

# AP Biology Final Project Ideas For High School

List of top class AP Biology Final Project Ideas For High School:

## **Plant Biology Projects**

1. Grow plants under different colored lights to see what happens.
2. Test if plants grow faster when they hear music.
3. See if talking to plants helps them grow better.
4. Find out which plant food makes plants the tallest.
5. Watch how salt water changes plant growth.
6. Try using coffee grounds to help plants grow.
7. Compare plant growth in soil versus just water.
8. Build a model to show how plants make food.
9. Use a clear box to watch roots grow toward water.
10. Test plant growth with tap water versus filtered water.
11. See how plants bend toward sunlight.
12. Compare growth of plants in different soils.
13. Check what happens when plants get no sunlight.
14. Count how many new leaves appear each day.
15. Show how plants help clean the air we breathe.
16. Test if veggie scraps help plants grow faster.
17. Compare growing plants from seeds or cuttings.
18. Watch how carnivorous plants catch and eat bugs.
19. Measure how much water plants release into air each day.
20. Show how plants protect themselves from bugs.

21. Track flower color changes in soils with different pH.
22. Test if kind or harsh words affect plant growth.
23. Measure how far roots grow in one month.
24. Compare indoor and outdoor growth of the same plant.
25. Make a model to show how water moves through plants.

## **Animal Biology Projects**

26. Study how earthworms make soil better for plants.
27. Compare how different animals react to the same sounds.
28. Show how birds build different nest types.
29. Watch and record how ants work as a team.
30. Test if dogs remember where treats are hidden.
31. Study how tadpoles turn into frogs.
32. Compare heart rates of small and large animals.
33. Make a model to show how animal eyes work.
34. Record and identify bird calls you hear nearby.
35. Test if fish swim faster in warm or cold water.
36. Study how hermit crabs pick new shells.
37. Watch how animals clean themselves each day.
38. Compare reaction times in young and old animals.
39. Study how animals share messages without sounds.
40. Test if mice can solve a simple maze for food.
41. Show how animal camouflage helps them hide.
42. Measure how much food different pets eat daily.

43. Study how butterflies choose which flowers to visit.
44. Track animal behavior before it rains or snows.
45. Record how long different animals sleep each day.
46. Test if goldfish remember things for long or short.
47. Compare how insects, mammals, and reptiles walk.
48. Study how animals act when they are alone.
49. Make a model to show animal traits for their homes.
50. Test if animals like certain food colors.

## **Microbiology Projects**

51. Grow bacteria from unwashed and washed hands on plates.
52. Test which cleaner at home kills the most germs.
53. Show how mold grows on bread in different spots.
54. Look at pond water under a microscope to find tiny life.
55. Compare yogurt bacteria from different brands under a microscope.
56. Test if garlic can kill bacteria like medicine.
57. Show how bacteria break down leaves and food scraps.
58. Test which school surfaces have the most bacteria.
59. Compare bacteria growth in warm versus cold spots.
60. Build a model to show how bacteria cells split.
61. Test if washing hands with cold or hot water works best.
62. Grow bacteria with and without antibiotics to show resistance.
63. Study how probiotics fight bad bacteria in tests.
64. Compare bacteria growth in tap water versus bottled water.

65. Test which fruits get mold first and why.
66. Watch how quickly bacteria spoil different foods.
67. Show how bacteria help make foods like cheese.
68. Test which mouth wash kills the most mouth germs.
69. Grow bacteria from different parts of your school.
70. Show how bacteria from sneezes spread on plates.
71. Compare bacteria on phones versus computer keyboards.
72. Test if natural cleaners work as well as chemical ones.
73. Show how bacteria can clean up oil spills.
74. Compare bacteria growth in light and dark places.
75. Build a model to show how viruses infect cells.

## **Human Body Projects**

76. Compare lung size between athletes and non-athletes.
77. Test how exercise changes heart recovery time.
78. Show how different foods change blood sugar levels.
79. Build a working model of the human digestive system.
80. Test memory before and after exercise.
81. Compare reaction times using your good and bad hands.
82. Study how music affects focus during homework.
83. Test if food color changes taste.
84. Build a model to show how muscles and bones work together.
85. Compare eye tests between different age groups.
86. Show how food moves through the digestive system.

87. Test if certain smells help you remember things.
88. Compare right brain and left brain tests.
89. Measure lung size before and after running.
90. Test if reading or listening helps students learn more.
91. Show how blood carries oxygen in the body.
92. Study how sleep affects test scores in students.
93. Build a model to show how kidneys clean the blood.
94. Compare body temperature at different times of the day.
95. Test if good posture helps you focus longer.
96. Show how skin protects us from germs.
97. Measure how much water is lost when we breathe.
98. Test if eye color makes bright light feel different.
99. Build a model to show how the brain processes information.
100. Compare how fast cuts heal with different treatments.

