Biology Project Topics For Class 10

“What are good topics for biology project class 10?” here is you answer:

Environmental Biology

1. Study how plastic waste in soil affects how fast radish plants grow by comparing plants grown in clean soil versus soil mixed with small plastic pieces.

2. Test if kitchen waste such as banana peels and eggshells can be good fertilizers by measuring how tall tomato plants grow with these compared to chemical fertilizers.

3. Check how waste water from homes affects small water animals by collecting pond water samples from clean and polluted areas and counting the living creatures under a microscope.

4. Find out which indoor plants clean the air best by placing different plants in small boxes with smoke and measuring how fast the air clears.

5. Study if earthworms can break down different kinds of trash by feeding them paper, vegetable scraps, and leaves, then checking which materials break down fastest.

6. Test how acid rain harms leaves by spraying bean plants with water mixed with lemon juice or vinegar, then measuring the damage to leaves after one week.

7. Measure how much oxygen water plants make by collecting bubbles from plants kept in jars under sunlight and comparing the amounts.

8. Check if plants can remove oil from waste water by growing water hyacinth in containers with cooking oil mixed in water and testing if the water becomes cleaner.

9. Study how noise affects seed sprouting by playing loud sounds near one group of seeds while keeping another group in a quiet room.

10. Test which natural materials make the best biodegradable pots by growing seedlings in pots made from newspaper, coconut shells, and cow dung, then checking root growth.

Plant Biology and Botany

11. Find out if music helps plants grow faster by playing different songs near bean plants each day and measuring their height after three weeks.

12. Test how colored light affects plant growth by covering plants with red, blue, or green plastic and comparing how much they grow.

13. Study if talking to plants makes them healthier by speaking kind words to one set of plants each day while ignoring another set, then measuring leaf size.

14. Check which direction seeds need to face for best sprouting by planting beans pointing up, down, and sideways, then counting how many sprout in each group.

15. Measure how salt water affects plant survival by watering marigold plants with different amounts of salt mixed in water and recording when leaves turn yellow.

16. Test if plants grow better when roots can sense gravity by growing plants in rotating containers that spin slowly and comparing them to still containers.

17. Study how different amounts of sunlight change flower colors by keeping rose or hibiscus plants in full sun, partial shade, and complete darkness.

18. Find out if plants can recognize their plant family members by growing seeds from the same parent plant together versus mixed with stranger plants and measuring root competition.

19. Check how water temperature affects seed germination by soaking seeds in cold, room temperature, and warm water before planting them.

20. Test if natural plant hormones from banana peels can help cuttings grow roots faster by soaking rose stem cuttings in banana peel water versus plain water.

Human Biology and Health

21. Study how exercise changes heart rate by measuring pulse before and after different activities like jumping, running, and walking, then making comparison charts.

22. Test if different drinks affect tooth enamel by soaking extracted teeth or eggshells in soda, juice, and water for one week and checking for damage.

23. Find out which hand sanitizer kills germs best by rubbing hands on agar plates after using different brands and counting bacterial colonies that grow.

24. Check how screen time affects eye blinking by counting how many times people blink while reading books compared to looking at phone screens.

25. Measure lung capacity differences by having students blow up balloons in one breath and comparing sizes between athletes and non-athletes.

26. Test if chewing gum improves memory by asking volunteers to memorize word lists while chewing gum versus not chewing, then testing their recall.

27. Study how sleep affects reaction time by testing how fast people catch falling rulers after getting full sleep versus staying up late.

28. Find out which natural remedies fight bacteria by placing drops of honey, garlic juice, and neem extract on bacterial cultures and measuring clear zones.

29. Check how posture affects breathing by measuring how much air students can blow into balloons while sitting straight versus slouching forward.

30. Test if listening to music during study helps memory by having groups memorize facts with and without background music, then comparing test scores.

Microbiology and Fungi

31. Study which surfaces in school have the most germs by pressing agar plates on door handles, desks, and water taps, then counting bacterial colonies.

32. Test if homemade yogurt contains live bacteria by examining yogurt samples under a microscope and comparing store-bought versus homemade versions.

33. Find out how temperature affects bread mold growth by keeping bread slices in the refrigerator, room temperature, and warm places, then measuring mold spread.

34. Check which food preservatives stop mold best by adding salt, sugar, vinegar, and oil to bread pieces and recording how long each stays mold-free.

35. Measure how antibiotics kill bacteria by placing antibiotic discs on bacterial cultures and measuring the size of clear zones where germs died.

36. Test if probiotics in buttermilk help digestion by comparing bacterial growth from probiotic drinks versus regular milk on agar plates.

37. Study how soap removes germs by touching agar plates with dirty hands, then washing with water only versus soap and water, and comparing bacterial growth.

38. Find out which natural substances prevent bacterial growth by testing garlic, turmeric, and ginger extracts against bacteria cultures on petri dishes.

39. Check how ultraviolet light kills microorganisms by exposing bacterial cultures to sunlight for different time periods and counting surviving colonies.

