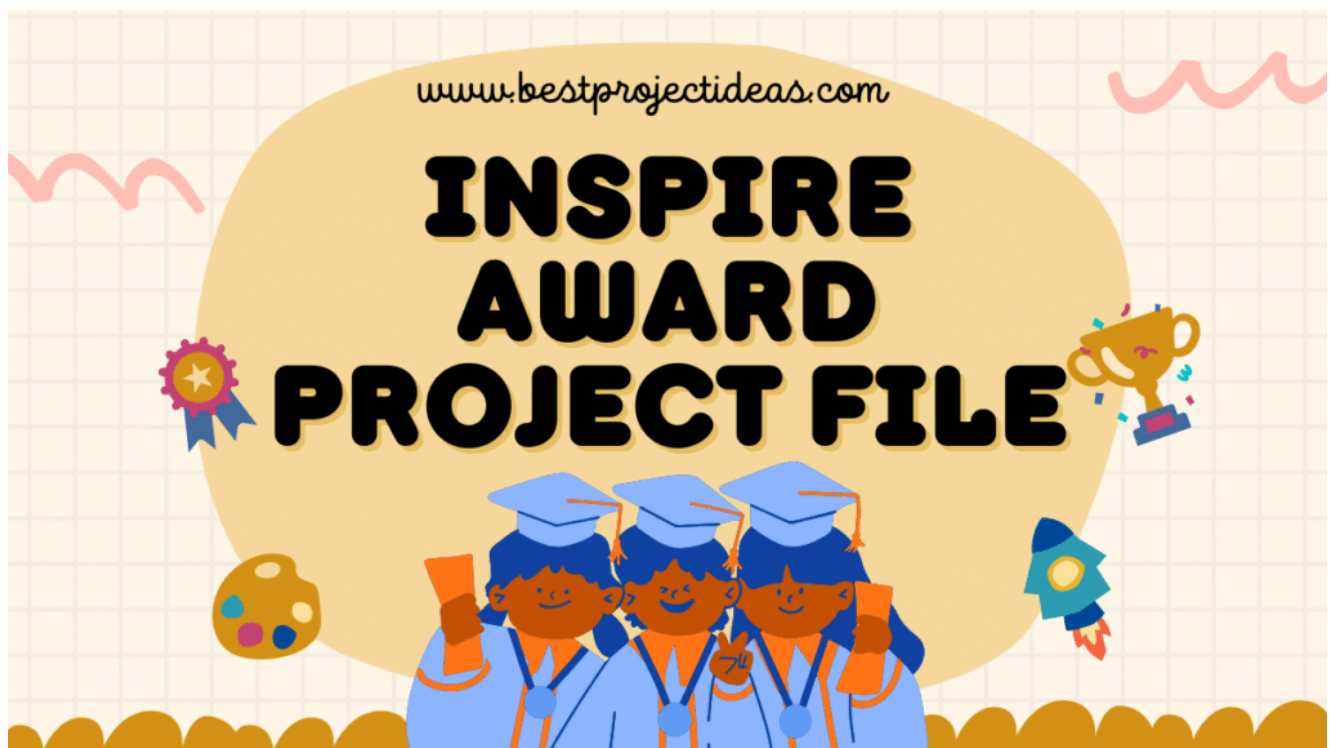


# 199+ Inspire Award Project File 2025-26

SEPTEMBER 11, 2025 | JOHN DEAR



Every big idea starts with a small spark, and the **Inspire Award project file** is where that spark takes shape on paper. It's not just a collection of pages — it's the story of your curiosity, research, and innovation.

For students participating in the Inspire Award scheme or any science fair, the project file is the backbone of their work. It shows how an idea was born, how it was tested, and what results came out of it.

In this blog, we'll explore what an Inspire Award project file is, how to choose the right topic, why the file matters, and the key components you should include to make your project stand out.

Must Read: [120 Innovative Ideas For Inspire Award Project](#)

## Table of Contents



- 0.0.1. What is an Inspire Award project file?
- 0.1. How do I choose a project topic?
- 0.2. 199+ Inspire Award Project File 2025-26
  - 0.2.1. Environmental Science
  - 0.2.2. Biology & Life Sciences
  - 0.2.3. Chemistry
  - 0.2.4. Physics
  - 0.2.5. Engineering & Robotics
  - 0.2.6. Computer Science & AI
  - 0.2.7. Energy & Renewable
  - 0.2.8. Agriculture & Food Science
  - 0.2.9. Health & Medicine
  - 0.2.10. Social Science & Miscellaneous
- 0.3. Why Inspire Award project file matter
- 0.4. Mandatory components to include in your project file
- 1. How to format the file
- 2. Sample table of contents
- 3. Quick formatting checklist before submission
- 4. Presentation & viva preparation tips
- 5. Common mistakes to avoid
- 6. Simple example project ideas
- 7. Final tips for a strong Inspire Award project file

## What is an Inspire Award project file?

An Inspire Award project file is a written record of a student's scientific/innovative project prepared for the INSPIRE/INNOVATION type award programs (school/college-level science & innovation competitions).

It documents everything about the project — idea, purpose, background research, methods, results, conclusions, and supporting material (photos, diagrams, datasheets, prototype notes). Judges use it to understand your work, reproduce it if needed, and evaluate your thinking, originality, and effort.

