

ATL Project Ideas For Different Classes

Here are the ATL project ideas for different classes in 2024 and 2025:

ATL Project Ideas for Class 5

1. **Seed Planter Robot:** A small robot that plants seeds in a garden.
2. **Solar-Powered Toy Car:** A car that runs on sunlight.
3. **Water Filter from Natural Materials:** A filter made from sand, rocks, and plants to clean dirty water.
4. **Balloon-Powered Boat:** A boat that moves with air from a balloon.
5. **Recycled Art Robot:** A robot made from old toys that draws pictures.
6. **Fruit Battery Clock:** A clock powered by fruits like lemons or oranges.
7. **Wind-Up Flashlight:** A flashlight powered by winding a handle.
8. **Cardboard Periscope:** A tool made from cardboard tubes to see over walls or around corners.
9. **Magnetic Levitation Train:** A toy train that floats using magnets.
10. **Rain Alarm:** A device that makes noise when it starts raining.
11. **Paper Bridge Challenge:** Build a strong bridge using only paper and tape.
12. **Soda Can Wind Spinner:** A colourful spinner made from old soda cans that spin in the wind.
13. **Potato Chip Can Radio:** A simple radio made from a potato chip can.
14. **Rubber Band-Powered Car:** A toy car that moves with a twisted rubber band.
15. **Homemade Compass:** A compass made from a needle, magnet, and water bowl.
16. **Balloon Hovercraft:** A small hovercraft that glides on air from a balloon.
17. **Tin Can Phone:** A simple communication device made from tin cans and string.
18. **Solar Oven:** A box that cooks food using the sun's heat.
19. **Marble Run from Recycled Materials:** A fun marble track made from cardboard and plastic bottles.
20. **Egg Drop Protector:** A device to keep an egg safe when dropped from a height.

ATL Project Ideas for Class 6

21. **Smart Plant Watering System:** A device that waters plants when the soil gets dry.
22. **Earthquake-Proof Building Model:** A model house that stays strong during shaking.
23. **Homemade Weather Station:** Tools to measure temperature, wind speed, and rainfall.
24. **Solar-Powered Night Light:** A light that charges during the day and glows at night.
25. **Hydraulic Arm:** A moving arm powered by water pressure in syringes.
26. **Magnetic Levitation Pen Holder:** A pen holder that floats using magnets.
27. **Wind-Powered Water Lifter:** A device using wind to lift water higher.
28. **Automated Pet Feeder:** A machine that gives pets food at set times.
29. **Cardboard Pinball Machine:** A game made from cardboard and rubber bands.
30. **DIY Hologram Projector:** A device creating 3D-like images using a smartphone.
31. **Rubber Band-Powered Helicopter:** A toy helicopter that flies using rubber bands.

32. **Homemade Lava Lamp:** A cool lamp with coloured water and oil moving like lava.
33. **Solar-Powered Fan:** A fan that runs on energy from the sun.
34. **Balloon-Powered Lego Car:** A car made from Legos moving with balloon power.
35. **Soda Bottle Submarine:** A toy submarine that rises and sinks in water.
36. **Paper Airplane Launcher:** A device throwing paper aeroplanes with extra force.
37. **DIY Projector:** A projector made from a shoebox and magnifying glass.
38. **Rubber Band Gun:** A toy gun shooting rubber bands safely.
39. **Homemade Stethoscope:** A tool listening to heartbeats made from simple materials.
40. **Wind-Powered Art:** A sculpture changing shape in the wind.

ATL Project Ideas for Class 7

41. **Arduino-Controlled LED Cube:** A cube of LED lights displaying patterns.
42. **Automatic Hand Sanitizer Dispenser:** A touchless device for hand sanitizer.
43. **Homemade Air Purifier:** A machine cleaning air using simple materials.
44. **Solar-Powered Phone Charger:** A device using sunlight to charge phones.
45. **Talking Alarm Clock:** A clock speaking the time when a button is pressed.
46. **DIY Drone:** A flying machine controlled by a remote.
47. **Automated Plant Watering System:** Watering plants based on soil moisture.
48. **Cardboard Arcade Game:** A working game from cardboard and electronics.
49. **Smart Doorbell:** A doorbell sends messages when someone's at the door.
50. **Homemade Seismograph:** A device detecting earth tremors.
51. **DIY 3D Printer:** A printer from recycled electronics.
52. **Solar-Powered Water Heater:** A device heating water with sunlight.
53. **Robotic Arm with Servo Motors:** A movable arm controlled by motors.
54. **Touchless Trash Can:** A bin opening when you wave your hand.
55. **DIY Fingerprint Scanner:** A device reading fingerprints.
56. **Balloon-Powered Jet Car:** A car moving with balloon air.
57. **Homemade Wind Turbine:** A windmill making electricity.
58. **Arduino-Based Digital Clock:** A clock using an Arduino board.
59. **DIY Hoverboard:** A hoverboard using leaf blowers.
60. **Smart Home Model:** A house with smartphone-controlled lights and fans.

