

Probability Project Ideas For High School

List of best Probability Project Ideas For High School:

Math & Games Category

1. Flip a coin 100 times and draw a chart of how many heads you get.
2. Roll dice and count which number appears most.
3. Use cards to find the chance of drawing a matching pair.
4. Make a spinner with colored sections of different sizes and play a game.
5. Count M&M candy colors in many bags to see patterns.
6. Play Rock, Paper, Scissors and note who wins most.
7. Check if any two people in your class share the same birthday.
8. Make a game where players guess the color of hidden marbles.
9. Use dice to build a race game with simple chance rules.
10. Count car colors in a parking lot to find the most common.
11. Flip coins to see if they are fair.
12. Play a board game and track which player spot wins most.
13. Try two ways of shuffling cards to see which works best.
14. Make a simple carnival game that shows why some games are hard.
15. Keep a list of team wins to guess future results.
16. Design a fun game based on chance that is fair.
17. See if people can pick random numbers without any pattern.
18. Make a game where certain dice rolls win prizes.
19. Look at lottery numbers to see if any patterns appear.
20. Check if more babies are born on some weekdays than others.

21. Play the Monty Hall game with three doors and test the chance.
22. Use math to make a card trick instead of magic.
23. Make a spinner where each color has its own meaning.
24. Create a dice betting game with easy rules.
25. Keep tossing a coin until you get five heads in a row.
26. Play tic-tac-toe and count wins when you go first or second.
27. Record which Monopoly spaces get landed on most.
28. Build a paper slot machine with spinning wheels.
29. Check how many goldfish crackers have broken fins.
30. Build a marble run with paths that have different chances.
31. Make a game using colored beans in a bag.
32. Invent a card game where chance helps you win.
33. Show why casinos always win using simple math.
34. Guess numbers and track how often you are right.
35. See how many tries it takes to pick matching colored socks.
36. Make a school carnival booth that uses chance.
37. Create your own bingo and work out the odds.
38. Spin a wheel where some colors win prizes.
39. Roll two dice many times and count each result.
40. Act out the "Let's Make a Deal" game with your friends.

Sports & Weather Category

41. Chart how much it rains each day to guess weekend weather.
42. Count baseball hits to find a player's batting average.

43. Record basketball free throws to find success rates.
44. Look at past soccer penalty kicks to predict where they go.
45. Compare weather forecasts to real weather to see how often they are right.
46. Track football field goal tries at different yard lines.
47. Compare this year's weather with past years.
48. See which teams win more games at home than away.
49. Use cloud types and sky cover to guess rain chance.
50. Find how likely you are to score in different hockey plays.
51. Count tornadoes by place and time of year.
52. Work out the odds of different poker hands by playing many games.
53. See which basketball spot scores the most points.
54. Compare volleyball serve success from each position.
55. Watch moon phases and find patterns in rainy days.
56. Test tennis serves with different moves to see success rates.
57. Track daily temperatures to guess freezing days.
58. See how wind speed affects football kicks.
59. Work out home run odds with different bats.
60. Track snow days to find a pattern.
61. Check how humidity affects baseball hit distance.
62. Count which lane wins swimming races most often.
63. See which soccer positions score the most goals.
64. Count sunny vs. cloudy days each month.
65. Work out touchdown odds from different field spots.
66. Track golf putt success at different lengths.

67. Watch marathon times in different weather.
68. Count perfect bowling games with different balls.
69. Find hurricane patterns based on ocean temperature.
70. See which court spots give the best basketball shots.
71. Track temperatures all day for a week.
72. Watch soccer goal directions and goalkeeper saves.
73. Work out snow day odds from past temperature trends.
74. Compare dance scores from different judges.
75. Watch running times at different temperatures.
76. Track heat wave chances each summer month.
77. See how lacrosse shot angles affect goals.
78. Study baseball strike zones with different pitchers.
79. Work out rain odds during each moon phase.
80. Find patterns in gymnastics scores from different judges.

Life & School Category

81. Watch what foods students choose in the cafeteria to find favorites.
82. Time bus arrivals to see how often they are on time.
83. Work out odds of being called on in class.
84. Track attendance on each day of the week.
85. Try picking socks blindfolded to see how often they match.
86. Look at test scores in many classes to find patterns.
87. See if people pick the right door more than the left one.
88. Track late homework in different months.