## How do I choose a project topic?

Choosing the right topic is the first and most important step. Use this step-by-step approach:

1. **Follow your curiosity** — pick something you are genuinely interested in.
2. **Keep it simple and focused** — one clear question or problem works better than many.
3. **Check feasibility** — do you have time, tools, and materials to complete it?
4. **Think original or improved** — you don't need to reinvent the wheel; improving an existing idea is valuable.
5. **Consider impact** — choose topics that solve a real problem or teach a clear scientific concept.
6. **Safety & ethics** — avoid projects that are hazardous, harmful to animals, or unethical.
7. **Scale to your time** — if you have only a few weeks, choose a small, measurable experiment; for months, choose something deeper.
8. **Ask a mentor** — discuss with a teacher or guide to sharpen your idea and check scope.

## 199+ Inspire Award Project File 2025-26

### Environmental Science

1. **Study of Plastic Degradation in Soil** — Test how different plastics (PET, **HDPE**, biodegradable) break down in soil over months. Include aim, hypothesis, sample prep, periodic observations, soil chemistry tests, environmental implications, safety and references.
2. **Effect of Composting on Soil Nutrients** — Compare nutrient levels (NPK) in soil with kitchen-compost versus no compost. Include materials,

composting method, soil tests, data tables, graphs, and benefits for gardening.

3. **Measuring Microplastic Presence in Local Water** — Collect water samples and filter to detect microplastics; identify types and concentration. Include sampling plan, microscopy images, quantification, and pollution reduction suggestions.
4. **Air Quality Variation Across Neighborhoods** — Use simple particulate sensors to compare PM2.5/PM10 in different areas and times. Include sensor calibration, data logging, graphs, health implications, and mitigation ideas.
5. **Effect of Urban Trees on Local Temperature** — Measure temperature differences under tree cover vs open areas. Include methodology, repeated measurements, leaf-area estimates, and suggestions for urban planning.
6. **Biodegradation Rate of Paper vs Cardboard** — Bury paper and cardboard samples; monitor decomposition and microbial activity. Include mass-loss data, soil tests, and implications for waste management.
7. **Phytoremediation: Plant Uptake of Heavy Metals** — Grow plants in contaminated soil and measure metal accumulation in roots/shoots. Include ICP/chemical tests (or simpler color tests), plant selection, and remediation potential.
8. **Efficacy of Natural vs Chemical Pesticides** — Compare pest control and plant health using neem extract vs common chemical pesticide. Include control groups, pest counts, yield measurements, and environmental impact.
9. **Noise Pollution Mapping Near Roads** — Measure sound levels at various distances from a busy road and analyze patterns. Include sound meter logs, diagrams, health notes, and suggestions to reduce noise.
10. **Water Filtration Using Natural Materials** — Build filters using sand, charcoal, and coconut fiber; test turbidity and bacterial reduction. Include design, before/after tests, limitations, and possible low-cost solutions.
11. **Effect of Road Salt on Soil and Vegetation** — Simulate salt runoff and measure soil salinity and plant health. Include measurements over time, plant selection, and mitigation suggestions.
12. **Comparing Biodegradable Bags vs Plastic Bags in Compost** — Test breakdown and impact on compost quality. Include experimental set-up, quality tests of compost, and environmental recommendations.

13. **Impact of Light Pollution on Insect Activity** — Compare insect counts near bright streetlights and darker areas. Include trapping method, species notes, and ecological consequences.
14. **Rainwater Harvesting Efficiency Study** — Measure collection efficiency from different roof materials and gutter designs. Include volume measurements, contamination tests, and usage suggestions.
15. **Effect of Roadside Plants on Particulate Pollution** — Measure particulate reduction behind a green barrier vs an open area. Include sensor data, plant species list, and urban planting recommendations.
16. **Assessing Local Wetland Health** — Use simple indicators (plant diversity, water clarity, macroinvertebrates) to rate wetland condition. Include sampling, photos, and conservation measures.
17. **Comparing Organic vs Chemical Fertiliser Runoff** — Simulate rain and measure nutrient runoff from soil treated with organic and chemical fertilizers. Include water tests and environmental effects.
18. **Solar UV Index Variation by Shade and Surface** — Measure UV levels on grass, concrete, water, and shaded areas. Include health notes and shade-planning recommendations.
19. **Study of Algal Blooms in a Pond** — Monitor nutrient levels and algal growth over time, investigate causes. Include water chemistry tests, photos, and suggestions to prevent eutrophication.
20. **Evaluating Household Water Use and Conservation** — Track daily water use in sample households and test conservation measures. Include usage logs, suggested changes, and projected water savings.

## Biology & Life Sciences

21. **Effect of Natural Extracts on Seed Germination** — Test how aloe, coconut water, and saline affect germination rate. Include seed counts, growth measurements, and practical recommendations.
22. **Study of Antibiotic Resistance in Local Bacteria** — Isolate bacteria from surfaces and test sensitivity to common antibiotics (using safe, guided methods). Include safe handling, resistance patterns, and public-health notes.
23. **Behavioral Study: Light Preference of Insects** — Observe whether certain insects prefer specific light wavelengths. Include experimental design,

counts, and ecological implications.

