

# Research Topics For STEM Students

## Biology and Life Sciences

1. Study how local plants react to different sunlight levels
2. Test various natural fertilisers on vegetable plant growth
3. Compare healing rates of different types of leaves
4. Measure butterfly population changes in your neighbourhood area
5. Track bird migration patterns in your local region
6. Study how music affects plant development and growth
7. Observe ant colony behaviour under different weather conditions
8. Test natural ways to keep garden pests away
9. Study how temperature affects tadpole development stages
10. Compare growth rates of plants in different soil
11. Measure how exercise affects heart recovery time
12. Study local pond ecosystem changes through seasons
13. Test natural water filtration using different materials
14. Track plant growth with various watering schedules
15. Study earthworm behavior in different soil types
16. Compare seed germination rates in various conditions
17. Measure how light colour affects plant growth
18. Study local insect species diversity and patterns
19. Test natural food preservation methods' effectiveness
20. Observe how weather affects local wildlife behaviour

## Chemistry and Materials

21. Make natural dyes from plants and vegetables
22. Test how temperature affects crystal growth speed
23. Compare different methods to prevent apple browning
24. Study how sunlight affects food colour change
25. Test home materials for heat-conducting properties
26. Make soap using different natural ingredients
27. Study how temperature affects candy-making results
28. Compare the effectiveness of natural cleaning solutions
29. Test which materials best absorb oil spills
30. Study rust formation under different conditions
31. Compare different methods of water purification
32. Test natural fabric dye staying power
33. Study how temperature affects bubble solution strength
34. Compare different methods to preserve cut flowers
35. Test various materials for water resistance
36. Study how sugar affects the freezing point
37. Compare different methods of making paper
38. Test natural ways to remove stains
39. Study how salt affects ice melting speed

40. Compare the biodegradation of different materials

## Environmental Science

41. Study local air quality at different times
42. Test rainwater pH in different areas
43. Compare soil quality in different locations
44. Measure noise pollution around your neighbourhood
45. Study local water quality through seasons
46. Track daily temperature changes in microenvironments
47. Compare the effectiveness of different composting methods
48. Study light pollution effects on plant growth
49. Test natural ways to clean water
50. Measure rainfall patterns in your area
51. Study local tree species distribution patterns
52. Compare different soil erosion prevention methods
53. Test the effectiveness of natural water filters
54. Study how weather affects local plant growth
55. Compare different methods of water conservation
56. Track solar energy collection at different times
57. Study wind patterns in your local area
58. Test different methods of soil improvement
59. Compare natural methods of pest control
60. Study local watershed characteristics and patterns

## Physics and Engineering

61. Build simple machines using household materials
62. Test different bridge design strengths.
63. Compare the effectiveness of various sound insulators.
64. Study how shape affects paper aeroplane flight
65. Build and test different types of solar ovens
66. Compare different wheel designs for efficiency
67. Study how weight affects pendulum motion
68. Test different materials for sound conduction
69. Build and compare different types of levers
70. Study how shape affects water flow
71. Compare different methods of heat insulation
72. Test various materials for electrical conductivity
73. Study how design affects kite flight
74. Build and test different types of pulleys
75. Compare the effectiveness of different windmill designs
76. Study how shape affects boat stability
77. Test different methods of energy storage
78. Compare different types of simple motors
79. Study how design affects parachute performance
80. Build and test different types of rockets

## Mathematics and Data Science

81. Study patterns in local weather data
82. Compare different methods of measuring height
83. Track and analyse daily temperature patterns
84. Study geometric patterns in nature
85. Compare different probability prediction methods
86. Track and analyse rainfall patterns
87. Study traffic patterns at different times
88. Compare different methods of estimating distance
89. Study patterns in plant growth rates
90. Track and analyse wind speed patterns
91. Compare different methods of measuring area
92. Study patterns in local bird populations
93. Track and analyse cloud cover patterns
94. Study geometric patterns in architecture
95. Compare different sampling methods' effectiveness
96. Track and analyse noise level patterns
97. Study patterns in local insect activity
98. Compare different data collection methods
99. Study patterns in plant distribution
100. Track and analyse shadow length changes