89. Work out odds of meeting someone with your birthday.
90. Count people in halls between classes to find busy times.
91. Track who is picked first in gym class teams.
92. Work out odds of finding a certain book in the library.
93. Watch school announcements to find topic patterns.
94. Check how many people miss each test question to find hard ones.
95. See how lunch line length changes each day.
96. Work out odds of finding a parking spot at different times.
97. Track club sign-ups over time to find trends.
98. See how often homework is forgotten for each subject.
99. Track fire drills in each month.
100. Watch wifi speed in school at different times.
101. Work out odds of siblings having the same teacher years apart.
102. Track classroom temperature all day.
103. See where students like to sit in each class.
104. Work out odds of having a substitute teacher for each subject.
105. Track broken pencil sharpeners in classrooms.
106. See which water fountains students use most.
107. Work out how often buses run late.
108. Count questions asked in class each day.
109. See when students ask to use the bathroom.
110. Work out snow day odds from past years.
111. Track locker code resets each semester.
112. See how many students visit the nurse by grade.

113. Work out odds of getting a certain lunch table spot.
114. Track how often bells ring right on time.
115. See which subjects' books get checked out most.
116. Work out odds of having a birthday during school days.
117. Track after-school detentions all year.
118. See when tardy slips are handed out each morning.
119. Work out odds of getting computer lab time slots.
120. Track lost items that get returned each week.

Technology & Science Category

121. Test how long batteries last from different brands.
122. Watch how friends use phone apps each day.
123. Work out how often computers crash with different programs on.
124. Check website load times at different hours.
125. Track how often people forget their passwords.
126. Work out odds of getting spam in your email.
127. See where wifi signal is strong or weak in school.
128. Track how often light bulbs burn out.
129. Work out odds of dropped calls in different places.
130. See patterns in video game high scores.
131. Track plant growth with different watering plans.
132. Work out odds of getting a computer virus by activity.
133. See when social media posts get the most likes.
134. Track how often phone chargers stop working.

135. Work out odds of paper jams with different papers.
136. See patterns in microwave cooking success.
137. Track how often rechargeable batteries die.
138. Work out odds of finding dead pixels on screens.
139. See when websites crash most often.
140. Track how often apps crash on phones.
141. Work out odds of pairing wireless devices.
142. See patterns in digital photo times.
143. Track when software updates make devices faster.
144. Work out odds of finding what you search online.
145. See patterns in computer start-up times by age.
146. Track how well smart home devices follow commands.
147. Work out odds of losing internet at different times.
148. See when software bugs happen after updates.
149. Track how often people check their phones each hour.
150. Work out chances of seeds sprouting under set conditions.
151. See patterns in cloud storage use over time.
152. Track video buffering times by hour.
153. Work out odds of losing data with different drives.
154. See when cameras focus best in low light.
155. Track how long phone batteries last all day.
156. Work out odds of voice recognition hearing you right.
157. See patterns in garden pest visits each season.
158. Track how often people forget to charge overnight.

- 159. Work out odds of typing a password right the first time.
- 160. See how long calculator batteries last on average.

Consumer & Society Category

- 161. Work out odds of finding your favorite cereal at the store.
- 162. Track wait times in different checkout lines.
- 163. See when restaurant tables are free by time of day.
- 164. Work out odds of fresh bread at the bakery.
- 165. Track how often items go on sale in stores.
- 166. See where people sit in movie theaters by showtime.
- 167. Work out odds of parking near the store door.
- 168. Track menu orders at restaurants each day.
- 169. See how gas prices change each week.
- 170. Work out odds of having exact change in your pocket.
- 171. Track how often vending machines run out of items.
- 172. See patterns in coupon value and use at stores.
- 173. Work out odds of finding a certain book in a bookstore.
- 174. Track ice cream flavor sales by season.
- 175. See how traffic lights change timing in town.
- 176. Work out odds of matching socks after laundry.
- 177. Track how often stores restock shelves.
- 178. See how long drive-thru orders take each hour.
- 179. Work out odds of getting seats together at a late show.
- 180. Track when mail arrives each day.

