

1. Biology

1. **Plant Growth:** Test how light affects plant growth.
2. **Photosynthesis:** Show how plants make oxygen.
3. **Cell Models:** Build models of plant and animal cells.
4. **Bacteria Growth:** Grow bacteria and watch how they spread.
5. **DNA Extraction:** Extract DNA from fruits.
6. **Human Digestive System:** Make a model of the digestive system.
7. **Insect Habitats:** Study where insects live.
8. **Seed Germination:** Test how different conditions affect seed growth.
9. **Photosynthesis Rate:** Measure how fast plants make oxygen.
10. **Frog Anatomy:** Study frog anatomy (if allowed).

2. Chemistry

11. **Baking Soda and Vinegar:** Observe the fizzing reaction.
12. **pH Testing:** Test the acidity of various liquids.
13. **Solubility:** See how different things dissolve in water.
14. **Color Changes:** Watch color changes in chemical reactions.
15. **Natural pH Indicators:** Use fruits and vegetables to test pH.
16. **Electrolysis:** Split water into hydrogen and oxygen.
17. **Crystal Growth:** Grow crystals from salt or sugar.
18. **Reaction Rates:** Test how temperature affects chemical reactions.
19. **Natural Dyes:** Make dyes from plants.
20. **Acid-Base Reactions:** Mix acids and bases to see what happens.

3. Physics

21. **Simple Machines:** Build models of levers and pulleys.
22. **Magnets:** Test what attracts magnets.
23. **Light Bending:** Explore how light bends through lenses.
24. **Sound Travel:** See how sound moves through materials.
25. **Electric Circuits:** Create simple circuits with batteries.
26. **Newton's Laws:** Demonstrate Newton's laws of motion.
27. **Gravity:** Test how gravity affects objects.
28. **Static Electricity:** Use balloons to show static electricity.
29. **Energy Transfer:** See how heat moves through materials.
30. **Pendulum:** Measure how pendulum length affects swing time.

4. Earth Science

31. **Rock Types:** Identify different rocks.
32. **Soil Samples:** Compare different soil types.

33. **Erosion:** Simulate soil erosion with water.
34. **Water Cycle Model:** Create a model of the water cycle.
35. **Weather Tracking:** Record local weather data.
36. **Volcano Model:** Build a model volcano and make it "erupt."
37. **Earthquake Simulation:** Show how earthquakes affect buildings.
38. **Fossil Formation:** Make models to show how fossils form.
39. **Rock Layers:** Study sedimentary rock layers.
40. **Climate Zones:** Compare different climate zones.

5. Environmental Science

41. **Recycling Benefits:** Show why recycling is important.
42. **Water Quality:** Test the cleanliness of water samples.
43. **Renewable Energy:** Build a simple solar or wind-powered device.
44. **Waste Management:** Create a plan to reduce waste.
45. **Composting:** Start a compost bin and watch decomposition.
46. **Air Quality:** Measure air pollution levels.
47. **Greenhouse Effect:** Model the greenhouse effect.
48. **Habitat Conservation:** Research and present on endangered habitats.
49. **Energy Conservation:** Find ways to save energy at home.
50. **Biodiversity:** List and describe local plant and animal species.

6. Astronomy

51. **Solar System Model:** Build a model of the solar system.
52. **Constellations:** Map out constellations in the night sky.
53. **Moon Phases:** Show the phases of the moon with a model.
54. **Telescope Use:** Learn to use a telescope and record observations.
55. **Meteor Showers:** Study meteor showers.
56. **Planet Rotation:** Demonstrate how planets rotate.
57. **Eclipses:** Model solar and lunar eclipses.
58. **Astronomy Apps:** Review apps for stargazing.
59. **Space Missions:** Research famous space missions.
60. **Planet Distances:** Calculate distances between planets.

7. Engineering

61. **Bridge Building:** Build a bridge model with popsicle sticks.
62. **Catapult:** Make a simple catapult and test it.
63. **Robots:** Assemble a basic robot.
64. **Hydraulic Machine:** Build a model using syringes and tubes.
65. **Wind Turbine:** Create a small wind turbine.
66. **Roller Coaster:** Design a marble roller coaster.
67. **Elevator Model:** Make a working model of an elevator.

- 68. **Archimedes' Principle:** Demonstrate buoyancy with a model.
- 69. **Paper Airplanes:** Test different paper airplane designs.
- 70. **Simple Robots:** Program a robot to complete a task.