## Technology and Computer Science

101. Build simple sensors using basic electronics
102. Create basic weather monitoring systems
103. Design simple automated watering systems
104. Build basic motion detection devices
105. Create simple light measurement tools
106. Design basic temperature monitoring systems
107. Build simple sound level meters
108. Create basic humidity measurement devices
109. Design simple wind speed monitors
110. Build basic soil moisture sensors
111. Create simple plant growth tracking systems
112. Design basic rainfall measurement devices
113. Build simple light-tracking systems
114. Create basic distance measurement tools
115. Design simple water level monitors
116. Build basic air quality sensors
117. Create simple pressure measurement devices
118. Design basic heart rate monitors
119. Build simple reaction time testers
120. Create basic speed measurement tools

## Health and Sports Science

121. Compare the effectiveness of different stretching methods
122. Study how exercise affects reaction time
123. Test different methods of measuring pulse
124. Compare the effectiveness of various cooling methods
125. Study how different exercises affect breathing
126. Test various methods of measuring flexibility
127. Compare different ways to improve balance
128. Study how rest affects physical performance
129. Test different methods of measuring strength
130. Compare the effectiveness of various warm-ups
131. Study how nutrition affects exercise recovery
132. Test different methods of improving coordination
133. Compare the effectiveness of various breathing techniques
134. Study how music affects exercise performance
135. Test different methods of measuring endurance
136. Compare the effectiveness of various recovery methods
137. Study how temperature affects exercise performance
138. Test different methods of improving speed
139. Compare the effectiveness of various training methods
140. Study how hydration affects physical performance

## Agriculture and Food Science

141. Compare different methods of seed storage
142. Study how storage affects fruit ripening
143. Test various methods of extending produce life
144. Compare different methods of growing sprouts
145. Study how temperature affects food storage
146. Test various methods of drying herbs
147. Compare different methods of composting
148. Study how light affects plant nutrients
149. Test various methods of soil preparation
150. Compare different methods of pest management

## Quantitative Research Topics for STEM Students:

151. Study how plant height changes with different soil nutrients.
152. Compare student math scores using games versus textbooks.
153. Track temperature changes in different coloured cars over time.
154. Measure rainfall effects on local plant species growth.
155. Count butterfly visits to native versus non-native flowers.
156. Test battery life in phones with different apps running.
157. Record water usage patterns in school drinking fountains.
158. Study wind power output at different times daily.
159. Compare growth rates of seeds under varied light colours.
160. Measure sound levels in different school building areas.

161. Track student focus during morning versus afternoon classes.
162. Study home energy use with LED versus regular bulbs.
163. Compare plant growth using tap versus filtered water.
164. Measure soap effectiveness at different water temperatures.
165. Study walking speeds on different playground surfaces.
166. Compare homework completion rates with varied study methods.
167. Track ice melting speeds under different conditions.
168. Measure paper aeroplane flight with wing design changes.
169. Study snack choices based on package colours.
170. Compare reaction times using different hand positions.

### Qualitative Research Topics for STEM Students:

171. Explore why students pick certain science fair projects.
172. Study how families make eco-friendly choices daily.
173. Learn what makes students excited about math class.
174. Understand teachers' views on outdoor science lessons.
175. Explore student feelings about group versus solo work.
176. Study why some students avoid computer programming.
177. Understanding parent's thoughts about science homework helps.
178. Learn how students pick their favourite science subjects.
179. Explore why girls choose engineering activities.
180. Study how students solve difficult math problems.
181. Understand student views on virtual science labs.
182. Learn why students join robotics clubs.
183. Study how families handle internet safety rules.
184. Explore student opinions about science textbook design.
185. Understand teacher approaches to explaining tough concepts.
186. Learn how students pick science project partners.
187. Study why some math concepts seem harder.
188. Explore student thoughts about science field trips.
189. Understand how students use technology for learning.
190. Learn why students choose certain science careers.