24. **Comparing Natural vs Synthetic Growth Hormones on Plants** — Test rooting and sprouting using natural hormones (willow extract) vs commercial rooting powder. Include success rates and practical use.
25. **Effect of Music on Plant Growth** — Expose plants to different music genres and measure growth differences. Include controls, light/water consistency, and data analysis.
26. **Studying Circadian Movement in Plants** — Observe leaf movement over 24 hours for a touch-sensitive plant or nyctinastic species. Include time-lapse data and explanations of plant rhythms.
27. **Salinity Tolerance in Local Plant Varieties** — Grow plants under varied salt concentrations and record stress indicators. Include survival rates and implications for coastal farming.
28. **Microbial Fuel Cell from Waste** — Build a simple microbial fuel cell using mud/organic waste to generate small voltages. Include setup diagrams, voltage data, and applications.
29. **Effect of Temperature on Yeast Fermentation** — Measure CO<sub>2</sub> production at different temperatures during fermentation. Include method, CO<sub>2</sub> capture, and food/biotech relevance.
30. **DNA Extraction from Fruit** — Extract and visualize DNA from strawberries or bananas using household items. Include step-by-step protocol, photos, and explanation of DNA role.
31. **Study of Pollinator Preferences Using Colorful Flowers** — Offer different colored model flowers with same nectar to observe pollinator choices. Include counts and pollination ecology notes.
32. **Comparative Study of Ant Foraging Patterns** — Observe how ants choose paths with different obstacles or food strengths. Include maps, time studies, and behavioral interpretation.
33. **Examining Enzyme Activity in Fruit Ripening** — Measure enzyme indicators (e.g., pectinase) during ripening stages. Include titrations or color tests, and discussion on food processing.
34. **Study of Osmosis in Plant Cells** — Use potato or onion to demonstrate osmotic changes in various salt/sugar solutions. Include weight/texture changes and clear explanation.
35. **Gut Microbiome Simulation with Yogurt Cultures** — Study how prebiotic foods affect yogurt culture growth (safe probiotic experiment). Include

growth curves and dietary implications.

36. **Investigation of Antibacterial Properties of Honey** — Test honey vs sugar solutions on bacterial growth (use safe culture methods). Include zones of inhibition and medicinal discussion.
37. **Respiration Rate of Small Invertebrates at Different Temperatures** — Measure oxygen consumption or activity levels of earthworms or similar. Include ethical handling, measurements, and ecological notes.
38. **Effects of Microgravity Simulation on Plant Growth** — Use clinostat or tilted growth to simulate reduced gravity and observe root orientation. Include diagrams and implications for space botany.
39. **Study of Seed Dormancy Mechanisms** — Test dormancy-breaking treatments (scarification, cold stratification) on different seeds. Include germination rates and agricultural relevance.
40. **Role of Mycorrhizae in Plant Nutrition** — Compare plant growth with and without mycorrhizal inoculation. Include root imaging, growth data, and soil health discussion.

## Chemistry

41. **Natural pH Indicators from Plants** — Extract pigments from red cabbage or beetroot and test acids/bases. Include color charts, extraction method, and real-life uses.
42. **Electrolysis of Saltwater for Hydrogen Production** — Build a safe small electrolysis cell; measure gas volume produced under different voltages. Include safety measures and energy discussion.
43. **Green Synthesis of Silver Nanoparticles** — Use plant extracts to reduce silver salts and characterize color change and particle size (spectroscopy optional). Include method, antibacterial test, and safety notes.
44. **Biodegradable Polymer from Starch** — Make and test film from starch and glycerol; compare strength and decomposition. Include mechanical tests and composting trials.
45. **Removal of Heavy Metals Using Activated Carbon** — Test water adsorption of metals using homemade activated carbon. Include concentration tests before/after and adsorption calculations.
46. **Effect of Temperature on Reaction Rate** — Use a safe reaction (e.g., sodium thiosulfate with HCl) to observe rate changes with temperature.

Include rate calculations and graphing.

47. **Study of Natural Dyes and Mordants on Fabrics** — Dye fabrics with turmeric, beetroot, etc., and test colorfastness with different mordants. Include fastness tests and eco-friendly textile notes.
48. **Detecting Vitamin C in Fruit Juices** — Titrate with iodine or use DCPIP to estimate vitamin C concentration. Include calibration, results, and nutritional implications.
49. **Synthesis and Characterization of Soap from Vegetable Oils** — Make cold-process soap and compare properties with commercial soap. Include pH, lather, and biodegradability notes.
50. **Catalytic Degradation of Dyes Using Sunlight and  $\text{TiO}_2$**  — Test dye fading in presence of photocatalyst under sunlight. Include concentration measurements and water-cleaning applications.
51. **Antacid Effectiveness Study** — Compare neutralizing capacity of different antacids using acid titration. Include dosage, reaction rates, and health caution notes.
52. **Creating pH-Responsive Hydrogel from Natural Polymers** — Make a simple gel and test swelling at various pH levels. Include practical use ideas like controlled release.
53. **Study of Corrosion Rates of Metals in Different Solutions** — Expose iron/copper to saline, acidic, and distilled water and measure corrosion. Include mass-loss data and prevention techniques.
54. **Extraction of Caffeine from Tea Leaves** — Isolate caffeine using solvent extraction and observe crystals. Include safety, yield, and discussion on stimulant effects.
55. **Study of Emulsions and Emulsifying Agents** — Prepare oil-in-water emulsions using different stabilizers and test stability. Include microscopy (if available) and food/industry relevance.
56. **Natural Antioxidant Measurement in Plants** — Use simple assays (DPPH if available) or compare browning rates to estimate antioxidant strength. Include implications for nutrition.
57. **Making Biogas from Kitchen Waste** — Build a small anaerobic digester and measure gas production. Include gas composition test (if possible) and use-case for cooking or energy.
58. **Study of Conductivity of Electrolytes** — Measure conductivity of salt, sugar, and acid solutions at various concentrations. Include calibration and



implications for batteries/electrochemistry.

59. **Investigation of Flame Colors from Salt Salts** — Observe flame tests with different metal salts to identify elements. Include safety, color documentation, and analytical uses.
60. **Preparation of Natural Coagulants for Water Treatment** — Test plant-based coagulants (e.g., moringa seed) to clarify turbid water. Include turbidity before/after and community application ideas.

