Best Project Ideas

159+ Science Project Ideas for Class 10 — Easy, Practical & Mark-Ready

SEPTEMBER 19, 2025 | **JOHN DEAR**

A good science project can make your Class 10 board year memorable — and score you extra marks, too.

Below is a complete, well-formatted blog-style guide with simple explanations, tips on choosing a topic, safety notes, report structure, and many ready-to-do project ideas across Physics, Chemistry, Biology, Environment and simple Electronics/Computer science.

No links — just clear, classroom-friendly content. Let's go!

Must Read: 249+ Easy Science Investigatory Project Ideas For Students

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What is do it Science project ideas for class 10?

"**Do it Science project ideas for class 10**" means practical, hands-on science projects that Class 10 students can perform (often called DIY — do it yourself). These projects:

- Use simple, mostly household or low-cost materials.
- Demonstrate a scientific principle (e.g., motion, acids & bases, photosynthesis).
- Are safe to perform under teacher/guardian supervision.
- Produce measurable observations you can record, analyze and present as a report or model.

Goal: show understanding of scientific method — aim, hypothesis, procedure, observation, conclusion — while keeping things doable in a school lab or at home.

How do I choose a project topic?

Choosing the *right* topic matters. Use this short checklist:

1. **Interest & curiosity** — pick something you find fun or interesting. You'll work better if you care about it.
2. **Syllabus connection** — choose a topic linked to your Class 10 syllabus (Physics, Chemistry, Biology or Environment) — examiners like that.
3. **Materials & budget** — check if materials are available at home or locally and affordable.
4. **Time & skill level** — choose a project you can finish in the available time and with your current lab skills.
5. **Safety & permissions** — avoid dangerous chemicals or biological hazards; get teacher/guardian approval.

6. **Originality & clarity** — try to pick a fresh angle or new measurement; clear results make marking easier.
7. **Measurement possible** — projects with quantitative results (numbers, graphs) score better than purely qualitative ones.

How to present your project (simple report structure)

Use this structure for any project. Keep it neat and numbered.

1. **Title**
2. **Name, class, roll no., school**
3. **Aim / Objective** — one clear sentence.
4. **Background / Theory** — short explanation of the science behind it.
5. **Hypothesis** — what you expect.
6. **Materials / Apparatus** — list with quantities.
7. **Procedure** — numbered steps (clear and repeatable).
8. **Observations / Data** — tables, measurements, photos.
9. **Results / Graphs** — simple plots or calculations.
10. **Conclusion** — what you learned and whether hypothesis was supported.
11. **Precautions / Safety**
12. **Applications / Future work** — how it applies in real life or how to improve.
13. **Acknowledgments** and **References** (books or teachers you used).

Add neat diagrams and 2–4 photos of your experiment — that helps a lot.

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Biology & Life Sciences

1. Study of Plant Transpiration: Investigate how leaf area and light affect transpiration rate by measuring water loss from potted plants over days.
2. Effect of Different Soils on Seed Germination: Test germination rate of seeds in sand, clay, loam and potting mix to see which soil type supports fastest growth.

3. Photosynthesis Rate vs Light Color: Compare plant growth or oxygen production under red, blue and white light to see which color boosts photosynthesis most.

4. Effect of pH on Seed Germination: Test how acidic, neutral, and slightly alkaline water affect germination and early growth of seeds.

5. Microbial Growth on Common Surfaces (Safe Demo): Use pre-sterilized petri-plates with agar and swab non-harmful surfaces (e.g., bread crust, kitchen sponge) then incubate showing growth patterns — emphasize safety and supervision.

6. Study of Natural Antibacterial Agents: Test effectiveness of garlic, turmeric, and salt solutions against harmless bacteria indicators or use agar diffusion with safe strains under teacher supervision.

7. Effect of Salt Concentration on Plant Cells (Osmosis): Observe effects of different salt solutions on potato or onion cells under a microscope to demonstrate plasmolysis.

