

5th Grade Science Project Ideas With Hypothesis

Checkout the latest 5th grade science project ideas with hypotheses for students that will surely boost their scores to the next level:

Plant Science

- 1. Do plants grow taller with music?**
Hypothesis: Music can stimulate plant growth, leading to taller plants.
- 2. Does water temperature affect seed growth?**
Hypothesis: Warmer water will increase seed growth rates.
- 3. How do different soils affect plants?**
Hypothesis: Soil composition directly influences plant health and growth.
- 4. Does salt affect plant growth?**
Hypothesis: Salt in soil can slow down plant growth.
- 5. Does light affect plant growth direction?**
Hypothesis: Plants will grow toward light sources.
- 6. Can you create a mini greenhouse?**
Hypothesis: A mini greenhouse can improve plant growth by maintaining humidity.
- 7. What affects the seed germination rate?**
Hypothesis: Temperature and moisture levels control seed germination speed.
- 8. Does light color affect plant growth?**
Hypothesis: Different light colors have varying effects on plant growth.
- 9. Which factor influences leaf color change?**
Hypothesis: Temperature and sunlight are critical factors in leaf color change.
- 10. Does soil type affect plant growth?**
Hypothesis: Certain soil types provide better nutrients for plant growth.
- 11. What influences the rate of photosynthesis?**
Hypothesis: Light intensity and carbon dioxide levels affect photosynthesis speed.
- 12. Does light intensity affect plant growth?**
Hypothesis: Higher light intensity promotes faster plant growth.
- 13. Which factor influences plant transpiration?**
Hypothesis: Humidity and temperature regulate plant transpiration rates.
- 14. Does soil acidity affect plant growth?**
Hypothesis: High acidity in soil slows plant growth.
- 15. Does fertilizer affect plant growth rate?**
Hypothesis: Fertilizer speeds up plant growth by providing extra nutrients.

Physics

- 16. Which paper airplane flies farthest?**
Hypothesis: The design of the airplane affects its flight distance.
- 17. What material makes the strongest bridge?**
Hypothesis: Certain materials have more strength for bridge building.
- 18. Which magnet is the strongest?**
Hypothesis: Larger or denser magnets generate stronger forces.

19. **How do shadows change during the day?**
Hypothesis: Shadows change length and position based on the sun's position.
20. **Can you build a simple electric motor?**
Hypothesis: An electric motor can be built with basic materials like copper wire.
21. **How do different materials conduct heat?**
Hypothesis: Metals conduct heat better than non-metals.
22. **What affects a pendulum's swing?**
Hypothesis: The length of the string controls the pendulum's swing.
23. **How do different surfaces affect friction?**
Hypothesis: Rougher surfaces create more friction than smooth surfaces.
24. **Does color affect heat absorption?**
Hypothesis: Darker colors absorb more heat than lighter colors.
25. **Can you make a working compass?**
Hypothesis: A compass can be made using a magnet and simple materials.
26. **How do different materials insulate?**
Hypothesis: Wool and foam are good insulators compared to metals.
27. **Can you build a simple catapult?**
Hypothesis: A catapult can be made from basic materials and will launch objects.
28. **How do different materials conduct electricity?**
Hypothesis: Metals are better conductors of electricity than non-metals.
29. **Can you make a working sundial?**
Hypothesis: A sundial accurately tells time-based on the sun's position.
30. **How are different materials soundproof?**
Hypothesis: Thicker materials provide better soundproofing than thinner ones.
31. **Can you build a working periscope?**
Hypothesis: A periscope can be made using mirrors and tubes.
32. **What affects a car's rolling distance?**
Hypothesis: Smoother surfaces increase a car's rolling distance.
33. **Can you build a simple wind turbine?**
Hypothesis: A wind turbine can generate electricity using wind power.
34. **How do different materials reflect light?**
Hypothesis: Mirrors and shiny materials reflect light better than dull materials.
35. **Can you make a working hydraulic lift?**
Hypothesis: Hydraulic lifts use pressure to raise and lower objects.
36. **How do different materials affect sound?**
Hypothesis: Soft materials absorb sound better than hard materials.
37. **Can you build a simple water wheel?**
Hypothesis: Water wheels convert water energy into mechanical energy.
38. **How do different materials conduct colds?**
Hypothesis: Metals conduct cold better than other materials.
39. **Can you make a working windmill?**
Hypothesis: A windmill can harness wind energy to perform tasks.
40. **How do different materials affect static?**
Hypothesis: Some materials, like wool, generate more static than others.
41. **Can you build a simple seismograph?**
Hypothesis: A seismograph detects and records vibrations from the ground.
42. **How do different materials affect buoyancy?**
Hypothesis: Objects made from denser materials are less buoyant.

