

PJAS Project Ideas For High School Students

Here's a list of unique PJAS project ideas for high school students:

1. Biology:

1. Plant growth with colored light bulbs
2. Effects of music on plant growth
3. Comparing homemade vs. store-bought fertilizers
4. Analyzing pond water ecosystems locally
5. Testing natural vs. chemical pesticides
6. Fruit fly behavior in different environments
7. Earthworm populations in various soil types
8. Mold growth on different bread types
9. Effects of caffeine on Planaria Regeneration
10. Comparing biodegradable vs. plastic bag decomposition
11. Impact of temperature on yeast fermentation
12. Bird feeding habits in backyards
13. Effects of sugar on teeth staining
14. Comparing organic vs. non-organic produce shelf life
15. Testing natural vs. chemical cleaning products
16. Analysing local air quality using lichens
17. Effects of exercise on heart rate
18. Comparing plant growth in different soils
19. Testing homemade vs. commercial hand sanitisers
20. Insect biodiversity in local parks

2. Chemistry:

21. Making soap from different fats
22. Comparing antacid effectiveness against stomach acid
23. Creating batteries from various fruits
24. Testing flame colors of different salts
25. Analysing crystal growth in different solutions
26. Rust prevention methods on nails
27. Making invisible ink with household items
28. Testing acidity levels in standard drinks
29. Sunscreen effectiveness comparisons
30. Analysing sugar content in various sodas
31. Making plastic from milk and vinegar
32. Testing water quality in local streams
33. Effectiveness of different stain removers
34. Vitamin C content in fruits analysis
35. Making biodiesel fuel from vegetable oil
36. pH levels of household cleaners testing

37. Solubility of various substances comparison
38. Metal content in coins analysis
39. Making slime with different ingredients
40. Testing corrosion resistance of metals

3. Physics:

41. Building a simple electric motor
42. Sound insulation properties of materials
43. Comparing paper airplane efficiency
44. Testing friction on various surfaces
45. Building a homemade wind turbine
46. Heat absorption of different colors
47. Comparing the buoyancy of different objects
48. Testing the magnetic strength of multiple magnets
49. Building a basic spectroscope
50. Analysing light refraction through liquids
51. Insulation properties of materials comparison
52. Aerodynamics of car shape testing
53. Building a simple hydraulic system
54. Pendulum motion with different weights
55. Energy efficiency of light bulbs comparison
56. Water resistance of various fabrics
57. Building a homemade seismograph
58. Analysing sound waves with household items
59. Strength of bridge design comparison
60. Testing the thermal conductivity of metals

4. Environmental Science:

61. Analyzing local water pollution sources
62. Recycling methods comparison
63. Air quality testing in different areas
64. Soil erosion prevention techniques
65. The energy efficiency of appliances comparison
66. Effectiveness of homemade air purifiers
67. Deforestation's impact on soil analysis
68. Comparing the biodegradability of plastics
69. Testing oil spill cleanup methods
70. Effect of road salt on plants
71. Water filtration methods comparison
72. Effectiveness of composting techniques
73. Fertilisers' impact on waterways
74. Solar panel energy production comparison
75. Effectiveness of natural pest control
76. Invasive species' local impact analysis
77. Water conservation methods at home
78. Green roof effectiveness testing

79. Impact of light pollution
80. The carbon footprint of foods comparison

5. Earth and Space Science:

81. Local rock formations analysis
82. Erosion control methods comparison
83. Soil permeability testing
84. Weather impact on soil analysis
85. Weather forecasting methods comparison
86. Homemade weather instruments testing
87. Local geological features analysis
88. Mineral content in water comparison
89. Impact of acid rain on plants
90. Moon phases and their effects
91. Sundials effectiveness comparison
92. Volcanic ash's impact on soil
93. Local fossil discoveries analysis
94. Water purification methods comparison
95. Earthquake-resistant structures testing
96. Tides' impact on coastlines analysis
97. Cloud seeder effectiveness comparison
98. Climate change's local impact
99. Local land features formation
100. Compasses effectiveness comparison