8. Study of Enzymes: How Temperature Affects Catalase: Use safe catalase sources (potato) and hydrogen peroxide to measure bubble production at different temperatures.

9. Yeast Fermentation and Temperature: Measure CO_2 production from yeast-sugar mixtures at various temperatures to learn about fermentation rate.

10. Antioxidant Levels in Fruits: Compare antioxidant activity in extracts from fruit (e.g., orange, apple, berries) using simple color-change indicators.

11. Study of Tooth Decay with Different Drinks: Soak eggshells (as tooth model) in cola, orange juice, milk and water and observe changes to demonstrate acidity effects.

12. Effect of Caffeine on Plant Growth (Safe doses): Test low concentrations of caffeine solution on bean seedlings to observe growth differences.

13. Plant Growth Hormones — Auxin Effect on Rooting: Compare rooting of stem cuttings with/without commercial rooting hormone (or natural auxin sources like willow extract).

14. Study of Pollinator Preference (Observation): Plant two flower varieties and observe which pollinators visit more often; record and analyze patterns.

15. Water Purification Using Natural Materials: Test filtration using sand, charcoal, and gravel and compare turbidity and clarity before/after.

16. Build a Simple Model of Human Lung: Create a bellows or balloon lung model to show how diaphragm movement affects air intake.

17. Study of Heart Rate Changes With Exercise: Measure pulse before, during, and after light exercise to study recovery time and factors affecting heart rate.

18. Effect of Light on Circadian Movement in Plants: Observe leaf movement in sensitive plants (e.g., Mimosa pudica) or bean seedlings under day-night cycles.

19. Study of Biodiversity in a Local Area: Survey plant and insect species in school ground and calculate diversity indices.

20. Composting Rate Investigation: Compare decomposition of kitchen waste with different C:N ratios or with/without worms to learn about composting speed.

21. Study of Antibiotic Resistance Awareness (Survey + Model): Survey peers on antibiotic use and create a simple model explaining resistance spread (no lab culturing needed).

22. Effect of Synthetic vs Natural Fertilizers on Plant Growth: Compare growth of plants with organic compost vs chemical fertilizer.

23. Study of Human Reaction Time: Use ruler-drop or phone app tests to measure reaction time under different conditions (tired, caffeinated, distracted).

24. Seed Dispersal Methods and Adaptations: Collect and classify seeds from local plants and explain their dispersal adaptations.

25. Role of Enzymes in Digestion — Starch Breakdown by Amylase: Use iodine test to show starch breakdown by saliva or commercial amylase under supervision.

26. Study of Algae Growth in Different Nutrient Levels: Grow harmless algae in jars with varied nutrient concentrations and measure turbidity or chlorophyll color.

27. Root Gravitropism Experiment: Grow seedlings on tilted plates to observe root growth direction in response to gravity.

28. Study of Human Senses — Taste Map Myth: Test taste sensitivity across tongue areas to confirm or debunk the "taste map" myth.

29. Study of Thermal Regulation in Animals (Model): Build models showing how fur or feathers affect heat retention using simple heaters and temperature probes.

30. Study of Enzyme Activity vs pH (Safe Enzymes): Measure activity of safe enzymes like catalase or papain using simple assays at varied pH.

31. Effect of Different Wavelengths on Plant Growth (sunlight filters): Use colored filters over plants and compare growth and leaf color.

32. Study of Soil Microorganisms (Microscope): Observe soil samples under microscope to identify protozoa, fungi, and nematodes (no culturing).

33. Study of Mold Growth on Bread with Different Conditions: Observe mold development under varied humidity and light (ensure safe disposal).

34. Study of Blood Pressure Variation With Activity: Using a BP monitor, record changes before/after exercise and during rest.

35. Study of Plant Defense — Wounding Responses: Observe how plants (e.g., beans) respond to leaf damage — measure new growth and chemical signals if possible.

36. Effect of Salt Stress on Plant Enzymes: Test simple stress markers like seed germination and early growth under increasing salt concentrations.

