

# Passion Project Ideas For High School Students

Here are the must-try passion project ideas for high school students:

## Technology & Computer Science

1. Build Self-Driving Robot Using Arduino and Sensors
2. Create Neighborhood Wildlife Tracking Mobile App
3. Design Solar-Powered Phone Charging Station for School
4. Develop Sign Language Translator with Machine Learning
5. Build a Voice-Controlled Smart Home System for the Elderly
6. Create Water Quality Monitoring Device Using Sensors
7. Design Augmented Reality Tour of Local Landmarks
8. Build an Automated Plant Watering System with Data
9. Create Peer Tutoring Matching Platform for Students
10. Design Wearable Device Tracking Air Quality Levels
11. Build Digital Time Capsule Documenting Community Stories
12. Create a Music Instrument Learning Game Using Motion
13. Design Smart Recycling Bin Sorting Different Materials
14. Build Emergency Alert System for Natural Disasters
15. Create Virtual Reality Chemistry Lab Experiments
16. Design Lost Pet Finding App Using Facial Recognition
17. Build a Language Learning Chatbot for Beginners
18. Create Heart Rate Monitoring Watch for Athletes
19. Design Traffic Pattern Analyzer Using Cameras
20. Build a Wheelchair Navigation System Using Sensors

## Environmental Science

21. Create Butterfly Garden Tracking Migration Patterns
22. Design Rainwater Harvesting System for School Garden
23. Build a Vertical Hydroponic Farm in Unused Space
24. Create a Composting Program Tracking Waste Reduction
25. Design Solar Oven for Community Meals
26. Build Wind Turbine Powering Outdoor Learning Space
27. Create Bee Habitat Monitoring Colony Health
28. Design Project Using Plastic Waste for Building Materials
29. Build a Floating Wetland to Clean the Pond. Water
30. Create Food Waste into Fertilizer Conversion System
31. Design Natural Dye Making from Local Plants
32. Build Biogas Generator Using Cafeteria Waste
33. Create Microplastic Filter for Washing Machines
34. Design Urban Wildlife Corridor Through Neighborhoods
35. Build a Greywater Recycling System for Gardens
36. Create Eco-Friendly Soap Making Workshop Series
37. Design Solar-Powered Food Dehydrator for Produce
38. Build a Living Wall to Purify Indoor Air

39. Create Zero-Waste School Supply Exchange Program
40. Design Sustainable Fashion from Recycled Materials

## Arts & Culture

41. Create Neighborhood Oral History Podcast Series
42. Design Public Art from Recycled Materials
43. Build Traveling Puppet Theater for Folk Tales
44. Create Cultural Recipe Preservation Cookbook Project
45. Design Indigenous Plant Knowledge Walking Tour
46. Build Musical Instruments from Natural Materials
47. Create Traditional Craft Skills Video Series
48. Design Cultural Fusion Fashion Collection Show
49. Build a Community Mural Showing Local History
50. Create Dance Performances Inspired by Migration Stories
51. Design Multicultural Festival Celebrating Diversity
52. Build a Temporary Art Gallery in an Empty Storefront
53. Create a Documentary on Local Artisans' Work
54. Design Shadow Puppet Plays Sharing Myths
55. Build Kinetic Sculptures Powered by Wind
56. Create a Photography Series of Community Elders
57. Design Geometric Patterns Inspired by Cultures
58. Build Miniature Models of Historic Buildings
59. Create an Animation Series about Cultural Legends
60. Design Wearable Art from Found Objects

## Social Impact

61. Create a Peer Mental Health Support Program
62. Design an Inclusive Playground for All Abilities
63. Build a Mobile Library Serving Remote Areas
64. Create an Intergenerational Storytelling Meetup Program
65. Design Accessibility Map for Local Businesses
66. Build Furniture from Recyclable Materials
67. Create a Food Security Awareness Campaign
68. Design Emergency Preparedness Guide for Community
69. Build Portable Shelter Solutions Demonstration
70. Create Skill-Sharing Platform Connecting Generations
71. Design Anti-Bullying Awareness Escape Room
72. Build Community Tool Lending Library System
73. Create a Local History Preservation Website
74. Design Disaster Relief Supply Distribution Plan
75. Build Neighborhood Safety Walking Group Program
76. Create Refugee Welcome Guide in Various Languages
77. Design Adaptive Sports Equipment from Materials
78. Build Community Garden Teaching Life Skills
79. Create Youth Empowerment Leadership Workshop Series
80. Design Public Transportation Improvement Proposal