6. Computer Science:

101. Creating a simple chatbot program
102. Sorting algorithms effectiveness analysis
103. Building an essential website for business
104. Comparing the performance of coding languages
105. Developing a simple mobile app
106. Internet usage patterns in school
107. Creating a game using Scratch
108. Password strength checkers comparison
109. Developing a database management system
110. Social media usage among teens
111. Creating a basic encryption program
112. Search engine performance comparison
113. Developing a budgeting application
114. Ad-blocking software effectiveness
115. Creating image recognition software
116. Spell checkers accuracy comparison
117. Developing a calculator application
118. Screen time's impact on sleep
119. Creating a text-to-speech program
120. Antivirus software effectiveness comparison

7. Mathematics:

121. Prime number patterns analysis
122. Estimation techniques effectiveness comparison
123. Probability testing in coin flips
124. Geometric shapes in nature analysis
125. Measurement tools accuracy comparison
126. Mental math tricks effectiveness testing
127. Fibonacci sequence patterns analysis
128. Calculating pi methods comparison
129. Budgeting methods effectiveness testing
130. Lottery number patterns analysis
131. Polling methods accuracy comparison
132. Study techniques effectiveness testing
133. Stock market trends patterns analysis
134. Equation-solving methods comparison
135. Memory techniques effectiveness testing
136. Music and math patterns analysis
137. Calculating percentages methods comparison
138. Problem-solving strategies effectiveness testing
139. Sports statistics patterns analysis
140. Statistical methods accuracy comparison

8. Psychology:

141. Colour impact on mood analysis
142. Memory techniques effectiveness testing
143. Reaction times comparison in situations
144. Music's effect on concentration analysis
145. Power poses effectiveness testing
146. Learning styles comparison among classmates
147. Sleep's impact on test scores
148. Study methods effectiveness testing
149. Perception of time in activities
150. Social media's impact on self-esteem
151. Stress-relief techniques effectiveness testing
152. Decision-making in groups vs. individuals
153. Scents' effect on memory analysis
154. Subliminal messaging effectiveness testing
155. Multitasking ability across age groups
156. Exercise's effect on mood analysis
157. Motivation techniques effectiveness testing
158. Perception of beauty across cultures
159. Phone use impact on relationships
160. Persuasion methods effectiveness testing

9. Social Sciences:

161. Voting patterns in local elections
162. Fundraising methods effectiveness comparison
163. Advertising's impact on purchasing
164. Social media trends among teens
165. Cultural differences in body language
166. Teaching styles effectiveness comparison
167. Minimum wage's impact on employment
168. Gender roles in different cultures
169. Anti-bullying program's effectiveness testing
170. Technology's impact on communication
171. Conflict resolution methods comparison
172. Recycling awareness campaigns' effectiveness
173. Sports' impact on community unity
174. Time management methods comparison
175. Parenting styles effectiveness testing
176. Fast food's impact on health
177. Crime reduction methods comparison
178. Leadership styles effectiveness testing
179. Immigration's impact on the local economy
180. Poverty reduction methods comparison

10. Engineering:

181. Building a water filtration system
182. Bridge design effectiveness comparison
183. Strength testing of concrete mixtures
184. Gear systems efficiency analysis
185. Insulation materials effectiveness comparison
186. Roofing materials durability testing
187. Solar panel design efficiency comparison
188. Dam design effectiveness comparison
189. Strength of wood joints testing
190. Wind turbine design efficiency analysis
191. Earthquake-resistant structures effectiveness
192. Road surface durability testing
193. Cooling systems efficiency comparison
194. Flood control methods' effectiveness
195. Adhesive strength testing comparison
196. Battery types efficiency analysis
197. Noise reduction techniques comparison
198. Packaging materials durability testing
199. Transportation systems efficiency analysis
200. Water conservation methods comparison

11. Microbiology:

201. Bacteria growth on different surfaces

202. Hand sanitizer effectiveness comparison
203. Temperature's impact on bacteria growth
204. Microorganisms in water sources analysis
205. Food preservative effectiveness comparison
206. Antibiotics' effect on bacteria growth
207. Microorganisms in soil types analysis
208. Disinfectants effectiveness comparison
209. UV light's effect on bacteria
210. Microorganisms on different foods analysis
211. Probiotic yogurt effectiveness comparison
212. pH's effect on bacteria growth
213. Microorganisms in mouth rinses analysis
214. Water filter effectiveness comparison
215. Essential oils' effect on bacteria
216. Microorganisms in cosmetic products analysis
217. Natural antibiotics effectiveness comparison
218. Sugar's effect on bacteria growth
219. Microorganisms in cleaning products analysis