## Physics

61. **Designing a Low-Cost Spectroscope** — Build a simple spectroscope using CDs and study spectra of light sources. Include diagrams, spectral interpretation, and real-world uses.
62. **Solar Cooker Efficiency Comparison** — Construct different solar cooker designs and compare cooking time and temperature. Include thermal measurements and suggested improvements.
63. **Study of Projectile Motion with a DIY Launcher** — Measure range and angle relationships using a simple launcher and analyze data with equations. Include error analysis and graphs.
64. **Building a Water Rocket and Measuring Thrust** — Construct a bottle rocket and record altitude/time using pressure differences. Include safety protocols and data interpretation.
65. **Investigating Heat Insulation Materials** — Compare insulation performance of foam, wool, and bubble wrap using temperature change tests. Include thermal conductivity discussion.
66. **Study of Magnetic Levitation Using Superconductors Simulation (Maglev Model)** — Build a model maglev using strong magnets and track stability and friction reduction. Include diagrams and transport implications.
67. **Design and Test of a Simple Seismograph** — Make a pen-on-paper seismograph model and record vibrations from simulated quakes. Include calibration and data analysis.
68. **Measuring Speed of Sound in Different Gases** — Using safe setup (air and CO<sub>2</sub> mixture if safe), measure speed differences. Include math, error sources, and acoustics discussion.

69. **Investigation of Friction with Different Surface Materials** — Measure coefficient of friction for wood, metal, and fabric surfaces. Include force measurements and applications.
70. **Studying Solar Panel Efficiency with Angle and Shade** — Measure power output at different tilt angles and partial shading. Include IV curves if possible and practical suggestions.
71. **Building a Simple Stirling Engine** — Construct a small model and measure RPM under heat variations. Include thermodynamic explanation and efficiency estimate.
72. **Investigating Buoyancy with Variable Density Liquids** — Use salt solutions of different density to float objects and study equilibrium. Include Archimedes' principle discussion.
73. **Study on Polarisation of Light Using Sunglasses and Filters** — Measure light intensity through rotated polarizers and explain polarization phenomena. Include diagrams and applications.
74. **Designing a Mechanical Advantage Device (Simple Machines)** — Build different lever/wheel systems to compare effort vs load. Include calculations and efficiency notes.
75. **Measuring Thermal Expansion of Metals** — Heat metal rods and measure length change; compare coefficients for different metals. Include accurate measuring methods and equations.
76. **Sound Wave Visualization with Chladni Plates** — Create simple vibration patterns on plates with sand to show modes. Include frequency measurements and interpretations.
77. **Investigating Capacitor Charging and Discharging** — Build circuits to measure RC time constant with different components. Include oscilloscope simulation or timing data.
78. **Study of Rolling Resistance vs Wheel Size** — Test how wheel diameter affects rolling resistance and energy needed. Include graphs and transport applications.
79. **Modeling Tidal Power with Scale Tank** — Build a small tidal flow model and test turbines at different flow rates. Include power estimates and environmental considerations.
80. **Exploring Electromagnetic Induction with Coils and Magnets** — Measure induced voltage with varying coil turns and magnet speed. Include Faraday's law explanation and application ideas.

# Engineering & Robotics

81. **Line-Following Robot for Waste Segregation** — Build a small line-following robot that separates colored objects representing waste. Include electronics list, code logic, and testing results.
82. **Automatic Plant Watering System** — Design a sensor-controlled pump to water plants based on soil moisture. Include circuit diagram, calibration, and water-saving data.
83. **Low-Cost Prosthetic Finger Prototype** — Build a mechanical finger using nylon, strings, and joints to mimic bending. Include materials, movement tests, and potential improvements.
84. **Smart Dustbin that Segregates Waste** — Use sensors to detect metal/plastic/organic and route waste into compartments. Include sensor tests and sorting accuracy.
85. **Solar-Powered Mobile Charger** — Build a small solar charger with a battery and voltage regulation. Include charging curves and portability evaluation.
86. **Design of a Simple Water Purification Unit** — Engineer a filter combining sedimentation, sand, charcoal, and UV disinfection (UV simulated). Include efficiency tests and cost analysis.
87. **Wind-Powered Phone Charger** — Build a small turbine-driven generator to charge a phone; measure power under various wind speeds. Include blade design notes.
88. **Smart Helmet with Fall Detection** — Prototype using accelerometer to detect falls and send alert (simulated). Include algorithm description and safety considerations.
89. **Automatic Streetlight Control Using LDR and RTC** — Control lights based on ambient light and scheduled times to save energy. Include wiring, timing tests, and energy saved estimate.
90. **Robotic Arm for Sorting Objects by Size** — Build a simple arm using servos and sensors to sort objects; evaluate accuracy and repeatability. Include kinematics basics.
91. **Designing a Bicycle Speed Governor** — Create a mechanical/electronic device to limit bicycle speed for safety. Include testing and rider feedback simulation.
92. **Portable Solar Desalination Device** — Engineer a small solar still and measure freshwater output from salty water. Include yield data and scaling

discussion.