37. Study of Plant-Microbe Interactions Using Legume Nodulation: Observe nodules on legume roots grown with/without rhizobium (teacher-supervised).

38. Study of Biodiesel from Vegetable Oil (Small Demo): Show the concept by comparing burning properties of vegetable oil vs diesel in a model heater (safety first and small scale).

39. Study of Hair Structure Under Microscope: Examine human or animal hair morphology and compare thickness and scale patterns.

40. Study of Insect Behavior — Phototaxis or Geotaxis: Observe insect (non-harmful) movement toward/away from light or gravity to study behavioral responses.

Chemistry

41. Effect of Acid Rain on Plant Leaves: Simulate acid rain with mild acid solutions and observe damage to leaves over time.

42. Natural pH Indicators from Plants: Extract pigments from red cabbage or beetroot and use them as pH indicators with household acids/bases.

43. Rate of Reaction — Effect of Surface Area: Study how powdered vs chunked antacid tablets react with acid to measure reaction rate.

44. Effect of Temperature on Reaction Rate: Use the citric acid–bicarbonate reaction or yeast fermentation to demonstrate temperature's effect.

45. Study of Corrosion and Rust Prevention: Test different coatings (paint, oil, galvanizing tape) on iron nails in moist conditions.

46. Water Hardness Testing and Softening Methods: Measure hardness with titration or soap test and test softening by boiling, adding washing soda, or ion-exchange resin.

47. Electrolysis of Water — Hydrogen and Oxygen Collection: Demonstrate water electrolysis using safe low-voltage supply and collect gases in inverted tubes.

48. Study of Catalysts: Show how a catalyst (manganese dioxide) speeds decomposition of hydrogen peroxide without being consumed.

49. Make Natural Dyes from Plants and Test Fastness: Create dyes from turmeric, onion skins, beetroot, then test color retention on fabrics after washing.

50. Study of Saturation and Solubility with Temperature: Measure how much sugar dissolves in water at different temperatures.

51. Study of Emulsions — Making Mayonnaise vs Oil-Water Mixtures: Demonstrate emulsifiers by making mayonnaise and comparing to simple oil-water mixtures.

52. Flame Test for Metal Ions: Perform safe small-scale flame tests to identify metal ions by flame color (supervised).

53. Study of Polymer Properties (Homemade Slime): Make different slimes with borax vs glue and test elasticity and viscosity.

54. Detecting Vitamin C in Fruit Juices: Use iodine titration or simple colorimetric tests to compare vitamin C levels.

55. Study of pH and Enzyme Activity in Food Digestion: Observe how pH affects breakdown of gelatin or starch in food models.

56. Make a Simple Solar Still to Purify Water: Build a small solar still and measure distilled water collected from salty or dirty water.

57. Study of Adsorption — Activated Charcoal: Test how charcoal adsorbs dyes or odor molecules from water.

58. Study of Reaction Energies — Endothermic vs Exothermic: Mix substances that show temperature change (e.g., baking soda + vinegar vs calcium chloride + water).

59. Study of Electroplating Basics: Demonstrate plating a small metal object with copper in a safe low-voltage bath.

60. Study of pH Changes During Fermentation: Measure pH change in yogurt or fermented dough over time.

61. Making Bioplastics from Starch: Prepare starch-based plastics and test properties like flexibility and water absorption.

62. Study of Sugar Fermentation for Alcohol Production (Demo): Demonstrate CO_2 production and sugar consumption using yeast (no distillation).

63. Test of Common Antacids: Compare neutralizing power of different antacids using vinegar and measuring pH change.

64. Study of Chemical Clock Reactions (Safe Version): Demonstrate a color-change reaction that occurs after a delay (teacher-supervised chemicals).

65. Study of Water Purification by Coagulation: Use alum or natural coagulants (like moringa seed powder) to clarify muddy water and observe sedimentation.