43. **Can you make a working steam engine?**
Hypothesis: Steam engines use heat to generate mechanical energy.
44. **Does temperature affect magnet strength?**
Hypothesis: Higher temperatures weaken a magnet's strength.
45. **Can you build a simple telescope?**
Hypothesis: A telescope magnifies distant objects using lenses.
46. **How do different materials affect friction?**
Hypothesis: Smooth materials reduce friction more than rough ones.
47. **Can you make a working kaleidoscope?**
Hypothesis: A kaleidoscope creates patterns by reflecting light through mirrors.
48. **How do different materials conduct vibration?**
Hypothesis: Hard materials transmit vibrations better than soft ones.
49. **Can you build a simple water pump?**
Hypothesis: A water pump can be made to move water using basic materials.
50. **Can you make a working hovercraft?**
Hypothesis: Hovercrafts use air pressure to float above surfaces.

Chemistry

51. **How do different liquids freeze?**
Hypothesis: Different liquids freeze at various temperatures based on their composition.
52. **Can you create a homemade battery?**
Hypothesis: A battery can be made using common household materials.
53. **Does soda affect tooth enamel?**
Hypothesis: Soda weakens and damages tooth enamel over time.
54. **Which fruits have the most vitamin C?**
Hypothesis: Citrus fruits contain the highest levels of vitamin C.
55. **What affects the speed of melting?**
Hypothesis: Heat and surface area influence how fast substances melt.
56. **Can you make invisible ink?**
Hypothesis: Certain household substances can be used to create invisible ink.
57. **How do different liquids evaporate?**
Hypothesis: Liquids with lower boiling points evaporate faster.
58. **Which bread molds fastest?**
Hypothesis: Moist and warm conditions speed up mold growth on bread.
59. **Which material absorbs the most oil?**
Hypothesis: Certain materials, like sponges, absorb more oil than others.
60. **How do different liquids mix?**
Hypothesis: The density of liquids affects how they mix together.
61. **What affects crystal growth speed?**
Hypothesis: Temperature and solution concentration affect crystal growth.
62. **Which cleaner removes stains best?**
Hypothesis: Stronger chemical cleaners are more effective at removing stains.
63. **What affects the boiling point?**
Hypothesis: Atmospheric pressure and impurities can raise or lower the boiling point.

64. **Which material degrades fastest?**
Hypothesis: Organic materials break down faster than synthetic ones.
65. **How do different factors affect rust?**
Hypothesis: Moisture and oxygen levels speed up the rusting process.
66. **Can you make a homemade thermometer?**
Hypothesis: Basic materials can be used to build a working thermometer.
67. **How do different solutions conduct electricity?**
Hypothesis: Solutions with ions conduct electricity better than pure water.
68. **Can you create a lava lamp?**
Hypothesis: A lava lamp can be made using household liquids with different densities.
69. **Does sugar affect bread rising?**
Hypothesis: Sugar increases yeast activity, causing bread to rise faster.
70. **Which liquid has the highest surface tension?**
Hypothesis: Water has higher surface tension compared to most other liquids.
71. **How do different materials absorb water?**
Hypothesis: Porous materials absorb more water than non-porous ones.
72. **Does vinegar affect eggshell strength?**
Hypothesis: Vinegar weakens eggshells by dissolving calcium carbonate.
73. **What influences the rate of evaporation?**
Hypothesis: Heat and air movement speed up evaporation.
74. **How do different liquids affect density?**
Hypothesis: The composition of liquids affects their density.
75. **Which liquid is most viscous?**
Hypothesis: Thicker liquids, like syrup, are more viscous than water.
76. **Which liquid has the highest boiling point?**
Hypothesis: Liquids with more complex molecules have higher boiling points.
77. **Which liquid is most acidic?**
Hypothesis: Vinegar and lemon juice are more acidic than other common liquids.
78. **Does water purity affect the freezing point?**
Hypothesis: Impurities in water lower its freezing point.
79. **What influences the rate of decomposition?**
Hypothesis: Temperature and moisture control how fast materials decompose.
80. **Which liquid has the lowest freezing point?**
Hypothesis: Liquids like alcohol freeze at lower temperatures than water.
81. **What influences the speed of reactions?**
Hypothesis: Temperature and concentration of reactants affect reaction speed.
82. **Which material is most heat-resistant?**
Hypothesis: Some materials, like ceramics, resist heat better than others.
83. **Does humidity affect the evaporation rate?**
Hypothesis: Higher humidity slows down the evaporation rate.
84. **What influences the rate of osmosis?**
Hypothesis: Temperature and solute concentration affect osmosis speed.
85. **Which liquid has the highest specific heat?**
Hypothesis: Water has a higher specific heat capacity than most other liquids.
86. **Which material is most biodegradable?**
Hypothesis: Natural fibers like cotton biodegrade faster than synthetic materials.

87. **Which liquid has the highest density?**

Hypothesis: Denser liquids, like honey, sink faster in water.

Earth Science

88. **Can you build a working volcano?**

Hypothesis: A model volcano can simulate an eruption using basic materials.

89. **Can you create a rain cloud?**

Hypothesis: Rain clouds can be mimicked using cold and warm air.

90. **What affects the rate of erosion?**

Hypothesis: Water, wind, and slope influence the speed of erosion.

91. **Can you create a homemade barometer?**

Hypothesis: A barometer can be made to measure air pressure changes.

