

Science Investigatory Project Ideas

Here are some of the best SIP project ideas for students:

Environmental Science Projects:

1. Turn fruit peels into natural water filters
2. Make biodegradable plastic from milk and vinegar
3. Create a mini solar water purifier using household materials
4. Test local pond water quality with simple indicators
5. Build a wind speed meter from recycled plastic cups
6. Measure acid rain effects on different plant types
7. Create natural pesticides using common kitchen ingredients
8. Study earthworm behavior in different soil types
9. Design rain garden to prevent soil erosion
10. Make paper from fallen leaves and grass

Chemistry Projects:

11. Extract natural dyes from flowers and vegetables
12. Create crystals using everyday household substances
13. Make soap from cooking oil and natural ingredients
14. Study rust formation on different metal types
15. Create a battery using fruits and vegetables
16. Make invisible ink from lemon juice
17. Extract DNA from fruits using kitchen supplies
18. Study chemical reactions in baking bread
19. Create natural indicators from red cabbage
20. Make perfume from flower petals

Physics Projects:

21. Build a simple electric motor using magnets
22. Create a working model of the hydraulic bridge
23. Design solar oven using a cardboard box
24. Make a rainbow using water and a mirror
25. Build rubber band-powered car
26. Create musical instruments using glass bottles
27. Design a working model of periscope
28. Make hovercraft using an old CD
29. Build a simple electric generator
30. Create a pinhole camera using a shoebox

Biology Projects:

31. Study plant growth in different colored lights
32. Observe mold growth on various foods

33. Test effects of music on plant growth
34. Study butterfly life cycle in homemade habitat
35. Make a microscope using a smartphone and water drop
36. Grow plants in water without soil
37. Study seed germination in different conditions
38. Create a model of the human breathing system
39. Observe osmosis using eggs and vinegar
40. Study effects of exercise on heart rate

Agricultural Science:

41. Compare organic vs chemical fertilisers
42. Make compost from kitchen waste
43. Study vertical farming using plastic bottles
44. Test natural ways to keep fruits fresh
45. Grow microgreens in recycled containers
46. Study effects of coffee grounds on plants
47. Create a self-watering plant system
48. Test different mulch materials
49. Study companion planting benefits
50. Make a natural root growth stimulator

Health Science:

51. Test the effectiveness of different hand soaps
52. Study effects of sugar on teeth
53. Make natural hand sanitiser
54. Test various food preservation methods
55. Create a model showing the effects of smoking
56. Study bacteria growth on unwashed hands
57. Make natural mosquito repellent
58. Test the effectiveness of face masks
59. Study effects of sleep on memory
60. Create a model showing the digestion process

Energy Projects:

61. Build mini wind turbines from recyclables
62. Create a solar water heater
63. Make biogas from kitchen waste
64. Design an energy-efficient house model
65. Build a mini hydroelectric generator
66. Create a solar phone charger
67. Make bio-battery using fruits
68. Design solar cooker using mirrors
69. Create pedal-powered generator
70. Build a mini wave energy converter

Technology Projects:

71. Build a simple robot using motors
72. Create a working model of a traffic light
73. Make a touch sensor using aluminum foil
74. Build a simple alarm system
75. Create LED constellation display
76. Make a simple electric quiz board
77. Build a working telegraph system
78. Create a motion detector using sensors
79. Make a simple metal detector
80. Build a mini weather station

Space Science:

81. Create a model showing lunar phases
82. Build sundial using simple materials
83. Make a model showing planetary orbits
84. Create an eclipse demonstration model
85. Build a rocket using household items
86. Make constellation projector
87. Create a model showing the seasons
88. Build satellite model with antenna
89. Make spectroscope using CD
90. Create a meteor impact demonstration

Marine Science:

91. Build wave motion demonstrator
92. Create an artificial coral reef model
93. Study effects of oil spills
94. Make water density column
95. Build an underwater volcano model
96. Create a tidal energy demonstration
97. Study marine animal adaptation models
98. Make an ocean current simulator
99. Build a working model of a submarine
100. Create a water filtration system

Earth Science:

101. Make a working model of the geyser
102. Create soil erosion demonstration
103. Build a volcano using baking soda
104. Make a model showing plate tectonics
105. Create a rock cycle demonstration
106. Build an earthquake-resistant structure model
107. Make fossils using plaster

108. Create a groundwater flow model
109. Build a weather vane using materials
110. Make a model showing mountain formation

Botany Projects:

111. Study effects of artificial light
112. Create self-sustaining terrarium
113. Make a plant growth time-lapse study
114. Build a greenhouse using plastic bottles
115. Study effects of different water types
116. Create natural pest control methods
117. Make plant propagation station
118. Study effects of talking to plants
119. Build an automated plant watering system
120. Create a seed viability test method

Zoology Projects:

121. Study ant colony behaviour patterns
122. Create a butterfly feeding station
123. Build a bird nest monitoring system
124. Make an animal tracking identification guide
125. Study fish behaviour in different waters
126. Create a reptile habitat model
127. Build a birdhouse with a monitoring camera
128. Make an animal migration tracking map
129. Study insect response to light
130. Create an animal behavior observation station

Food Science:

131. Study natural food preservation methods
132. Create yoghurt using different milk types
133. Make cheese using simple ingredients
134. Study bread mold prevention techniques
135. Create natural food colouring
136. Make a fruit preservation experiment
137. Study effects of temperature on food
138. Create a natural fruit ripening system
139. Make a food dehydration comparison study
140. Build a solar food dehydrator

Microbiology Projects:

141. Study bacteria growth in yoghurt
142. Create petri dish from household items
143. Make microscope slides of pond water

144. Study effects of antibacterial soap
145. Create fermentation demonstration
146. Make a probiotic food experiment
147. Study microorganisms in the soil
148. Create bacterial culture comparison
149. Make fungal growth observation
150. Study effects of temperature on microbes

Science Investigatory Project Ideas for Grade 4

151. Watch seeds grow in different coloured light boxes.
152. Compare how fast different types float down.
153. Test which paper aeroplane design flies furthest.
154. Create rainbow colours using white flowers and food.
155. Make a simple circuit with fruits.
156. Test which materials best conduct electricity.
157. Build a mini water filter system.
158. Study how different liquids freeze over time.
159. Make a weather station using simple tools.
160. Test which food mold grows the fastest.
161. Create static electricity with balloons and other items.
162. Study how shadows change throughout the day.
163. Test which soap makes the most giant bubbles.
164. Make a simple sound wave demonstrator.
165. Build a mini greenhouse using plastic containers.

Science Investigatory Project Ideas for Grade 5

166. Test which soil type grows plants best.
167. Create natural dyes from kitchen ingredients.
168. Build a working model of the human lung.
169. Make a homemade water cycle in a bottle.
170. Test different materials as heat insulators.
171. Create a lava lamp using household items.
172. Study how light bends in different liquids.
173. Make musical instruments to test sound properties.
174. Build simple machines using recycled materials.
175. Test which materials dissolve in water.
176. Create a model showing day and night.
177. Study how temperature affects magnet strength.
178. Make crystal gardens using everyday materials.
179. Build a water purification system using layers.
180. Test which plants clean water best.

Science Investigatory Project Ideas for Grade 6

181. Study how yeast makes bread rise.

182. Create a working model of the digestive system.
183. Test the effectiveness of natural preservatives.
184. Build a simple solar-powered oven.
185. Make a model showing blood circulation.
186. Study the effects of acid rain on plants.
187. Create a battery using different metal combinations.
188. Test which materials block magnetic forces.
189. Build a working watershed model.
190. Study how different surfaces affect friction.
191. Make natural indicators for acids and bases.
192. Create a model showing Earth's layers.
193. Test which plants attract the most butterflies.
194. Build a wind power demonstration model.
195. Study how bridges handle different weights.

Science Investigatory Project Ideas for Grade 9

196. Create bioplastic from natural materials.
197. Study factors affecting pendulum motion.
198. Build a working model of an electromagnetic crane.
199. Test the effectiveness of natural water filters.
200. Create an alternative energy demonstration model.
201. Study factors affecting plant photosynthesis.
202. Build a working model of a hydraulic system.
203. Test different methods of water purification.
204. Create a natural battery using vegetables.
205. Study the effects of music on plant growth.
206. Build a working model of a solar tracker.
207. Test the effectiveness of homemade fertilisers.
208. Create a working model of an electric motor.
209. Study factors affecting seed germination.
210. Build a working model of a water rocket.

Science Investigatory Project Ideas for Grade 12

211. Create biodiesel from used cooking oil.
212. Study the effectiveness of natural antibacterial substances.
213. Build a working model of a hydrogen fuel cell.
214. Test the efficiency of different solar panel designs.
215. Create a working model of automated irrigation.
216. Study factors affecting enzyme activity.
217. Build a working model of a wind turbine.
218. Test the effectiveness of natural pesticides.
219. Create a working model of water desalination.
220. Study factors affecting bacterial growth.
221. Build a working model of a biomass digester.
222. Test the effectiveness of sound insulation materials.

223. Create a working model of a water purifier.
224. Study factors affecting plant tissue culture.
225. Build a working model of solar desalination.

Science Investigatory Project Ideas for College Students

226. Create biofuel from algae cultivation.
227. Study the effectiveness of nanoparticle water filtration.
228. Build a working model of intelligent irrigation.
229. Test the efficiency of vertical farming systems.
230. Create a working model of a waste-to-energy converter.
231. Study factors affecting microbial fuel cells.
232. Build a working model of a solar tracking system.
233. Test the effectiveness of green roof designs.
234. Create a working model of an atmospheric water generator.
235. Study factors affecting biogas production.
236. Build a working model of tidal energy.
237. Test the effectiveness of natural water treatment.
238. Create a working model of a hydroponics system.
239. Study factors affecting bioremediation.
240. Build a working model of wave energy.

Science Investigatory Project Ideas for High School Students

241. Create natural water quality indicators.
242. Study the effectiveness of composting methods.
243. Build a working model of a rainwater harvester.
244. Test the efficiency of different insulation materials.
245. Create a working model of a solar still.
246. Study factors affecting plant growth hormones.
247. Build a working model of an air quality monitor.
248. Test the effectiveness of natural water filters.
249. Create a working model of a biogas generator.
250. Study factors affecting soil fertility.
251. Build a working model of wind energy.
252. Test the effectiveness of organic pesticides.
253. Create a working model of hydropower.
254. Study factors affecting plant diseases.
255. Build a working model of a solar cooker.