66. Study of Baking Powder vs Baking Soda: Compare leavening behavior and gas production when used in different recipes.

67. Test for Reducing Sugars (Benedict's Test Demo): Use safe color change tests with supervision to show presence of reducing sugars in foods.

68. Study of Detergent vs Soap Cleaning Efficiency: Compare cleaning power in hard and soft water conditions.

69. Study of Chromatography — Separating Plant Pigments: Use paper chromatography to separate chlorophyll, carotene and xanthophyll from leaves.

70. Study of Acid-Base Titration Precision (School Safe): Perform titrations with common acids and bases to determine concentration.

71. Study of pH Buffer Solutions: Make buffer solutions and test their resistance to pH changes when acids or bases are added.

72. Investigating Antifoaming Agents: Compare foaming by detergents and ways to reduce foam using oil or other additives.

73. Study of Chemical Indicators in Food Spoilage: Observe changes in color, pH and smell of foods as they spoil under controlled conditions.

74. Study of Solubility of Gases in Water vs Temperature: Measure dissolved CO_2 in water at different temperatures (use safe carbonation methods).

75. Make and Test a Simple Lava Lamp (Density and Solubility): Create a lava lamp with oil, water and effervescent tablets to show immiscibility and gas-driven motion.

Physics

76. Study of Projectile Motion: Build a small launcher and measure range vs launch angle to verify projectile equations.

77. Study of Pendulum Period vs Length: Measure pendulum periods at different lengths to demonstrate $T \propto \sqrt{L}$.

78. Investigate Friction — Effect of Surface Texture: Measure force required to pull a block across different surfaces and calculate friction coefficients.

79. Study of Center of Mass and Stability: Build models with movable weights to demonstrate tipping and stability.

80. Study of Refraction — Refractive Index Measurement: Measure refractive index of liquids using a laser/laser-pointer and protractor method.

81. Study of Lens Focal Length: Determine focal length of converging and diverging lenses using light sources and screen.

82. Build a Simple Electromagnet and Investigate Strength Factors: Make an electromagnet and test how coil turns, current and core affect strength (low-voltage).

83. Study of Sound Waves — Frequency vs Pitch Perception: Use tone generator apps to test human sensitivity to frequencies and measure wavelength using resonance tubes.

84. Study of Heat Insulation Materials: Compare materials (polystyrene, cotton, wool) by measuring heat loss from hot water bottles.

85. Build a Simple Solar Oven and Test Cooking Efficiency: Bake small items and compare cooking times vs direct sun.

86. Study of Electric Circuits — Series vs Parallel: Build circuits and measure voltage/current distribution and bulb brightness.

87. Study of Ohm's Law and Resistivity: Measure voltage-current behavior of resistors and calculate resistivity for wires of different metals.

88. Study of Magnetic Field Mapping: Use small compasses to map field lines around magnets and electromagnets.

89. Study of Energy Conversion in a Wind Turbine Model: Build a small turbine and measure electrical output at different wind speeds.

90. Study of Buoyancy and Archimedes' Principle: Measure displaced water vs object weight for different materials and shapes.

91. Study of Thermal Expansion of Solids: Measure length change in metal rods with temperature change and calculate coefficient.

92. Investigate Heat Capacity of Different Metals: Heat equal masses of metals and measure temperature change to compare specific heat.

93. Study of Light Polarization: Use polarizing filters to demonstrate polarization effects and stress patterns in plastics.

94. Study of Doppler Effect with Sound: Use moving sound sources or phone apps to demonstrate frequency shift.

95. Study of Simple Harmonic Motion with Springs: Measure period vs mass and force constant for spring-mass systems.

96. Build a Water Rocket and Study Launch Parameters: Use plastic bottle rockets to study how pressure and nozzle size affect height.

97. Study of Insulating Properties of Double-Glazed Models: Build model windows and compare heat loss to single-pane models.

98. Study of Battery Efficiency with Load: Test battery voltage and life under different loads to compare performance.

99. Study of Electromagnetic Induction: Move a magnet through a coil and measure induced voltage; test effect of speed and turns.