93. **Automated First-Aid Kit Dispenser** — Design a device that dispenses bandages/medicine on voice or button command. Include mechanism, safety locks, and user testing.
94. **Self-Balancing Two-Wheel Robot** — Build and tune a small self-balancing robot using gyroscope input. Include control algorithm summary and stability tests.
95. **Low-Cost Water-Level Monitoring System** — Create sensor-based alerts for tanks to prevent overflow/dry run. Include power usage and real-world use case.
96. **Design of a Foldable, Portable Wheelchair Prototype** — Create a scaled model focusing on ergonomics and foldability. Include load tests and user comfort notes.
97. **Automated Rainwater Diverter for Gardens** — Build a mechanism to route rainwater to storage or drain based on tank level. Include sensor calibration and capacity calculations.
98. **Smart Irrigation Using Weather Forecasts (Simulated)** — Combine sensor data with forecast input to plan watering and save water (use simulated forecast inputs). Include schedule optimization and water savings estimate.
99. **Design and Testing of a Shock Absorber Model** — Build a mini shock absorber and measure performance under impact. Include damping calculations and vehicle application notes.
100. **Biometric Door Lock Prototype** — Use fingerprint module or keypad with microcontroller to simulate secure access. Include security considerations and usability testing.

## Computer Science & AI

101. **Chatbot for Student FAQs** — Build a simple rule-based or ML chatbot to answer common school/college questions. Include conversation flow, dataset, and user-testing results.
102. **Handwritten Digit Recognizer Using ML** — Train a model (MNIST or small dataset) to recognize digits and display accuracy metrics. Include dataset description and confusion matrix.
103. **App to Track Daily Study Time and Productivity** — Create a mobile/web tracker with reports and suggestions. Include UI mockups, data privacy

notes, and user testing.

104. **Detecting Fake News with Simple NLP Features** — Build a model using lexical and metadata features to flag suspicious articles (use publicly available data). Include feature list and evaluation.
105. **Smart Attendance System Using Face Detection (Demo)** — Implement face detection to mark attendance (with consent). Include dataset ethics, accuracy, and privacy measures.
106. **Gesture-Controlled Media Player Using Webcam** — Use simple hand-gesture recognition to control play/pause and volume. Include algorithm steps and demo results.
107. **Predicting Crop Yield Using Weather & Soil Data** — Build a predictive model with historical data to estimate yield. Include data sources, features, and error metrics.
108. **Traffic Density Estimation from Images** — Use basic computer vision to count vehicles and estimate congestion. Include dataset, detection method, and potential deployment.
109. **Personal Finance Tracker with Expense Categorization** — Build tool to classify expenses and show budgets. Include demo reports and security notes.
110. **Recommendation System for School Books** — Create a simple recommender based on subject, grade, and ratings. Include algorithm explanation and example suggestions.
111. **Voice-Controlled Home Automation Prototype** — Build voice command control for lights and fans via microcontroller (demo). Include voice recognition accuracy and latency.
112. **Using ML to Detect Plant Diseases from Leaf Images** — Train a classifier on healthy vs diseased leaves and report accuracy. Include dataset, augmentation, and field-use notes.
113. **Optical Character Recognition (OCR) for Local Language** — Build OCR for a regional language script and test on handwritten samples. Include transcription accuracy and applications.
114. **Simulating Epidemic Spread Using Agent-Based Model** — Create a simple simulation to study effects of social distancing and vaccination. Include model parameters and scenario comparisons.
115. **Smart Recycling App with Image Recognition** — Let users take a photo of waste to classify recycling category. Include dataset, accuracy, and user

flow.

116. **Detective System for Water Leak using IoT Data** — Use sensor data and anomaly detection methods to spot leaks. Include dataset simulation and alarm thresholds.
117. **Emotion Recognition from Speech** — Build a classifier to detect basic emotions from voice samples and report accuracy. Include ethical considerations.
118. **Algorithm to Optimize Classroom Seating for Social Distancing** — Develop placement algorithm to maximize students with spacing constraints. Include examples and complexity notes.
119. **Blockchain-Based Certificate Verification Demo** — Implement a simple blockchain ledger to store and verify certificates (demo). Include security discussion and simulated transactions.
120. **AI Tutor for Practice Quizzes with Explanations** — Create system that generates quizzes and gives step-by-step feedback. Include sample interactions and student improvement metrics.

## Energy & Renewable

121. **Comparative Study of Solar Panel Types (Poly vs Mono)** — Test small panels under same conditions and compare output. Include IV data and suitability notes.
122. **Design of a Micro-Hydro Turbine for Small Streams** — Build a prototype turbine and measure power at different flows. Include efficiency calculations and site requirements.
123. **Investigation of Thermal Energy Storage Materials** — Compare materials (water, wax) for heat retention. Include charging/discharging curves and daily use cases.
124. **Study of Biogas Production from Different Kitchen Wastes** — Measure gas volume from vegetable peels, rice husk, and mixed waste. Include gas composition and energy yield.
125. **Wind Turbine Blade Shape Optimization (Model Tests)** — Test blade shapes in a fan tunnel and compare RPM and torque. Include design recommendations.
126. **Solar Tracking System to Increase Panel Yield** — Build a single-axis tracker and measure yield improvement vs fixed panel. Include control logic

and power gains.