92. **Which soil type holds the most water?**

Hypothesis: Clay soil retains water better than sandy soil.

93. **Can you create a homemade hygrometer?**

Hypothesis: A hygrometer can be built to measure humidity levels.

94. **What affects the flight of kites?**

Hypothesis: Wind speed and angle of the kite affect its flight.

95. **Can you create a homemade anemometer?**

Hypothesis: A homemade anemometer can measure wind speed.

96. **Which factor influences cloud formation?**

Hypothesis: Humidity and air temperature affect how clouds form.

97. **Can you create a homemade seismometer?**

Hypothesis: A simple seismometer can detect ground vibrations.

98. **Can you create a homemade rain gauge?**

Hypothesis: A rain gauge can measure rainfall accurately with simple tools.

99. **Which factor influences dew formation?**

Hypothesis: Temperature and humidity levels determine dew formation.

100. **Does air pressure affect boiling point?**

Hypothesis: Lower air pressure reduces the boiling point of liquids.

101. **Can you create a homemade wind vane?**

Hypothesis: A wind vane can be made to show wind direction.

102. **Can you create a homemade weather station?**

Hypothesis: A basic weather station can measure various weather conditions.

103. **What affects the strength of earthquakes?**

Hypothesis: Plate movement intensity controls earthquake strength.

104. **Which factor influences ocean currents?**

Hypothesis: Wind and water temperature affect ocean currents.

105. **What influences the rate of weathering?**

Hypothesis: Weathering is sped up by water, wind, and chemicals exposure.

106. **Which factor influences volcanic eruptions?**

Hypothesis: Magma pressure and gas content affect the force of eruptions.

Biology

107. **What food do ants like best?**

Hypothesis: Ants are more attracted to sugary foods than other types.

108. **Can you make a working solar oven?**
Hypothesis: A solar oven can be built to cook food using sunlight.
109. **Which factor affects popcorn popping?**
Hypothesis: Moisture content and temperature influence popcorn popping.
110. **Can you create a tornado in a bottle?**
Hypothesis: Spinning water in a bottle can mimic a tornado's shape and movement.
111. **Which factor influences mold growth?**
Hypothesis: Warm, moist conditions speed up mold growth.
112. **Which factor influences seed dispersal?**
Hypothesis: Wind and animal activity are key factors in seed dispersal.
113. **What affects the growth of fungi?**
Hypothesis: Fungi grow faster in dark, moist environments.
114. **Can you create a homemade Cartesian diver?**
Hypothesis: A Cartesian diver can be made to demonstrate buoyancy changes in water.

Engineering

115. **Can you build a water filter?**
Hypothesis: A simple water filter can purify dirty water using basic materials.
116. **Can you create a cloud in a jar?**
Hypothesis: A cloud can form in a jar with temperature and moisture manipulation.
117. **What affects the strength of bubbles?**
Hypothesis: The composition of the soap solution affects bubble strength and longevity.
118. **Can you create a homemade water clock?**
Hypothesis: A water clock can measure time by the flow of water through a container.
119. **Can you create a homemade electroscope?**
Hypothesis: A simple electroscope can detect static electricity.
120. **Can you create a homemade electromagnet?**
Hypothesis: A wire and battery can be used to create an electromagnet.
121. **Can you create a homemade solar cell?**
Hypothesis: A basic solar cell can generate electricity using sunlight.
122. **Can you create a homemade air purifier?**
Hypothesis: A simple air purifier can reduce airborne particles using household materials.

Materials Science

123. **How do different materials affect magnetism?**
Hypothesis: Certain materials, like metals, enhance magnetism more than others.
124. **How do different materials affect light?**
Hypothesis: Transparent materials allow more light to pass through than opaque ones.
125. **How do different materials affect electricity?**
Hypothesis: Conductive materials, like copper, transmit electricity better than others.

126. **How do different materials affect temperature?**
Hypothesis: Some materials, like metal, heat up faster than others.
127. **How do different materials reflect heat?**
Hypothesis: Shiny materials reflect more heat than dark or rough surfaces.
128. **How do different materials affect sound?**
Hypothesis: Soft materials absorb sound better than hard surfaces.
129. **How do different materials conduct vibration?**
Hypothesis: Dense materials conduct vibrations more efficiently than lighter ones.
130. **Which material is most fire-resistant?**
Hypothesis: Certain materials, like asbestos, resist fire better than others.

Miscellaneous

131. **What affects the bounce of a ball?**
Hypothesis: The material and air pressure inside a ball affect its bounce.
132. **What affects the strength of magnets?**
Hypothesis: The material of the magnet and temperature influence its strength.
133. **What affects the strength of glue?**
Hypothesis: The chemical composition of glue determines its adhesive strength.
134. **What affects the strength of structures?**
Hypothesis: The materials and design of structures influence their strength.
135. **What affects the strength of bones?**
Hypothesis: Calcium intake and exercise strengthen bones over time.
136. **What affects the strength of teeth?**
Hypothesis: Diet and fluoride exposure contribute to stronger teeth.