100. Investigate Static Electricity — Charge and Discharge: Use balloons and pith balls to demonstrate electrostatic attraction and repulsion.

101. Study of Projectile Motion with Air Resistance (Model): Compare launches with/without added fins or drag to see air resistance effects.

102. Build a Simple Seismograph Model: Create a pendulum-with-pen model to record vibrations and simulate earthquake signals.

103. Study of Thermal Conductivity of Liquids: Measure how quickly a heated object loses heat in different liquids.

104. Investigate the Efficiency of Light Bulbs (LED vs CFL vs Incandescent): Measure light output and power consumption to compare efficiency.

105. Study of Mirrors — Image Formation by Curved Mirrors: Use concave and convex mirrors to locate images and measure magnification.

106. Test the Effect of Mass Distribution on Rotational Inertia: Use rotating platforms with masses added at different radii.

107. Study of Pressure in Fluids — Pascal's Principle: Build simple hydraulic lift models and measure force amplification.

108. Study of Capacitance with Different Dielectrics: Construct capacitors with various materials and measure capacitance.

109. Build a Simple Hovercraft (Air Cushion): Create a small hovercraft model and test load capacity and friction reduction.

110. Study of Thermal Radiation — Emissivity of Surfaces: Compare temperature change under infrared lamp for black, shiny and white surfaces.

Environmental Science & Ecology

111. Measure Air Quality with Low-Cost Sensors: Use simple particulate or gas sensors (or passive methods like lichens) to compare air quality around school.

112. Study of Microplastic Pollution in Local Water: Filter water samples and observe microplastics under a microscope (safe handling and disposal).

113. Effectiveness of Different Mulches on Soil Moisture Retention: Compare water retention and plant growth with organic and synthetic mulches.

114. Study of Urban Heat Island Effect (Local Survey): Measure temperature differences in shaded/green vs paved areas and analyze causes.

115. Compost Quality vs Worms (Vermicomposting): Compare compost produced with and without worms in terms of nutrient content and odor.

116. Study of Eutrophication in Pond Samples: Observe algal blooms in collected samples, measure dissolved oxygen over time (safe handling).

117. Study of Rainwater Harvest Quality: Collect rooftop rainwater and test pH, turbidity and basic contaminants before/after simple filtration.

118. Compare Carbon Footprint of Daily Activities: Survey and calculate carbon emissions for transport, food choices or electricity use.

119. Study of Noise Pollution Around School: Measure decibel levels at different times and locations and assess impact on health.

120. Study of Soil Erosion Rate on Slopes: Create slope models with different vegetation cover and measure soil loss under simulated rain.

121. Test Different Methods for Oil Spill Cleanup (Demo): Use scale models with oil on water and compare cleanup by skimming, absorption, and dispersants (safe substitutes like cooking oil).

122. Study of Water Table Variation (Observation + Data): Monitor local wells or groundwater markers over weeks to track water table changes.

123. Effect of Road Salt on Plant Growth (Safe Model): Simulate salt runoff and study its effect on roadside plants in pots.

124. Study of Renewable vs Non-renewable Resource Use in Community: Survey energy sources used locally and propose shifts to renewable practices.

125. Study of Soil pH and Plant Suitability: Test soil pH in different sites and recommend appropriate plants for each soil type.
126. Investigate Effect of Herbicides on Earthworms (Safe Demo): Observe earthworm behavior in soil treated with diluted herbicide vs control (with care).
127. Study of Water Filtration by Wetlands (Model): Build a small wetland model using plants and soil to filter dirty water and measure clarity.
128. Study of Urban Green Spaces on Biodiversity: Compare species counts in parks vs non-green urban areas.
129. Study of Solar Panel Efficiency in Different Angles and Dust Levels: Measure output of panels under various tilts and with/without dust.
130. Study of Household Waste Segregation and Compostability: Audit household waste and test how much can be composted or recycled.