127. **Energy Harvesting from Footsteps** — Demo piezoelectric tiles generating small voltages; measure energy per step. Include scalability discussion.
128. **Designing an Efficient Solar Dryer for Farmers** — Prototype dryer for fruits and measure drying time and quality. Include thermal graphs and cost analysis.
129. **Evaluation of LED vs CFL vs Incandescent Energy Use** — Measure light output vs power consumption and lifetime estimates. Include payback period calculations.
130. **Hybrid Solar-Wind Power Small-Scale System** — Combine a small turbine and panel to supply a LED load and log performance. Include storage strategy.
131. **Comparing Battery Chemistries for Storage** — Test lead-acid vs Li-ion (simulated/small cells) for charge/discharge cycles. Include safety and lifecycle notes.
132. **Designing a Passive House Model for Temperature Control** — Build scale house with insulation and ventilation and track internal temps. Include design suggestions for energy efficiency.
133. **Hydrogen Production via Alkaline Electrolysis** — Controlled small setup to measure hydrogen output and efficiency. Include safety and future energy applications.
134. **Smart Grid Simulation for Local Microgrid** — Simulate supply-demand balancing and storage usage for a village model. Include cost and reliability analysis.
135. **Solar-Powered Water Pump Performance Study** — Test pump flow vs solar irradiance and storage backup. Include duty cycles and irrigation feasibility.
136. **Thermoelectric Generator from Waste Heat** — Use a TE module to harvest small voltages from hot surface; measure power and feasibility. Include cooling methods.
137. **Design of Low-Cost Insulating Window Film** — Test radiant barrier films and measure interior temperature reduction. Include cost-benefit for households.
138. **Investigation of Algae as Biofuel Source** — Grow algae samples and estimate oil yield (lab-scale). Include growth conditions and extraction overview.

139. **Evaluating Energy Savings from Smart Plugs** — Use smart plugs to monitor standby consumption of appliances and estimate savings. Include user behavior change suggestions.
140. **Designing a Solar Lantern with Battery Backup** — Prototype a lantern with solar charging and test runtime under load. Include cost per lumen and user scenarios.

## Agriculture & Food Science

141. **Improving Soil Fertility with Green Manure Crops** — Grow legumes as green manure and measure subsequent soil N improvement. Include crop schedule and yield impact.
142. **Studying Shelf Life of Natural Food Preservatives** — Test cloves, turmeric, vinegar on fruits to reduce spoilage. Include storage tests and microbial checks.
143. **Comparing Drip vs Flood Irrigation Efficiency** — Simulate both systems for potted plants and measure water used vs yield. Include water savings calculations.
144. **Effect of Mulching Materials on Soil Moisture** — Compare organic and plastic mulches on moisture retention and plant health. Include moisture logs and growth metrics.
145. **Evaluating Organic Pest Control Using Trap Crops** — Use trap crops to lure pests and measure reduction on main crop. Include pest counts and yield notes.
146. **Testing Natural Seed Coatings to Improve Germination** — Coat seeds with cow dung, neem, or clay and measure germination and vigor. Include costs and farmer practicality.
147. **Post-Harvest Storage Methods to Reduce Grain Loss** — Test storage in cloth, plastic, and hermetic bags and measure pest/deterioration. Include recommendations for small farmers.
148. **Fermentation Process to Improve Food Nutrient Value** — Make fermented foods (idli batter, pickles) and measure palatability and preservation. Include probiotic discussion.
149. **Hydroponic vs Soil Growth for Leafy Vegetables** — Compare growth rate and nutrient content between hydroponics and soil-grown plants. Include water and fertilizer usage.



150. **Designing Low-Cost Grain Dryer Using Solar Energy** — Build small dryer and test moisture removal rates. Include throughput and farmer-adoption notes.
151. **Soil pH Adjustment Methods and Crop Response** — Test lime vs organic amendments and measure crop growth. Include soil tests and recommendations.
152. **Use of Biochar to Improve Soil Health** — Add biochar to pots and measure water retention, nutrient retention, and plant growth. Include production method and benefits.
153. **Testing Natural Feed Additives on Poultry Growth (Simulated)** — Compare probiotic vs standard feed in growth (use controlled and ethical lab model or literature-based simulation). Include welfare and ethics notes.
154. **Assessing Nutrient Content of Home-Grown vs Market Vegetables** — Test vitamin/mineral levels with simple assays or literature comparison. Include dietary implications.
155. **Integrated Pest Management (IPM) Case Study on a Crop** — Implement multiple IPM steps and document pest incidence and yield changes. Include cost-benefit analysis.
156. **Testing Biodegradable Mulch Films vs Plastic** — Compare decomposition rates and crop response. Include environmental impact analysis.
157. **Water-Saving Schedule Optimization for Small Farms** — Use crop water requirements and local climate to propose schedules and simulate savings. Include farmer-friendly charts.
158. **Making Natural Slow-Release Fertilizer Pellets** — Prepare pellets from compost and test nutrient release over weeks. Include method and soil test results.
159. **Improving Fruit Ripening with Ethylene Management** — Test natural ethylene sources (banana) vs inhibitors and measure ripening speed. Include storage recommendations.
160. **Study of Beneficial Insects in Agroecosystems** — Catalog beneficial insects in a field and study their impact on pests. Include identification keys and conservation tips.