### Product-Based Research Topics for STEM Students:

191. Design recycled material school supply holders.
192. Create natural ingredient cleaning solutions.
193. Build solar-powered phone chargers for students.
194. Make eco-friendly lunch box cooling systems.
195. Design reusable water filtration methods.
196. Create biodegradable plant pots from waste.
197. Build simple wind energy demonstration tools.
198. Design affordable home hydroponics systems.
199. Create natural pest control solutions.
200. Make energy-saving window covers.
201. Design rainwater collection systems for gardens.
202. Create solar food dehydrators.

203. Build sound-absorbing classroom dividers.
204. Design gravity-powered water filters.
205. Make natural dye from local plants.
206. Create compost bins from recycled materials.
207. Design vertical garden systems for small spaces.
208. Build manual water pumps for gardens.
209. Create solar ovens from household items.
210. Design bike-powered device chargers.

### Easy Experimental Research Topics for STEM Students:

211. Test which fruits contain the most vitamin C.
212. Compare different methods to prevent apple browning.
213. Study soap bubble size with different solutions.
214. Test natural versus chemical stain removers.
215. Compare plant growth using music exposure.
216. Study shoe grip on different floor surfaces.
217. Test paper towel strength between brands.
218. Compare popcorn brands' kernel pop rates.
219. Study mould growth on different loaves of bread.
220. Test magnet strength through various materials.
221. Compare natural versus artificial sweeteners.
222. Study bridge designs using pasta noodles.
223. Test eggshell strength with vinegar soaking.
224. Compare different methods of seed sprouting.
225. Study shadow lengths throughout the day.
226. Test different materials for sound insulation.
227. Compare natural versus chemical fabric dyes.
228. Study salt crystal formation methods.
229. Test different methods of keeping cookies fresh.
230. Compare plant growth using coloured light filters.

### Experimental Research Topics About Plants:

231. Study how music affects plant leaf growth.
232. Test coffee grounds as a natural fertiliser.
233. Compare seed germination in different soils.
234. Study plant growth with talking versus silence.
235. Test organic versus chemical pest controls.
236. Compare root growth in light versus dark.
237. Study effects of companion planting methods.
238. Test different natural growth hormones.
239. Compare indoor versus outdoor plant health.
240. Study effects of pruning on plant strength.
241. Test plant growth using fish tank water.
242. Compare seed storage method effectiveness.
243. Study effects of different watering schedules.
244. Test plant response to artificial lights.

245. Compare growth rates using various mulches.
246. Study effects of different pot materials.
247. Test plant response to temperature changes.
248. Compare growth with different water types.
249. Study effects of handling on plant health.
250. Test different natural soil amendments.

### Experimental Research Topics for the Philippines:

251. Study local bamboo strength for construction.
252. Test native plant natural dye production.
253. Compare traditional versus modern farming methods.
254. Study mangrove growth in different waters.
255. Test local fruit preservation techniques.
256. Compare indigenous versus commercial pest controls.
257. Study coconut waste as a building material.
258. Test local plant water filtration abilities.
259. Compare native versus hybrid rice growth.
260. Study effects of volcanic soil on plants.
261. Test local materials for water purification.
262. Compare traditional fishing method effectiveness.
263. Study nipa palm growth conditions.
264. Test local herbs as natural preservatives.
265. Compare native bee pollination effectiveness.
266. Study local material soil improvement methods.
267. Test indigenous plant medical properties.
268. Compare local versus imported fertilisers.
269. Study traditional crop rotation benefits.
270. Test local plant salt tolerance levels.

### Qualitative Research Topics for the Philippines:

271. Explore traditional farming knowledge preservation methods.
272. Study local community disaster preparation approaches.
273. Learn how families choose farming methods.
274. Understand traditional medicine use today.
275. Study local views on environmental protection.
276. Explore indigenous weather prediction knowledge.
277. Learn how communities manage water resources.
278. Study local attitudes toward sustainable farming.
279. Understand youth interest in traditional practices.
280. Explore family fishing tradition preservation.
281. Study community recycling program participation.
282. Learn how schools teach local science knowledge.
283. Understand coastal conservation awareness levels.
284. Study traditional craft preservation methods.
285. Explore local renewable energy perspectives.
286. Learn how communities handle waste management.

287. Study local biodiversity protection views.
288. Understand urban farming adoption reasons.
289. Explore mangrove conservation attitudes.
290. Study local climate change adaptation methods.