Earth & Space Science

131. Study of Soil Layers and Composition: Dig a small pit, describe horizons, and analyze texture and organic content.
132. Observe Moon Phases and Create a Model: Track moon phases for a month and build a physical or digital model that predicts phases.
133. Study of Rock Weathering Rates: Compare weathering of different rock types in acid rain simulation or freeze-thaw cycles.
134. Study of Water Cycle in a Closed System (Terrarium): Build a terrarium and observe condensation, evaporation and plant transpiration.
135. Study of Sunspot Observation (Safe Methods): Use safe solar projection to observe sunspots and record activity over weeks.
136. Study of Shoreline Erosion Models: Create small wave tanks and test effect of breakwaters and vegetation on erosion.
137. Build a Simple Sundial and Compare with Clock Time: Construct a sundial and study differences over a week, relating to longitude/time equation.
138. Study of Earthquake Wave Propagation Using Models: Use layered materials to see how waves travel differently through them.
139. Study of Magnetic Declination Locally: Measure difference between compass north and true north using map data and local observations.
140. Study of Cloud Formation in a Bottle: Demonstrate condensation and cloud formation by creating a pressure/temperature change inside a bottle.

Electronics, Robotics & Simple Engineering

141. Build a Line-Following Robot (Basic): Create a small robot that follows a black line using IR sensors and test speed and accuracy.

142. Automatic Plant-Watering System: Design a low-voltage system that senses soil moisture and activates a pump to water plants.

143. Build a Light-Tracking Solar Tracker: Make a small device that rotates a panel or lamp to face the brightest light source using LDRs.

144. Design a Simple Traffic Light Controller Using Timer ICs: Build a model intersection with LEDs controlled by NE555 timers or microcontroller.

145. Build a Clap-Operated Switch: Create a sound-activated switch to toggle a light when clapped using microphone sensor and amplifier circuit.

146. Study of Motor Efficiency vs Load: Measure RPM, current, and voltage of a DC motor under different loads and calculate efficiency.

147. Build a Simple Metal Detector: Use an oscillator/coil circuit to detect metallic objects buried in sand.

148. Design an Automatic Night Lamp Using LDR: Make a lamp that turns on automatically when ambient light falls below a threshold.

149. Build a Simple Line of Sight Wireless LED Control (IR or RF): Control an LED remotely and test range and interference.

150. Build a Gesture-Controlled Toy (Basic Accelerometer): Use an accelerometer module to control a small robot or LED display with hand gestures.

151. Build a Digital Timer Using 7-Segment Display: Use small microcontroller or ICs to build a countdown/up timer and test accuracy.

152. Design a Simple Water Level Indicator: Build a multi-level indicator using probes and LEDs to show tank water level.

153. Build a Morse Code Communicator with Arduino: Send and receive short messages using LEDs and buzzer as output.

154. Build an Obstacle-Avoiding Robot: Use ultrasonic sensors with microcontroller to navigate a maze without collisions.

155. Create an Electronic Dice with LEDs: Build a random number generator with push button and seven LEDs identifying numbers.

156. Build a Home Security Alarm with PIR Sensor: Create a sensor-based alarm that detects motion and sounds a buzzer or light.

157. Design a Solar-Powered USB Charger: Build a small solar charging circuit with regulation to charge a phone (safety: low current).

158. Build a Sound Level Indicator with LEDs: Use microphone sensor to light up bars based on ambient noise level.
159. Study Noise Filtering in Circuits: Build simple RC filters and test how they reduce unwanted signal frequencies.
160. Build a Thermostat Controller to Switch a Fan: Use a temperature sensor to turn a fan on/off at set thresholds.