## Health & Medicine

161. **Hand Sanitiser Effectiveness of Natural Formulations** — Test alcohol-based vs herbal formulations on harmless indicator microbes (follow safety). Include contact time and guidelines.
162. **Design of a Low-Cost Stethoscope Amplifier** — Build a simple amplifier to improve auscultation for remote clinics. Include sound recordings and amplification tables.
163. **Investigating Waterborne Disease Risk from Stored Water** — Test bacterial counts in stored water over days and evaluate simple safe storage practices. Include public-health advice.
164. **Study of Ergonomics in Student Backpacks** — Measure posture effects and weight distribution using simple tests and surveys. Include suggestions to reduce back pain.
165. **Measuring Vitamin D Levels vs Sun Exposure (Survey-Based)** — Use questionnaires and literature to correlate lifestyle sun exposure to vitamin D indicators (simulated). Include public health suggestions.
166. **Design of a Simple Pulmonary Function Test using Balloon Volume** — Use simple spirometry proxy (balloon) to estimate lung capacity with healthy volunteers (consent). Include data and norms.
167. **Testing Antibacterial Fabrics for Mask Effectiveness** — Compare filtration/antibacterial properties of different cloth masks. Include particle tests and breathability notes.
168. **Study of Sleep Patterns and Academic Performance** — Collect sleep logs and grades to find correlations (ethical and anonymized). Include statistical analysis.
169. **Effect of Hydration on Cognitive Task Performance** — Test simple cognitive tasks after normal vs slightly dehydrated states. Include ethics, consent, and performance metrics.
170. **Designing a Low-Cost Mobility Aid for Elderly** — Prototype a walking aid with added safety features and test stability. Include user feedback and improvement plan.
171. **Testing Biodegradable Wound Dressings** — Compare absorbency and protection of natural dressings like honey-gauze vs commercial (lab-simulated tests). Include infection control notes.
172. **Survey-Based Study on Handwashing Habits and Awareness** — Analyze population hygiene habits and propose awareness campaign improvements. Include statistical charts.

173. **Design of an Affordable Thermometer Calibration Device** — Build a simple device to calibrate thermometers using ice point and boiling (carefully). Include accuracy tests and safety.
174. **Effectiveness of Visual Reminders in Medication Adherence** — Test if charts or alarms improve pill-taking in volunteers (with consent). Include adherence rates and habit tips.
175. **Study on Oral Hygiene Practices and Plaque Formation** — Compare brushing techniques and durations and measure plaque index (ethical protocols). Include step-by-step methodology.
176. **Designing a Simple Dental Floss Dispenser for Children** — Prototype a child-friendly dispenser and evaluate usability. Include materials, safety, and hygiene notes.
177. **Investigating Impact of Screen Time on Eye Strain** — Collect symptom surveys and simple eye tests after varied screen durations. Include preventive measures.
178. **Assessing Nutritional Awareness Among Teenagers** — Conduct a questionnaire-based study and propose educational interventions. Include sampling and analysis.
179. **Prototype of a Mobile App for Emergency First Aid Instructions** — Design UI/flow and test comprehension via user trials. Include content accuracy and usability results.
180. **Testing Local Medicinal Plants for Anti-inflammatory Activity (Literature + Simple Lab Tests)** — Combine literature review with safe topical tests on model systems (no human trials). Include ethics and references.

## Social Science & Miscellaneous

181. **Study of Waste Segregation Behaviour in Households** — Survey households, run small awareness drives, and measure change in segregation. Include methodology, stats, and recommendations.
182. **Effect of School Garden Participation on Student Well-Being** — Compare students involved in gardening vs not on stress and engagement measures. Include survey design and analysis.
183. **Mapping Literacy Levels and Access to Libraries in a Local Area** — Survey and map library access and literacy indicators; propose interventions. Include maps, data, and policy suggestions.

184. **Assessing Impact of Digital Learning Tools in Classrooms** — Compare test performance with and without specified digital tools. Include controlled study design and learning metrics.
185. **Studying Consumer Preference for Eco-Friendly Packaging** — Survey consumers and analyze willingness to pay and behavior. Include sampling and marketing insights.
186. **Designing a Low-Cost Educational Toy to Teach Fractions** — Build and test a toy with students and measure concept grasp. Include design steps and learning outcome data.
187. **Evaluating Road Safety Awareness Among Teen Drivers** — Survey, simulate hazard perception tests, and propose safety campaigns. Include data and suggested measures.
188. **Analyzing Local Water Use Policy and Its Effectiveness** — Review local regulations, survey users, and propose improvements. Include policy analysis and recommendations.
189. **Community-Based Study of Mental Health Stigma** — Use surveys and focus groups to map stigma and craft awareness strategies. Include ethical consent and anonymization.
190. **Design of an Accessible Playground Model for Children with Disabilities** — Create a model demonstrating inclusive design and test with users for feedback. Include safety and usability.
191. **Study of Traditional Knowledge in Local Craftsmanship** — Document techniques, materials, and threats to craft; propose preservation steps. Include interviews and photos.
192. **Creating a Low-Cost Learning Module for Financial Literacy** — Build lessons and pilot with students; measure improvement in basic finance understanding. Include lesson plans and test results.
193. **Investigation of Public Transport Accessibility for Elderly** — Survey routes, stops, and barriers; propose design improvements. Include maps and accessibility checklist.
194. **Designing a Citizen Science Project to Monitor Local Birds** — Create protocol for community to collect bird sightings and analyze biodiversity patterns. Include data forms and simple analysis.
195. **Study on Impact of Social Media Challenges on Teen Behaviour** — Analyze prevalence, motivations, and outcomes of viral challenges. Include survey ethics and safety suggestions.

196. **Local History Documentation Project Using Oral Interviews** — Record elderly narratives about a town's past and present findings. Include transcription, archiving methods, and historical relevance.
197. **Pilot Study: Reducing Food Waste in School Canteens** — Implement portion changes/awareness and measure waste before/after. Include weight logs and student feedback.
198. **Designing an App to Report Civic Issues to Municipal Authorities** — Prototype UI and test response simulation; evaluate user adoption barriers. Include privacy and verification idea.
199. **Study of Effects of Indoor Plants on Classroom Air Quality** — Place plants in rooms and measure VOC/comfort before/after (simpler proxies like perceived air quality). Include species list and recommendations.
200. **Creating a Local Disaster Preparedness Plan for a Village** — Assess risks, map resources, and prepare emergency response steps. Include drills, contact lists, and improvement metrics.