8. Chemistry and Physics

- 71. **pH Indicators:** Make indicators from fruits and test liquids.
- 72. **Bubbles and Reactions:** Study gas production in chemical reactions.
- 73. **Solar Still:** Build a solar still to purify water.
- 74. **Thermal Insulation:** Test how materials insulate against heat.
- 75. **Density:** Measure and compare the density of liquids and solids.
- 76. **Electricity and Magnetism:** Show how electricity creates magnetism.
- 77. **Pressure:** Experiment with how air pressure affects objects.
- 78. **Food Chemistry:** See how cooking changes food chemically.
- 79. **Rocket Launch:** Build a simple water rocket.
- 80. **Chemical Crystals:** Grow and compare crystals.

9. Ecology

- 81. **Plant Adaptations:** Study how plants adapt to their environment.
- 82. **Ecosystem Models:** Create a model of a local ecosystem.
- 83. **Pollinators:** Observe how pollinators help plants.
- 84. **Habitat Types:** Explore different local habitats.
- 85. **Invasive Species:** Learn about the impact of invasive species.
- 86. **Water Filtration:** Build a simple water filter.
- 87. **Soil Health:** Test factors affecting soil health.
- 88. **Food Chains:** Create a model showing energy flow in food chains.
- 89. **Wildlife Tracking:** Track local wildlife activity.
- 90. **Pollution Effects:** Study how pollution affects nature.

10. Health and Medicine

- 91. **Heart Rate:** Measure how exercise affects heart rate.
- 92. **Bacteria Growth:** Test how bacteria grow in different conditions.
- 93. **Food Nutrition:** Analyze the nutritional value of different foods.
- 94. **Exercise Benefits:** See how exercise impacts health.
- 95. **First Aid Kit:** Make and learn to use a first aid kit.
- 96. **Disease Spread:** Model how diseases spread.
- 97. **Respiratory System:** Build a model of the respiratory system.
- 98. **Hydration:** Test how different drinks affect hydration.
- 99. **Stress and Relaxation:** Study how stress affects you and ways to relax.
- 100. **Germ Prevention:** Show why washing hands prevents illness.

11. Robotics

101. **Basic Robot:** Build a simple robot from a kit.
102. **Robot Arm:** Create a robotic arm model.
103. **Line Following Robot:** Make a robot that follows a line.
104. **Obstacle Avoidance:** Build a robot that avoids obstacles.
105. **Robotic Hand:** Design a hand that can move objects.
106. **Automated Waterer:** Create a robot that waters plants.
107. **Remote-Controlled Car:** Modify a toy car to be remote-controlled.
108. **Sorting Robot:** Design a robot that sorts objects.
109. **Voice-Controlled Robot:** Program a robot to respond to voice commands.
110. **Simple Drone:** Assemble a basic drone and test it.

12. Environmental Conservation

111. **Energy-Efficient Lighting:** Compare energy use of different light bulbs.
112. **Solar Water Heater:** Build a simple solar water heater.
113. **Green Roof:** Model a green roof and its benefits.
114. **Rain Garden:** Design a garden to manage rainwater.
115. **Waste Reduction:** Plan ways to reduce household waste.
116. **Sustainable Farming:** Research sustainable farming methods.
117. **Eco-Friendly Products:** Test eco-friendly cleaning products.
118. **Biodiversity Survey:** List local plant and animal species.
119. **Carbon Footprint:** Calculate and analyze your carbon footprint.
120. **Recycling Methods:** Study how different recycling methods work.

13. Mathematics in Science

121. **Data Analysis:** Analyze data from an experiment.
122. **Statistical Graphs:** Create graphs from scientific data.
123. **Geometry in Nature:** Find geometric shapes in nature.
124. **Probability:** Explore probability with simple experiments.
125. **Math in Engineering:** Use math to solve engineering problems.
126. **Pattern Recognition:** Identify patterns in nature or data.
127. **Volume and Surface Area:** Calculate for different objects.
128. **Optimization:** Solve problems using optimization techniques.
129. **Mathematical Models:** Create models to simulate processes.
130. **Graphing Functions:** Graph mathematical functions.

14. Technology and Innovations

131. **3D Printing:** Design and print a 3D object.
132. **Virtual Reality:** Explore virtual reality applications.
133. **Augmented Reality:** Create a simple AR experience.
134. **Smart Sensors:** Build a project using smart sensors.
135. **Wearable Tech:** Design a basic wearable tech prototype.