181. See when coffee shop orders get complicated.
182. Work out odds of finding your shoe size in stores.
183. Track how often store returns go smoothly.
184. See how fast restaurant tables turn over each meal.
185. Work out odds of guessing item prices right.
186. Track food delivery arrival times.
187. See how full mall parking lots are by time.
188. Work out odds of finding a song in a store.
189. Track how much recycling actually gets recycled.
190. See which clothing sizes are in stock most.
191. Work out odds of finding your snack in a convenience store.
192. Track how often buses run on time in town.
193. See when restaurants make order mistakes.
194. Work out odds of hitting all green lights downtown.
195. Track how often self-checkouts need help.
196. See when hotel rooms are free by season.
197. Work out odds of getting wrong change at stores.
198. Track if sale items really save you money.
199. See how long restaurant wait times are each day.
200. Work out odds of finding a shopping cart at the entrance.

Advanced & Fun Category

201. Test if playing music helps plants grow.
202. Work out how traits pass down in families.

203. See patterns in how stars shine at night.
204. Track if people pick the same door each time.
205. Work out odds of finding four-leaf clovers.
206. See animal paths in a field during the day.
207. Track if random number machines repeat patterns.
208. Work out odds of a deck shuffling back to start.
209. See cloud shapes before storms arrive.
210. Track if twins think the same thoughts.
211. Work out odds of certain DNA patterns in groups.
212. See when birds migrate each year.
213. Track if random tunes sound good together.
214. Work out odds of certain fingerprint shapes.
215. See insect paths in a garden.
216. Track if soap bubbles make perfect spheres.
217. Work out odds of two snowflakes matching.
218. See how people solve maze puzzles.
219. Track if people blink often when talking.
220. Work out odds of finding matching seashells on a beach.

Probability Project Ideas for College Students

1. Study how well different poll methods can guess election results each time
2. Build a Bayes model to guess stock price changes from past market data
3. Use Markov chains to study word patterns in story texts
4. Plan and check a Monte Carlo test to make supply chains run

5. Look into how probability ideas work in quantum computer algorithms
6. Study how random crypto price changes are using chance math
7. Build a model to guess disease spread from health data
8. Make a chance model to forecast weather with past weather data
9. Study how well various suggestion algorithms work using chance methods
10. Learn how wait times in different service businesses spread over time
11. Use survival study methods to check product life and reliability
12. Look into Poisson process use for modeling traffic flows in patterns
13. Build a chance model to guess when customers leave subscription services
14. Study genetic inheritance using chance math ideas
15. Use Bayes networks to make a diagnostic tool for machine failures
16. Learn how probability ideas work in computer vision algorithm design
17. Build a model to improve betting strategies in different chance games
18. Study how social network interactions show pattern stats
19. Make a model to predict student success using school education data
20. Study how well A/B tests work in digital online marketing
21. Use hidden Markov models to study speech patterns
22. Build a chance-based method to find fraud in money transactions
23. Study how sample size really affects statistical significance in lab research studies
24. Learn clustering algorithms and their chance foundations
25. Make a model to improve resource use in cloud computing setups
26. Look into how probability works in natural language processing
27. Study how insurance risk models work using chance methods
28. Build a stats model to predict sports game results

29. Use probability ideas to study network security holes
30. Learn stats properties of computer random number generators
31. Make a chance model to guess consumer behavior
32. Study how vaccine plans work using epidemic models
33. Build a model to improve farming steps using weather chance data
34. Learn how probability helps in image rebuilding computer algorithms
35. Study time series data with chance models
36. Use game theory and probability to study strategic decision-making
37. Build a reliability theory model for maintenance prediction
38. Learn how Bayes stats are used in medical diagnosis
39. Make a chance model to improve traffic lights
40. Study how user engagement stats really show patterns online

Probability Project Ideas for Class 10

41. Find and compare probability in various card games
42. Study the probability of different outcomes when rolling many dice
43. Do a survey at school and study the probability of different responses
44. Make a probability board game and study its fairness
45. Learn the Birthday Paradox by collecting classroom data
46. Explore the Monty Hall problem with fun hands on demonstrations
47. Study the probability of weather patterns using local past weather data sets
48. Find win chances in popular sports using team stats data
49. Make a coin flip experiment to show the law of large numbers
50. Make a spinner game and study the theoretical versus experimental probability