## Why Inspire Award project file matter

- **Shows your scientific thinking:** It demonstrates how you asked questions, designed tests, and drew conclusions.
- **Documents reproducibility:** Others should be able to repeat your work using your file.
- **Helps judges evaluate:** Clear files make it easier for evaluators to find your strengths.
- **Builds your skills:** Writing a full project file teaches research, organization, and communication.
- **Acts as proof:** Good documentation supports claims about results and originality.
- **Useful for future applications:** Colleges, scholarships, and science fairs may request project records.

## Mandatory components to include in your project file

Below are commonly expected sections — include each one and make them neat.

**1. Cover page**

- Project title, student name(s), class/grade, school, guide/teacher name, year.

**2. Certificate / Declaration**

- A signed declaration by the student and guide stating the work is original (include signatures and dates).

**3. Abstract (100–250 words)**

- Short summary: aim, method, main result, conclusion.

**4. Acknowledgements**

- Thank teachers, mentors, labs, and anyone who helped.

**5. Table of Contents**

- Section titles with page numbers.

**6. Introduction / Background**

- Why the problem matters, simple scientific background, brief literature or previous work.

**7. Aim / Objectives / Problem statement**

- Clear statement of what you set out to do.

**8. Hypothesis (if applicable)**

- Your predicted outcome (optional for exploratory projects).

**9. Materials and Methods**

- List of materials, step-by-step procedure (so someone else can repeat it), instruments used.

**10. Observations / Data**

- Raw data tables, charts, photographs, measurements, time logs.

**11. Results**

- Processed data, graphs, key findings (what the data shows).

**12. Discussion**

- Interpret results, explain why you got them, compare with expected outcomes, mention limitations.

**13. Conclusion**

- Short takeaway: did you meet the aim? What did you learn?

**14. Future scope / Suggestions**

- Improvements or next steps for the project.

**15. References / Bibliography**

- Books, articles, websites (list them; don't paste long quotes).

**16. Annexures / Appendices**

- Extra photos, questionnaires, detailed calculations, code listings, sensor logs.

### 17. **Photographs & Diagrams**

- Clear images of setup, experiment stages, prototype — labeled and dated.

### 18. **Project Logbook / Progress Diary**

- Daily/weekly notes showing work progress and dates (very useful).

### 19. **Safety & Ethics statement**

- Mention how you kept the project safe and ethical.

### 20. **Budget & Resource list (if applicable)**

- Small cost table: item name, quantity, price.

## How to format the file

- Paper size: A4 (standard).
- Font: readable (e.g., Times New Roman or Arial), size 12 for text, 14–16 for headings.
- Line spacing: 1.15–1.5 for clarity.
- Margins: 2.5 cm (approx).
- Page numbers: bottom center or bottom right.
- Headings: numbered (1, 1.1, 1.2...) for easy navigation.
- Use bullet lists, tables, and graphs to present data clearly.
- Bind or present neatly — spiral or folder as required by the organizers.

## Sample table of contents

1. Cover Page
2. Certificate / Declaration
3. Abstract
4. Acknowledgements
5. Table of Contents
6. Introduction / Background
7. Aim & Objectives
8. Materials & Methods
9. Observations / Data
10. Results

11. Discussion
12. Conclusion
13. Future Scope
14. References
15. Annexures / Photographs / Logbook

## Quick formatting checklist before submission

- Title and names are correct and spelled properly.
- Declaration signed by student and guide.
- Abstract included and concise.
- All sections present and numbered.
- Photos labeled with dates and captions.
- Data tables are clear; graphs have axes labels and units.
- References listed.
- Safety & ethics statement included.
- Logbook shows dates of work.
- File is within page/size limits (if specified by the award).

## Presentation & viva preparation tips

- Know your project flow: motivation → method → results → conclusion.
- Practice a 3-minute summary and a 10-minute detailed talk.
- Prepare to answer: “Why did you choose this?”, “How did you ensure accuracy?”, “What would you do next?”
- Carry the prototype, photos, and logbook to the viva.
- Be honest about limitations — judges appreciate realistic thinking.

## Common mistakes to avoid

- Missing declaration or signatures.
- No raw data or missing observations.
- Unclear procedure (others should be able to reproduce).
- Overstating results or making unproven claims.



- Poorly labeled graphs and photos.
- Last-minute work or messy presentation.

Must Read: [247+ Unique Inspire Award Project Ideas For Science Students](#)

## Simple example project ideas

- **Science/Physics:** Build a low-cost water turbine to measure energy output at different flow rates.
- **Environment:** Test natural materials as filters to clean greywater.
- **Biology:** Study the effect of different light colors on plant growth.
- **Engineering:** Design a simple automatic hand sanitizer dispenser.
- **Social Science / Data:** Survey local water usage and propose small conservation measures.

(Choose one, check safety and feasibility, then document it using the mandatory components above.)

## Final tips for a strong Inspire Award project file

- Start early — documentation takes time.
- Keep a daily log — it is one of the strongest proofs of effort.
- Use clear, simple language; avoid long, complicated sentences.
- Include photos with captions — visuals make your work real.
- Be original, even in small ways — a small improvement can be impressive.
- Proofread and ask your teacher to review before final submission.

 [Blog, Project Ideas](#)



## JOHN DEAR

I am a creative professional with over 5 years of experience in coming up with project ideas. I'm great at brainstorming, doing market research, and analyzing what's possible to develop innovative and impactful projects. I also excel in collaborating with teams, managing project timelines, and ensuring that every idea turns into a successful outcome. Let's work together to make your next project a success!



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