Renewable Energy & Green Tech

161. Compare Solar Panel Types (Monocrystalline vs Polycrystalline): Measure energy output of small panels under same conditions and compare.
162. Build a Small Wind Turbine and Test Blade Shapes: Create turbines with different blade profiles to measure electrical output.
163. Create a Biogas Model from Kitchen Waste (Small Demo): Demonstrate gas production in an anaerobic bottle model (no large-scale gas storage) and measure gas volume.
164. Study of Hydroponic vs Soil Growing: Grow plants hydroponically and in soil and compare growth, water use and nutrient needs.
165. Build a Micro-Hydropower Model: Use flowing water to turn a small turbine and measure generated power.
166. Study of Algae as Biofuel Source (Observation): Grow algae in jars and measure biomass increase under nutrients and light (no extraction).
167. Design a Home Energy Audit and Savings Plan: Measure home energy use and propose changes to reduce consumption and cost.
168. Test the Effectiveness of Solar Reflectors on Oven Performance: Add reflectors to a solar oven and measure temperature increases.
169. Build a Solar-Powered Water Pump Model: Use a small PV panel to run a pump and test flow rates under different irradiance.
170. Study of Insulation for Passive Cooling: Test insulation materials and reflective surfaces to keep a model house cool.

Food Science & Nutrition

171. Effect of Different Cooking Methods on Vitamin C Retention: Compare vitamin C levels in vegetables after boiling, steaming and microwaving (safe test methods).

172. Study of Fermentation in Idli/Dosa Batter: Observe how fermentation time and temperature affect batter rise and taste.

173. Test Preservatives' Effect on Food Spoilage (Safe Demo): Compare spoilage rates of fruit slices with natural vs chemical preservatives under supervision.

174. Study of Sugar Content in Different Beverages: Use refractometer or titration to compare Brix (sugar concentration) in sodas, juices and smoothies.

175. Effect of Salt and Sugar on Osmosis in Vegetables: Soak cucumbers in salt/sugar solutions and observe firmness and mass change.

176. Study of Food Emulsions — Salad Dressing Stability: Create dressings with different emulsifiers and observe separation over time.

177. Test Antioxidant Levels in Tea Types: Compare green, black and herbal teas for antioxidant indicators and flavor differences.

178. Study of Bread Volume with Different Yeast Amounts: Bake small loaves with varied yeast and measure rise, texture and taste.

179. Study of Fortification — Iron Absorption in Foods (Literature + Demo): Model iron enrichment in flour and discuss effects on nutrition.

180. Compare Homemade vs Commercial Yogurt Cultures: Make yogurt at home and compare texture and taste to store-bought versions.

Material Science & Engineering

181. Study Strength of Different Bridge Designs (Model): Build small bridges (truss, beam, arch) from popsicle sticks and test load capacity.

182. Study of Concrete Mix Ratios on Strength: Make small concrete cubes with different cement:sand ratios and test crushing strength after curing.

183. Study of Thermal Insulation Properties of Building Materials: Compare how well materials like brick, foam and wood insulate a small model house.

184. Investigate Tensile Strength of Threads and Fabrics: Test different sewing threads or cloths to see which can hold heavier weights before breaking.

185. Study Water Absorption in Building Materials: Measure how much water different bricks, tiles or cement blocks absorb over time.

186. Create Composite Materials from Recycled Plastics and Fibers: Mix shredded plastic with fibers to make test tiles and compare stiffness.

187. Study of Lubrication — Effect of Oils on Friction: Test different oils/greases between surfaces to measure friction reduction.

188. Test Durability of Coatings — Scratch and Corrosion Resistance: Apply coatings like varnish, paint and wax and test wear after simulated use.

189. Study of Heat-Resistant Materials (Small Demo): Compare how different kitchen materials withstand heat from a lamp or hot plate.

190. Make and Test Aerogels or Insulating Foam (Simple Recipes): Prepare simple insulating foam using safe chemicals and test insulating power.

Computer Science, Data & Math Projects

191. Build a Simple Weather Predictor Using Historical Data: Use past local temperature/rain data to make basic prediction models (statistics or simple regression).

192. Create an App to Track School Energy Use: Design a prototype app or spreadsheet that logs classroom energy use and suggests savings.