## Health & Wellness

81. Create a Stress-Relief Garden for Students
82. Design Healthy Cooking Video Series
83. Build Outdoor Fitness Equipment from Materials
84. Create a Mindfulness Meditation App for Teens
85. Design Ergonomic Furniture for Classrooms
86. Build Sleep Tracking App Analyzing Patterns
87. Create a Healthy Snack Vending Machine Proposal
88. Design an Accessible Exercise Program for Seniors
89. Build Posture Improvement Device Using Sensors
90. Create a Mental Health Resource Directory App
91. Design Nature Therapy Walking Program
92. Build Hydration Reminder Smart Water Bottle
93. Create an Injury Prevention Guide for Athletes
94. Design Workplace Wellness Program Proposal
95. Build Anxiety Management Virtual Reality Experience
96. Create a Nutrition Education Board Game
97. Design an Accessible Yoga Program for Everyone
98. Build Mood Tracking Journal App
99. Create a Community Fitness Challenge Program
100. Design Healthy Habits Reward System

## Science & Research

101. Create a Local Air Quality Monitoring Network
102. Design Wildlife Behavior Tracking System
103. Build Water Contamination Testing Program
104. Create Soil Health Analysis Project
105. Design Light Pollution Measurement Study
106. Build Weather Prediction Model Using Data
107. Create a Biodiversity Mapping Project for the Area
108. Design Noise Pollution Reduction Experiment
109. Build Renewable Energy Comparison Study
110. Create a Habitat Restoration Monitoring Program
111. Design Citizen Science Data Collection App
112. Build Earthquake Early Warning System
113. Create Climate Change Impact Documentation Project
114. Design Invasive Species Tracking Program
115. Build Water Conservation Measurement Study
116. Create a Sustainable Agriculture Research Project
117. Design Pollution Impact on Plants Study
118. Build Erosion Control Experiment Station
119. Create Ecosystem Health Indicators Project
120. Design Carbon Footprint Reduction Study

## Business & Entrepreneurship

121. Create a Sustainable Fashion Resale Marketplace
122. Design Zero-Waste Grocery Delivery Service
123. Build Community Skills Exchange Platform
124. Create Local Artisan Products Marketplace
125. Design Eco-Friendly School Supply Business
126. Build Pet Sitting Service App
127. Create Food Waste Reduction Delivery Program
128. Design Handmade Craft Subscription Box
129. Build a Local Tour Guide Booking Platform
130. Create Student Tutoring Marketplace App
131. Design Secondhand Textbook Exchange Service
132. Build Neighborhood Errand Service Platform
133. Create Sustainable Gift Wrapping Business
134. Design Local Produce Delivery Service
135. Build Home Organization Consulting Business
136. Create Eco-Friendly Party Planning Service
137. Design Student Discount Card Program
138. Build Local Business Directory App
139. Create Community Event Planning Service
140. Design a Sustainable Catering Business Proposal

## Engineering & Design

141. Create Solar-Powered Phone Charging Station
142. Design Rainwater Collection and Filtration System
143. Build Portable Wind Turbine Generator
144. Create an Automated Recycling Sorting Machine
145. Design Collapsible Emergency Shelter Prototype
146. Build Pedal-Powered Charging Station
147. Create a Vertical Garden Irrigation System
148. Design Accessible Playground Equipment Modifications
149. Build Solar Cooker for Outdoor Use
150. Create a Water Purification System Prototype
151. Design Noise-Reducing Window Attachment
152. Build Bike-Powered Generator System
153. Create a Portable Solar Food Dehydrator
154. Design Wheelchair-Accessible Garden Beds
155. Build Wave Energy Demonstration Model
156. Create Energy-Efficient Cooking System
157. Design Floating Garbage Collection Device
158. Build an Air Quality Monitoring Station
159. Create a Sustainable Housing Model Prototype
160. Design Water Conservation System

