emphasis is placed on the role of hand-eye coordination and its influence on fielding abilities.

Objectives:

Level	Objective (verb in bold)
1	Students will identify the formula for fielding percentage. Students will describe reaction time.
2	Students will calculate fielding percentage.
3	Students will describe the connection between eyes, brain, nerves, and muscles in the context of reaction time.

Terminology:

- Fielding Percentage: The average (as of a baseball fielder) determined by dividing the number of putouts and assists by the number of chances.
- Reaction Time: The time elapsing between the beginning of the application of a stimulus and the beginning of an organism's reaction to it.
- Gravitational force: The gravitational attraction of the mass of the earth, the moon, or a planet for bodies at or near its surface.
- Stimulus: Something that rouses or incites one to activity.

Standards:

California Common Core Math Standards

6.RP.3c – Find a percent of a quantity as a rate per 100 (e.g., 30% of a quantity means 30/100 times the quantity); solve problems involving finding the whole, given a part and the percent.

7.SP.5 Understand that the probability of a chance event is a number between 0 and 1 that expresses the likelihood of the event occurring. Larger numbers indicate greater likelihood. A



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probability near 0 indicates an unlikely event, a probability around 1/2 indicates an event that is neither unlikely nor likely, and a probability near 1 indicates a likely event.

8.SP.4 Understand that patterns of association can also be seen in bivariate categorical data by displaying frequencies and relative frequencies in a two-way table. Construct and interpret a two-way table summarizing data on two categorical variables collected from the same subjects. Use relative frequencies calculated for rows or columns to describe possible association between the two variables.

Next Generation Science Standards

5-PS2-1 – Support an argument that the gravitational force exerted by Earth on objects is directed down.

8-PS Students know how to identify separately the two or more forces that are acting on a single static object, including gravity, elastic forces due to tension or compression in matter, and friction.

Worksheet 8 Answers will vary

Assessment Questions

1. What is the numerator and the denominator for the formula for fielding percentage?

Answer: Numerator is number of catches, denominator is number of attempts

2. Which two of the five senses are most used by a fielder when they react to a batted ball?

Answer: Sight and sound are the most useful

3. If a player catches 400 baseballs in 450 attempts, what is their fielding percentage?

Answer: $400 / 450 = 0.88 = 88\%$