193. Study Correlation Between Study Hours and Scores: Collect anonymized class data and analyze correlation using graphs and statistics.

194. Simulate Epidemic Spread with Simple Models: Create a basic SIR model in spreadsheet or code to simulate infection spread and control measures.

195. Make a Computer Model of Population Growth: Use exponential and logistic models to show how population changes with resources.

196. Create a Quiz App Using Scratch or Python: Build an interactive quiz that gives feedback and scores, and analyze user results.

197. Study Compression — How Image Quality Changes with Compression: Compress images at different levels and compare file size vs perceived quality.

198. Analyze Local Weather Patterns with Graphs: Use available historical data to create charts of temperature/rain over months and draw conclusions.

199. Build a Simple Traffic Simulation Model: Simulate stream of cars and test effects of traffic lights, lane numbers, or vehicle speed.

200. Use Sensors and Data Logging to Monitor Plant Conditions: Connect a temperature/moisture sensor to a microcontroller and log data for plant health analysis.

Safety first — quick rules

- Always wear safety goggles and gloves when needed.

- Work with adult or teacher supervision for heating or electricity.
- Avoid strong acids, bases, corrosive or toxic chemicals. Use household-safe alternatives (vinegar, baking soda, salt, sugar, lemon).
- Do not culture bacteria or use unknown soil/water samples without lab supervision.
- Dispose of chemicals and waste as your teacher instructs.

Quick tips for a high-scoring project

- Use a clear aim and measurable results (numbers, not just "it changed").
- Show one or two graphs (e.g., time vs temperature, concentration vs reaction rate).
- Explain the science simply and clearly — examiners love clarity.
- Keep the report tidy, with labeled photos and diagrams.
- Practice your 2–3 minute explanation for the viva voce (oral).

Example: detailed short plan (one sample you can follow)

Title: Effect of Salt Concentration on Seed Germination
Aim: To study how different salt concentrations affect germination of gram seeds.
Materials: 30 gram seeds, petri dishes or trays, salt, water, measuring cylinder.
Procedure:

1. Make 5 solutions: 0% (control), 0.5%, 1%, 1.5%, 2% salt.
2. Place 6 seeds on moist filter paper per dish and add equal volumes of each solution.
3. Keep in same light/temperature conditions.
4. Record germination each day for 7 days and measure root/shoot length on day 7.
   Observation: Table of germination % and average root length.
   Result: Plot germination % vs salt concentration.
   Conclusion: State effect and possible reasons (osmotic stress).
   Safety: Dispose of salt solution safely, do not ingest seeds used in experiment.

Also Read: 69+ Genius Maths Project Ideas for Exhibition 2024 + PDF

Common mistakes to avoid

- Vague aim (e.g., "to study plants" — be specific).
- No control group — always include a control if possible.
- Not repeating trials — at least 3 repeats gives reliable data.
- Messy or unlabeled charts and photos.
- Ignoring safety and teacher guidance.

Final words — go make something cool!

Pick an idea that excites you, plan carefully, measure cleanly, and explain the science simply.

If you want, tell me which subject (Physics/Chem/Chemistry/Bio/Electrical) you prefer and I'll expand **one chosen idea** into a ready-to-print project report with step-by-step procedure, charts and a sample viva voce script. Want that?

FAQ

Q: How many experiments should I include?
A: One well-planned experiment is better than many shallow ones. Do 1 primary experiment and add a small related demo if you want.

Q: Can I use smartphone apps for measurements?
A: Yes — for RPM, light intensity or sound level — but mention the app and method and verify accuracy.

Q: How long should the report be?
A: 8–12 pages (neat and focused) is ideal for Class 10 — but follow your school's guidelines.

📁 Blog, Project Ideas

J O H N   D E A R

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!
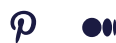
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Best Project Ideas

Are you ready to make your big ideas happen? Let's connect and discuss how we can bring your vision to life. Together, we can create amazing results and turn your dreams into reality.

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