## **Ecology and Environment Projects**

101. Test if water from different sources has different tiny life.
102. Compare biodiversity in disturbed and natural areas.
103. Show how acid rain affects plant growth over time.
104. Test if adding worms makes compost faster.
105. Study how small changes in a habitat affect the food web.
106. Build a model to show how carbon moves through nature.
107. Test which materials break down fastest in soil.
108. Compare soil quality from different places in town.

109. Show how oil spills affect plants and animals.
110. Study how different trees support different insects.
111. Test if artificial or natural wetlands clean water better.
112. Build a model to show the water cycle in action.
113. Compare animal numbers before and after habitat change.
114. Study how light pollution affects animals at night.
115. Test if native plants attract more local insects.
116. Show how invasive species change local habitats over time.
117. Build a working model of a self-sustaining ecosystem.
118. Study how road salt affects nearby plants.
119. Test if different bird feeders attract different birds.
120. Compare insect numbers in organic and normal gardens.
121. Show which shore designs stop erosion best.
122. Study how temperature changes affect pond life.
123. Test if city trees are healthier than forest trees.
124. Build a model to show how pollution moves through rivers.
125. Study how pollinators pick which flowers to visit.

## **Genetics and DNA Projects**

126. Extract DNA from different fruits and compare it.
127. Show how family traits pass through a family tree.
128. Build a model to show how DNA makes proteins.
129. Test if siblings share more traits than random people.
130. Compare how many students can roll their tongues.

131. Show how genetic mutations can help or harm.
132. Build a model to show chromosomes during cell division.
133. Test if certain traits appear more in some groups.
134. Compare traits that follow dominant or recessive patterns.
135. Show how DNA fingerprinting helps solve crimes.
136. Test if eye color follows predicted genetic patterns.
137. Build a model to show how genes control body growth.
138. Compare gene activity in identical versus fraternal twins.
139. Show how selective breeding makes new plant types.
140. Test how many students have attached or detached earlobes.
141. Build a model to show how CRISPR edits genes.
142. Compare which traits skip generations in family history.
143. Show how genetic diseases pass down in families.
144. Test if colorblindness is higher in boys or girls.
145. Build a model to show how genes turn on and off.
146. Compare genetic diversity in different plant groups.
147. Show how DNA testing reveals ancestry.
148. Test if certain traits cluster together.
149. Build a working model of DNA replication.
150. Compare ways to extract and view DNA.

## **ISC Biology Project Topics**

1. Check how different light colors help plants grow.
2. Learn how air pollution hurts local plants.

3. See how enzymes work at different temperatures.
4. Build a model that shows the full human breathing system.
5. Find out what changes help yogurt to ferment.
6. Learn how some bacteria resist antibiotics.
7. Check how different sugars make yeast work.
8. Check local water for tiny germs.
9. Build a working kidney filter model.
10. See how caffeine changes heartbeats.
11. Write down frog growth stages with notes.
12. Look at how exercise changes lung size.
13. Find out if natural or chemical bug sprays work best.
14. Check how plant cells soak up water in different liquids.
15. Build a detailed model that shows nerve signals.
16. See which way makes DNA extraction work best.
17. Show blood types and how kids get traits.
18. Learn how much vitamin C is in fresh and stored fruits.
19. Build a working model of the human tummy system.
20. Find out what makes seeds start to grow.
21. Study how plants move toward light or touch.
22. Build a model of the full carbon cycle in nature.
23. Check how bacteria grow on different cooking surfaces.
24. Learn what makes plants lose water in different conditions.
25. Build a model of how cells breathe.



## Science Project Ideas Biology

26. Check if music helps plants grow in a fair test.
27. Learn how temperature changes small animals' heartbeats.
28. See which hand-wash ways work best.
29. Make a little ecosystem in a bottle to show nutrient flow.
30. Test simple ways to improve memory with students.
31. Find out if fingerprint patterns run in families.
32. Check how colored light changes vitamin levels.
33. See if birds like some seeds more than others.
34. Learn how sugar makes bacteria grow.
35. Study how different toothpastes remove stains on teeth.
36. Find out what makes mold grow better.
37. Check how video games change how fast you react.
38. Learn what makes composting faster and better.
39. Test caffeine on plant growth.
40. See if eye color changes how you see light.
41. Learn what raises blood sugar after eating.
42. Check if home cleaners or store cleaners work best.
43. Study how music speed affects exercise.
44. Find out how sleep helps learning and memory.
45. Test if ants like real or fake sweeteners.
46. See how different soils change plant nutrients.
47. Test if color makes food taste different.

- 48. Learn if right or left hand matches foot.
- 49. Find out if “green” products break down in nature.
- 50. Study what keeps your balance best.