40. Test if fermented foods contain helpful bacteria by examining kimchi, pickles, and sauerkraut samples under microscopes and identifying bacterial shapes.

Genetics and Heredity

41. Find out if fingerprint patterns run in families by collecting fingerprints from family members and comparing loops, whorls, and arches across generations.

42. Check if tongue-rolling ability is inherited by surveying students and their parents to see if children of roller parents can also roll their tongues.

43. Test if eye color follows inheritance patterns by creating family trees showing eye colors across three generations and calculating dominant versus recessive traits.

44. Measure if height is genetic by comparing student heights with their parents' average heights and plotting the relationship on graphs.

45. Find out if earlobes being attached or free follows genetic rules by surveying families and creating Punnett squares to predict offspring traits.

46. Check if hair type is inherited by documenting straight, wavy, and curly hair in family photos across generations and identifying patterns.

47. Test if blood type inheritance matches predictions by collecting anonymous blood type data from students and parents, then verifying using genetic charts.

48. Study if the ability to smell certain odors is genetic by testing if family members can smell asparagus in urine after eating asparagus.

49. Find out if left-handedness runs in families by surveying hand preference across three generations and calculating inheritance percentages.

50. (reserved)

Animal Behavior and Zoology

51. Study how ants communicate by creating obstacle courses with food and watching if other ants follow the same path to the food source.

52. Test if earthworms prefer certain soil types by building choice chambers with sand, clay, and garden soil, then counting worms in each section.

53. Find out what colors attract butterflies most by placing colored paper squares with sugar water in a garden and recording butterfly visits.

54. Check if fish recognize their owners by feeding aquarium fish at the same time daily while wearing different colored shirts and measuring their response speed.

55. Measure how temperature affects snail movement speed by placing snails on measured tracks in cold, room temperature, and warm environments.

56. Test if birds prefer certain nesting materials by hanging different materials like yarn, twigs, and cotton in trees and counting which disappear fastest.

57. Study how light affects insect behavior by setting up light traps with different colored bulbs and counting which insects are attracted to each color.

58. Find out if spiders build different web patterns in corners versus open spaces by photographing webs in various locations and comparing their designs.

59. Check how hunger affects animal problem-solving by timing how fast pet dogs or cats figure out puzzle feeders when hungry versus just fed.

60. Test if tadpoles grow faster in crowded or spacious tanks by raising groups in small and large containers with the same food and measuring development stages.

Ecology and Ecosystems

61. Study food chains in a local pond by identifying plants, insects, small fish, and larger animals, then drawing who eats whom in the ecosystem.

62. Test how removing one species affects others by creating mini ecosystems in bottles with plants, snails, and insects, then removing one type and observing changes.

63. Find out which plants grow best together by planting tomatoes with basil, marigolds, or alone, then comparing plant health and pest problems.

64. Check how population density affects plant competition by planting bean seeds close together versus far apart and measuring individual plant growth.

65. Measure how decomposition rates change with temperature by burying apple slices at different depths and checking decay speed after two weeks.

66. Test if certain plants help or hurt their neighbors by growing plants in pairs and measuring if growth is better, worse, or unchanged compared to single plants.

67. Study how seasonal changes affect bird populations by counting different bird species visiting a feeder monthly throughout the school year.

68. Find out which insects pollinate which flowers by watching flowers during different times of day and recording which insects visit each flower type.

69. Check how habitat destruction affects biodiversity by comparing insect and plant species in natural areas versus cleared land near school.

70. Test if creating artificial habitats brings back wildlife by building bird houses or insect hotels and monitoring which creatures move in over time.

Cell Biology and Microscopy

71. Study the difference between plant and animal cells by examining onion skin and human cheek cells under a microscope and drawing their structures.

72. Test how salt water affects cells by observing onion cells in plain water versus salt water and watching if cells shrink or swell.

73. Find out if temperature affects cell membranes by soaking beetroot slices in hot and cold water and measuring how much red color leaks out.

74. Check what cell organelles look like by staining different cell samples with iodine and methylene blue, then identifying parts under a microscope.

75. Measure cell size differences by examining and measuring cells from different organisms like algae, bacteria cultures, and plant leaves under magnification.

76. Test if sugar solutions affect cell shape by placing plant cells in different concentrations of sugar water and observing changes under a microscope.

77. Study cell division stages by examining prepared slides of onion root tips and identifying cells in different phases of mitosis.

78. Find out how alcohol affects cells by adding rubbing alcohol to water with live pond organisms and watching cell changes under a microscope.

79. Check if cells need oxygen by sealing some pond water samples and leaving others open, then comparing microorganism activity after one day.

80. Test cell membrane permeability by filling dialysis tubing or membrane bags with starch solution and checking if iodine from outside water enters inside.

Photosynthesis and Plant Physiology

81. Study how light intensity affects photosynthesis by placing water plants at different distances from a lamp and counting oxygen bubbles produced per minute.