51. Learn probability in genetic inheritance with colored beads
52. Study the odds in different lottery systems
53. Make a simulation to show how insurance companies use probability
54. Explore probability in music by studying note patterns in popular songs
55. Plan an experiment to test the probability of random number generation
56. Find the probability of specific traffic patterns at a local intersection
57. Make a model to show probability in daily decision-making
58. Study the probability of drawing specific colored marbles from a bag
59. Plan a classroom experiment on probability in population sampling
60. Explore how probability affects queue management in local businesses
61. Make a model to show conditional probability using playing cards
62. Study the probability distribution of heights or weights in your class
63. Plan a simulation to show how probability is used in weather forecasting
64. Make a visual representation of probability using tree diagrams
65. Study probability of outcomes in rock paper scissors games
66. Explore the gambler's fallacy through classroom experiments
67. Make a presentation on how probability is used in medical testing
68. Plan a dart board game to show geometric probability
69. Study probability in social media algorithms using simple models
70. Make a demonstration of how probability is used in quality control
71. Plan an experiment to calculate the probability of plant growth under different conditions
72. Study the probability of specific traffic light patterns
73. Explore probability in food preferences through class surveys

74. Make a model showing probability in epidemic spread
75. Plan a game to illustrate the concept of expected value
76. Study the probability of specific patterns in coin toss sequences
77. Make a classroom lottery to demonstrate odds and expected returns
78. Plan an experiment showing how probability affects manufacturing processes
79. Study the probability of reaching specific outcomes in popular board games
80. Make a visual presentation on how probability influences everyday decisions

Probability Games Ideas for Students

81. Probability Bingo: Make bingo cards with numbers based on probability outcomes
82. Monte Carlo Dice: A game where students guess outcomes of many dice rolls
83. Probability Roulette: A classroom roulette wheel showing odds and expected value
84. Card Probability Race: Students race by drawing cards with set probabilities
85. Coin Flip Challenge: Teams compete to guess patterns in sequential coin flips
86. Marbles and Probability: Drawing colored marbles from bags to show sampling
87. Probability Jenga: Put probability questions on Jenga blocks
88. Probability Monopoly: Change Monopoly to include probability calculations
89. The Probability Game Show: Students compete in teams solving probability questions
90. Probability Scavenger Hunt: Find items around the school using the probability clues
91. Bayesian Detective: Solve mysteries using Bayes probability updates
92. Probability Pictionary: Draw pictures showing probability concepts
93. Conditional Probability Card Game: A game showing the basics of conditional probability
94. Expected Value Auction: Bid on items with known chances of different values

95. Probability Memory Match: Match cards showing equal probability expressions
96. Random Walk Race: A board game based on the idea of random walks
97. Probability Jeopardy: A quiz game with probability categories and problems
98. Distribution Dash: A game showing various probability distributions
99. The Monty Hall Game Show: A live-action replay of the famous probability puzzle
100. Probability Poker: A simple poker game emphasizing probability calculations
101. Sample Space Challenge: Create the biggest possible sample space for given scenarios
102. Probability Charades: Act out probability ideas for teammates to guess
103. Bean Machine Demonstration: Build a physical Galton board to display normal distribution
104. Probability Battleship: A modified version incorporating probability ideas
105. Risk Assessment Game: Make choices based on probability calculations
106. Probability Telephone: Pass probability problems along a chain of students
107. Tree Diagram Race: Teams compete to build accurate probability tree diagrams
108. Probability Taboo: Describe probability ideas without using certain words
109. Simulation Olympics: Teams design and do probability simulations for specific scenarios
110. Probability Puzzle Escape Room: Solve probability puzzles to escape
111. Probability Relay Race: Teams answer sequential probability problems
112. Venn Diagram Game: Put events in the correct sections of probability Venn diagrams
113. Probability Dice-Off: A tournament using dice games with known probabilities
114. Random Variable Pictionary: Sketch distributions of random variables
115. Pascal's Triangle Challenge: Finish Pascal's Triangle puzzles against the clock
116. Law of Large Numbers Demonstration: A fun coin-flipping tournament

117. Probability Casino Night: Set up different games with calculated odds
118. Bayes' Theorem Puzzle Challenge: Solve real-world problems with Bayes' Theorem
119. Probability Obstacle Course: Navigate stations through probability-based challenges
120. Expected Value Market: Trade items with varied expected values