## Agriculture & Food

161. Create a Rooftop Vegetable Garden Using Hydroponics
162. Design Vertical Farming System for Schools

163. Build Aquaponics System Growing Fish and Vegetables
164. Create Mushroom Cultivation in Unused Spaces
165. Design Pollinator Garden to Increase Crop Yields
166. Build Seed Saving Library to Preserve Varieties
167. Create a Food Forest Demonstration Site
168. Design Composting System for Cafeteria Waste
169. Build Greenhouse Using Recycled Materials
170. Create Urban Chicken Coop Education Program
171. Design Sustainable Irrigation System Demonstration
172. Build Vermiculture System for Fertilizer Production
173. Create a Native Plant Propagation Program
174. Design School Garden Outdoor Classroom
175. Build Fruit Tree Grafting Demonstration Project
176. Create a Medicinal Herb Garden Guide
177. Design Winter Growing Season Extension System
178. Build Farm-to-School Program
179. Create Pest Management with Beneficial Insects
180. Design Soil Improvement Demonstration Plot

## **Medical Passion Projects for High School**

1. Create a mental health support app for teens
2. Design a 3D-printed prosthetic hand for children
3. Develop an emergency response training program for schools
4. Create health education videos in multiple languages
5. Design a portable sanitization station for classrooms
6. Build a study program to track sleep patterns
7. Create a first aid training program for sports
8. Develop a nutrition education program for cafeterias
9. Design accessible exercise equipment for people with disabilities
10. Create materials for a public health awareness campaign
11. Build a prototype for a blood pressure monitoring system
12. Design ergonomic furniture for long study sessions
13. Create a diabetes management app for teens
14. Develop a CPR training program for the community
15. Design a setup for a portable health screening clinic

## **Passion Projects for 6th Graders**

1. Start a school recycling awareness program
2. Create a neighborhood bird-watching guide
3. Build a simple weather monitoring station
4. Design a board game that teaches history
5. Create a healthy snack cookbook for kids
6. Build a mini greenhouse from recycled materials
7. Design an anti-bullying comic book series

8. Create a program for a community cleanup club
9. Build a simple robot using basic electronics
10. Design math tutoring cards for classmates
11. Create a kindness rocks garden project
12. Build a butterfly garden at school
13. Design a simple water filtration system
14. Create a business plan for friendship bracelets
15. Develop ideas for school spirit merchandise

## **Ivy League Passion Project Examples**

1. Develop an AI-powered language learning platform
2. Create a climate change prediction model
3. Design an educational program for quantum computing
4. Build a research project on gene editing
5. Create a poverty mapping analysis system
6. Design a plan for renewable energy implementation
7. Build a healthcare diagnostic tool with machine learning
8. Create a research study on economic inequality
9. Design a space debris tracking system
10. Build a neural network art generator
11. Create a sustainable city planning model
12. Design an algorithm to detect cancer cells
13. Build a tool for environmental impact assessment
14. Create a support platform for refugee education
15. Design a simulation system for pandemic response

## **Passion Projects for College**

1. Create a startup to solve campus sustainability issues
2. Design a mental health resource platform
3. Build a community housing solution project
4. Create a research study on alternative energy
5. Design a campaign for social justice advocacy
6. Build a project to study educational equity
7. Create a system for urban farming innovation
8. Design a plan to improve public transportation
9. Build a prototype for a blockchain voting system
10. Create a digital archive to preserve culture
11. Design a campus map to improve accessibility
12. Build a program to address food insecurity
13. Create a proposal for environmental policy
14. Design a plan to improve healthcare access
15. Build a project focused on ethical AI development

## **Passion Projects for 7th Graders**

1. Create a digital storytelling photography project
2. Design an eco-friendly fashion collection
3. Build a simple app for homework organization
4. Create a community garden at school
5. Design a volunteer program for a pet shelter
6. Build models for science fair demonstrations
7. Create a program for a healthy living challenge
8. Design a local history documentary
9. Build a simple website about a favorite topic
10. Create art from recycled materials
11. Design a morning announcement podcast series
12. Build a simple solar-powered device
13. Create a peer tutoring program
14. Design a nature photography collection
15. Build an emergency preparedness guide

## **Art Passion Project Ideas**

1. Create a public mural using recycled materials
2. Design digital art that shows emotions
3. Build a kinetic sculpture from found objects
4. Create a cultural fusion fashion collection
5. Design an augmented reality art gallery
6. Build a program for sustainable art supplies
7. Create an animation series about the environment
8. Design a community art therapy program
9. Build an interactive light installation
10. Create wearable art from waste materials
11. Design a sound art installation
12. Build pottery using local clay
13. Create an eco-friendly printmaking studio
14. Design a mobile art therapy cart
15. Build a program for community art exchange