- 136. **Tech Innovations:** Research recent tech innovations.
- 137. **Coding Projects:** Create a simple app or game.
- 138. **IoT Projects:** Connect devices through the internet.
- 139. **Automation:** Show automation in daily life.
- 140. **Tech in Medicine:** Research technology used in medicine.

15. Simple Machines

- 141. **Levers:** Build models of different levers.
- 142. **Pulleys:** Create a pulley system to lift objects.
- 143. **Inclined Planes:** Test different inclined planes.
- 144. **Wheels and Axles:** Explore how wheels and axles work.
- 145. **Gears:** Build a model showing gears in action.
- 146. **Screws:** Study how screws provide mechanical advantage.
- 147. **Cams and Cranks:** Make a model with cams and cranks.
- 148. **Gearbox:** Design a simple gearbox.
- 149. **Compound Machines:** Combine machines to create a compound machine.
- 150. **Mechanical Advantage:** Demonstrate with simple machines.

16. Chemistry in Everyday Life

- 151. **Cleaning Products:** Compare effectiveness of cleaning products.
- 152. **Food Chemistry:** Study chemical reactions in cooking.
- 153. **Homemade Soap:** Make soap through a simple process.
- 154. **Food Preservation:** Compare methods of preserving food.
- 155. **Cosmetics:** Create and test homemade cosmetics.
- 156. **pH Levels:** Test the pH of various liquids.
- 157. **Baking Chemistry:** Explore effects of baking soda and powder.
- 158. **Natural Fragrances:** Extract and test fragrances from plants.
- 159. **Rusting:** Observe and prevent rusting.
- 160. **Chemical Reactions in Drinks:** Test acids and bases in drinks.

17. Weather and Climate

- 161. **Weather Station:** Build a simple weather station.
- 162. **Cloud Formation:** Model different types of clouds.
- 163. **Weather Patterns:** Track and analyze local weather.
- 164. **Climate Zones:** Compare different climate zones.
- 165. **Heat Retention:** Test how materials retain heat.
- 166. **Rain Gauge:** Make a rain gauge and measure precipitation.
- 167. **Wind Speed:** Measure wind speed with a homemade device.
- 168. **Weather Forecasting:** Research weather forecasting models.
- 169. **Global Warming:** Study effects of global warming.
- 170. **Weather Effects on Plants:** Observe how weather affects plants.

18. Simple Electrical Projects

171. **Battery Fan:** Build a battery-powered fan.
172. **LED Circuit:** Create a circuit with LEDs.
173. **Electric Motor:** Construct a basic motor.
174. **Light Sensor:** Build a light intensity sensor.
175. **Sound Sensor:** Create a sound sensor.
176. **Battery Charger:** Design a simple battery charger.
177. **Fruit Electricity:** Generate electricity with fruits.
178. **Oscilloscope:** Build a basic oscilloscope.
179. **Conductivity Tester:** Test material conductivity.
180. **Circuit Types:** Explore series and parallel circuits.

19. Engineering Challenges

181. **Bridge Building:** Construct a bridge with popsicle sticks.
182. **Tower Design:** Build a tall tower with limited materials.
183. **Vehicle Construction:** Design a vehicle that moves.
184. **Rube Goldberg Machine:** Create a complex machine for a simple task.
185. **Dam Model:** Make a model dam and test water control.
186. **Water Filter:** Build a simple water filter.
187. **Catapult:** Create a catapult and test its range.
188. **Hydraulic Lift:** Design a hydraulic lift model.
189. **Solar Oven:** Build a solar oven for cooking.
190. **Parachute:** Test different parachute designs.

20. Fun and Interactive

191. **Science Tricks:** Perform science-based magic tricks.
192. **DIY Lava Lamp:** Make a lava lamp with household items.
193. **Invisible Ink:** Use heat to reveal invisible ink.
194. **Homemade Slime:** Make and experiment with slime.
195. **Static Electricity:** Move objects with static electricity.
196. **Dancing Raisins:** See how carbonation makes raisins dance.
197. **Color Changing Flowers:** Change flower colors with dye.
198. **Floating Pen:** Create an optical illusion with a floating pen.
199. **Magic Milk:** Make colorful patterns in milk.
200. **Weather Balloon:** Make a simple weather balloon.