Key Math Standards
Aligned to *Action Math Baseball* Activities

Activities in *Action Math Baseball* are linked to key math standards. As students interact with the simulation, the software automatically tracks and measures their performance and generates class and student assessment reports.

Standard Description	Game Activities
1. Evaluate numerical expressions using parentheses, brackets, or braces.	1. On-base percentage 2. Total bases (slugging avg.)
2. Compare decimals up to thousandths.	1. Rank batting average 2. Rank on-base percentage
3. Use place value to round decimals to any place.	Convert ratio to decimal and round up to four places
4. Add, subtract, multiply, and divide decimals using concrete models.	1. Home run ratio 2. Strikeout ratio 3. Slugging Average
5. Solve problems involving addition and subtraction of fractions.	Compute fractions for probability table (player's wheel)
6. Understand ratio concepts and use ratio reasoning to solve problems.	Apply ratios to the player's wheel
7. Understand the concept and derive a unit rate associated with ratio.	1. Compute home run ratio 2. Compute on-base percentage
8. Use ratio and rate reasoning to solve real-world and mathematical problems.	Identify the appropriate players to be traded and drafted
9. Fluently multiply multi-digit numbers using a standard algorithm.	1. Batting average 2. On-base percentage 3. Home run ratio 4. Strikeout ratio 5. Slugging average
10. Fluently add, subtract, multiply, and divide multi-digit decimals using a standard algorithm for each operation.	1. Compute batting average 2. Compute slugging average 3. Compute on-base percentage

Standard Description	Game Activities
11. Write and evaluate numerical expressions in which letters stand for numbers.	Compute Player Stats
12. Understand solving an equation or inequality as a process of answering a question: which values from a specified set.	Compute all stats necessary for determining the best year.
13. Use variables to represent numbers and write expressions when solving a real-world or mathematical problem.	1. Slugging average 2. Home run ratio 3. Strikeout ratio
14. Recognize a statistical question as one that anticipates variability in the data related to the question and accounts for it in the answers.	Draft players that improve your overall team's batting performance
15. Summarize numerical data sets in relation to their context, such as Reporting the number of observations.	Compute Player Stats, Best Year and Wheel stats calculations
16. Recognize and represent proportional relationships between quantities.	Create player's wheel
17. Use proportional relationships to solve multistep ratio and percent problems.	Proportion 360 degrees for each type of batting outcome.
18. Represent addition and subtraction on a horizontal or vertical number line diagram.	1. Home run ratio 2. Strikeout ratio 3. Slugging average 4. Plate Appearance 5. On-base percentage
19. Apply and extend understandings of multiplication, division and of fractions to multiply and divide rational numbers.	Compute formulas for player stats, best year and player's wheel.
20. Solve multi-step real-life mathematical problems posed with positive rational numbers (whole numbers, fractions, and decimals), using tools strategically.	Compute wheel stats using ratios, decimals and percents

Standard Description	Game Activities
21. Display numerical data in plots on a number line, including dot plots, histograms, and box plots.	Review, Interpret and select data points represented by the number line and coordinate plane data plots.
22. Approximate the probability of a chance event by collecting data that predicts the approximate relative frequency given the probability.	Compute degrees for the player's wheel
23. Develop a probability model and use it to find probabilities of events.	1. Apply probability statistics 2. Create the player's wheel
24. Find probabilities of compound events using organized lists, tables, tree diagrams, and simulation.	Compute counts, decimals, percentages and degrees for wheel stats grid
25. Make sense of problems and persevere in solving them.	1. Compute best year for all players 2.Draft players to replace low performing batters
26. Reason abstractly and quantitatively.	1. Identify the appropriate player to be drafted 2. Identify the appropriate players that should be traded
27. Construct viable arguments and critique the reasoning of others.	Achieve a winning record
28. Model with mathematics	Improve team's overall batting average, on-base percentage and slugging average
29. Use appropriate tools strategically.	1. Set batting order 2. Bunt appropriately 3. Draft players appropriately
30. Attend to precision.	1. Compute calculations accurately 2. Set batting order appropriately