## **Biology Exhibition Ideas for Class 12**

- 51. Build a moving model to show how DNA copies itself.
- 52. Make a working model of the blood flow in the body.
- 53. Show genetic changes with fun displays.
- 54. Display the stages of baby animal growth before birth.
- 55. Build a live ecosystem model to show who eats whom.
- 56. Show how a dialysis machine works for kidneys.
- 57. Make a display to show nerve signals sending messages.
- 58. Show how PCR makes many copies of DNA.
- 59. Build a moving model to show how muscles pull.
- 60. Make an interactive show of how the body fights germs.
- 61. Build a working model of the human brain with labels.
- 62. Show the stages of human evolution with models.
- 63. Build an interactive display of how plants make food.
- 64. Make a model of the human eye that can focus.
- 65. Show the full menstrual cycle with hormones.
- 66. Build a model to show how proteins are made.
- 67. Show how cells become different types.
- 68. Build a working heart model that pumps.
- 69. Show how hormones talk to each other.

- 70. Make a model of the nitrogen cycle with displays.
- 71. Build a working model of how blood clots.
- 72. Show how cancer cells start and spread.
- 73. Build a model of how a sperm meets an egg.
- 74. Make a working model of lungs that breathe in and out.
- 75. Build an interactive display of how vaccines are made.

## **Genetics Project Ideas High School**

- 76. Learn how earlobes attach in families.
- 77. Pull DNA from fruits to compare amounts.
- 78. Make family trees for certain traits.
- 79. See how many can taste PTC in class.
- 80. Learn if tongue rolling runs in families.
- 81. Build a model to show how CRISPR edits genes.
- 82. Check fingerprint patterns in brothers and sisters.
- 83. Make a model showing cell division with crossing.
- 84. Find out traits in pea plants that show up.
- 85. Study how blood types pass in families.
- 86. Make a model that shows all of DNA copying.
- 87. Test colorblindness in people to learn its cause.
- 88. Learn how dog traits changed by breeding.
- 89. Show chromosomal problems like Down syndrome.
- 90. Find out how widow's peak passes in families.
- 91. Learn why some groups keep making milk.

92. Make a model to show how proteins form from DNA.
93. Study how dimples run in families.
94. See height differences in plants of the same kind.
95. Show how gene mistakes happen and change proteins.
96. Study how many genes control height in people.
97. Learn how eye color passes from parents.
98. Make a model for genetic engineering steps.
99. Learn how freckles pass in families.
100. See diversity using seeds from plants.

## **Biotechnology Research Topics for High School**

101. Pull DNA from food items and compare.
102. Check ways to add new DNA to cells.
103. Make plastics from plant starch.
104. Study what changes enzyme speed in reactions.
105. Make fuel from algae and test how well.
106. Check ways to grow plant cells in labs.
107. Study how soil germs make antibiotics.
108. Build sensors to find pollution in the air or water.
109. Check ways to pull DNA from cells.
110. Study how bacteria make natural dyes.
111. Build filters to clean water with living cells.
112. Test what makes microbe batteries work well.
113. Study how gene change affects plant growth.

- 114. Make medicines from plant parts and test.
- 115. Check different ways to ferment foods.
- 116. Study how bacteria make biodegradable plastic.
- 117. Build models to show how gene therapy works.
- 118. Test what helps cells make proteins fast.
- 119. Study ways to grow skin in labs.
- 120. Make natural pesticides from insects or plants.
- 121. Test what helps making antibody drugs.
- 122. Study how cells make enzymes for industry.
- 123. Build sensors that can read blood sugar.
- 124. Check ways to lock cells in place in bioreactors.
- 125. Study how to make insulin in cells.

## **Award-Winning Biology Science Fair Projects**

- 126. Study how tiny plastic bits affect water animals.
- 127. Test natural chemicals on bacteria that resist drugs.
- 128. Build fake wetlands to clean water.
- 129. Study how electric fields change plant growth.
- 130. Test new ways to find cancer early.
- 131. Make an AI to spot plant diseases.
- 132. Study light beats on how plants make food.
- 133. Test bacteria made to clean pollution.
- 134. Build a new way to find plant stress early.
- 135. Study how tiny particles affect cell walls.

136. Test new easy-to-break materials for implants.
137. Build a system to make electricity from plants.
138. Study how cutting out a gene affects an organism.
139. Test custom virus treatment for infections.
140. Build new sensors to find toxins in nature.
141. Study how gut germs affect your health.
142. Test gene therapy to fix inherited problems.
143. Build new drug delivery with tiny particles.
144. Study how moved sleep cycles change body work.
145. Test new ways to give vaccines.
146. Build a method to find early cancer cells.
147. Study how gene switches change cell actions.
148. Test new biology to solve big problems.
149. Build new ways to help nerves grow after damage.
150. Study how natural body chemicals affect aging.