82. Test if carbon dioxide is needed for photosynthesis by covering plant leaves with petroleum jelly to block air and testing for starch production with iodine.

83. Find out which leaf color makes food fastest by comparing green, purple, and variegated leaves from different plants for starch content after sunlight exposure.

84. Check if plants need chlorophyll for photosynthesis by covering parts of leaves with black paper, exposing them to light, then testing covered versus uncovered areas for starch.

85. Measure how water availability affects photosynthesis rate by giving plants different amounts of water and testing their leaves for starch production daily.

86. Test if artificial light works as well as sunlight by growing identical plants under LED bulbs versus natural sunlight and comparing growth rates.

87. Study how leaf surface area affects food production by comparing photosynthesis rates in plants with large leaves versus small leaves using bubble counting methods.

88. Find out if plants photosynthesize at night by covering plants in darkness for 24 hours, then testing leaves for starch at different times.

89. Check how air pollution affects photosynthesis by growing plants near busy roads versus clean areas and comparing their starch production and leaf health.

90. Test if older leaves photosynthesize differently than young leaves by measuring oxygen bubble production from leaves of different ages on the same plant.

Enzymes and Biochemistry

91. Study how temperature affects enzyme activity by testing how fast meat tenderizer breaks down gelatin at cold, warm, and hot temperatures.

92. Test if pH changes enzyme function by mixing pineapple juice with milk at different pH levels and measuring how fast the milk curdles.

93. Find out which fruits contain the most digestive enzymes by placing fresh papaya, pineapple, and kiwi on gelatin and comparing how much gelatin dissolves.

94. Check how enzyme concentration affects reaction speed by adding different amounts of catalase from liver to hydrogen peroxide and measuring foam production.

95. Measure if cooking destroys enzymes by comparing how raw versus boiled potato juice breaks down hydrogen peroxide into oxygen and water.

96. Test which household products contain enzymes by applying meat tenderizer, detergent, and pineapple juice to protein stains and comparing stain removal.

97. Study how substrate concentration affects enzyme activity by mixing different amounts of starch with saliva and testing how fast the starch disappears.

98. Find out if enzymes can be reused by filtering catalase solution after one reaction and testing if the filtered enzyme still breaks down fresh hydrogen peroxide.

99. Check if inhibitors stop enzyme action by adding salt or vinegar to enzyme reactions and comparing reaction speeds with and without inhibitors.

100. Test how mechanical damage affects enzyme release by crushing versus gently cutting fruits and vegetables, then measuring enzyme activity in released juices.

Models and Demonstration Projects

101. Build a working model of the human digestive system using tubes and balloons to show how food travels from mouth to stomach to intestines and gets broken down.

102. Create a lung model with plastic bottles and balloons to demonstrate how the diaphragm muscle helps lungs expand and contract during breathing.

103. Construct a heart and blood circulation model using colored water and tubes to show how blood flows from the heart to body parts and back.

104. Make a labeled brain model from clay or paper mache showing the cerebrum, cerebellum, and brain stem, explaining what each part controls in our body.

105. Design a rainwater harvesting demonstration showing how roof water flows through filters into storage tanks and becomes clean enough for use.

106. Build a small aquaponics system in a tank where fish waste feeds plants growing on top while plants clean the water for fish below.

107. Create a working model of the human eye using a magnifying glass and paper to show how the lens focuses light onto the retina.

108. Construct a kidney filtration model using coffee filters and colored water to demonstrate how kidneys remove waste from blood.

109. Build a DNA double helix model using colored beads and wire to show how genetic information is stored in twisted ladder shapes.

110. Make a working model of the human ear using a funnel and balloon to demonstrate how sound vibrations travel and make the eardrum move.

Research and Survey-Based Projects

111. Survey students about their daily junk food eating habits and compare their energy levels, concentration in class, and sick days to find health connections.

112. Conduct interviews in your neighborhood to learn how many people understand why vaccines are important and if they trust vaccination programs for disease prevention.

113. Test air quality around your school by collecting dust samples from different locations and comparing pollution levels near roads versus parks.

114. Research diabetes by interviewing family doctors or reading medical reports, then create a presentation explaining what causes high blood sugar and how patients manage it.

115. Survey families in your area to list the five most common diseases they suffer from, then research if these illnesses spread through germs or come from lifestyle choices.

116. Interview school nurses or local health workers to gather data on which seasonal diseases affect students most and what prevention steps work best.

117. Conduct a survey asking students how many hours they sleep each night, then compare their test scores to see if more sleep relates to better academic performance.

118. Research thyroid disorders by studying cases of goitre in your region, identifying if iodine-deficient diets cause the problem and how iodized salt helps.

119. Survey households about their water sources and purification methods, then test water samples to check if their cleaning techniques actually remove germs and chemicals.

120. Study exercise habits by surveying classmates about weekly physical activity hours and comparing this data with their body mass index and fitness test results.