ATL Project Ideas for Class 8

61. **Voice-Controlled Home Automation:** Controlling lights and fans with voice.
62. **Gesture-Controlled Robot:** A robot moving with hand gestures.
63. **Smart Mirror:** A mirror showing time, weather, and notifications.
64. **DIY Bionic Hand:** A hand controlled by arm movements.
65. **Automatic Plant Watering and Monitoring System:** Water plants and check their health.
66. **Solar-Powered Electric Fence:** A fence shocking with solar energy.
67. **Homemade Water Quality Tester:** Checking if water is safe to drink.
68. **Arduino-Based Obstacle Avoiding Robot:** A robot avoiding objects.
69. **DIY Earthquake Alarm:** Alarm sounding during ground shaking.
70. **Smart Garbage Segregator:** Sorting trash into categories.
71. **Pedal-Powered Phone Charger:** Charging phones with bicycle pedals.
72. **DIY Braille Printer:** Printing Braille for the visually impaired.

73. **Homemade Wind Speed Meter:** Measuring wind speed.
74. **Arduino-Based Home Security System:** Detecting intruders with sensors.
75. **DIY Spectroscope:** Studying light from different sources.
76. **Smart Walking Stick for the Blind:** Helping blind people navigate.
77. **Automatic Street Light Control System:** Lights turn on at dark and off at light.
78. **DIY Lie Detector:** Detecting physical signs of lying.
79. **Homemade Hydropower Generator:** Making electricity from water.
80. **Arduino-Based Automatic Pet Feeder:** Feeding pets at set times with Arduino.

ATL Project Ideas for Class 10

81. **IoT-Based Smart Irrigation System:** Watering crops based on soil and weather data.
82. **Biometric Attendance System:** Marking attendance using fingerprints or face recognition.
83. **Blockchain-Based Voting System:** Secure digital voting using blockchain technology.
84. **AI-Powered Chatbot:** Answering questions and holding conversations using artificial intelligence.
85. **Smart Traffic Management System:** Controlling traffic lights based on vehicle flow.
86. **DIY Air Quality Monitor:** Measuring and displaying air pollution levels.
87. **Automatic Solar Panel Cleaner:** Cleaning dust off solar panels automatically.
88. **Voice-Controlled Wheelchair:** Moving a wheelchair with voice commands.
89. **Smart Wearable for Health Monitoring:** Tracking health indicators with a wearable device.
90. **DIY Electric Skateboard:** Riding a skateboard powered by an electric motor.
91. **Renewable Energy Hybrid System:** Combining solar and wind energy for power generation.
92. **Smart Parking System:** Showing available parking spots in a parking lot.
93. **Waste Segregation Robot:** Sorting different types of waste automatically.
94. **IoT-Based Home Energy Monitor:** Tracking and displaying home energy consumption.
95. **DIY Electrocardiogram (ECG) Machine:** Measuring heart activity with a simple device.
96. **Automatic Plant Disease Detection System:** Identifying plant diseases using image processing.
97. **Smart Assistive Device for the Visually Impaired:** Helping visually impaired individuals with a wearable device.
98. **DIY Water Level Controller:** Automatically managing water levels in tanks.
99. **IoT-Based Fire Detection and Alert System:** Detecting fires and sending alerts.
100. **Smart Medication Reminder and Dispenser:** Remind and dispense medicines on schedule.

ATL Project Ideas for Class 11

101. **AI-Powered Facial Expression Analyzer:** Recognizing emotions from facial expressions using artificial intelligence.

102. **Smart Aquaponics System:** Combining fish farming with plant cultivation for sustainable agriculture.
103. **DIY Brain-Computer Interface:** Controlling computers or devices using brain signals.
104. **IoT-Based Flood Monitoring and Alert System:** Detecting and warning about floods with sensor networks.
105. **Automatic Coronavirus Symptom Detector:** Checking for COVID-19 symptoms automatically.
106. **Smart Waste Management System:** Efficiently collect and dispose of waste in urban areas.
107. **AI-Based Sign Language Translator:** Converting sign language gestures into text or speech.
108. **DIY Hexapod Robot:** Building a six-legged walking robot controlled via smartphone.
109. **Smart Energy Grid Model:** Simulating an efficient power distribution system for cities.
110. **IoT-Based Soil Health Monitoring System:** Monitoring and reporting soil conditions using IoT sensors.
111. **Augmented Reality Educational Tool:** Enhancing learning by overlaying digital information onto real-world objects.
112. **DIY Electroencephalogram (EEG) Machine:** Recording and analyzing brain wave patterns with a homemade device.
113. **Smart Vertical Farming System:** Growing crops in vertical layers using automated systems.
114. **AI-Powered Language Translation Earbuds:** Translating spoken languages in real-time using earphones.
115. **IoT-Based Wildlife Monitoring System:** Tracking and studying wildlife behaviour using sensor networks.
116. **DIY Laser Security System:** Detecting intruders using laser technology.
117. **Smart Traffic Accident Detection and Alert System:** Detecting car accidents and alerting emergency services.
118. **AI-Based Crop Disease Prediction Model:** Predicting crop diseases based on weather and environmental data.
119. **DIY Electromagnetic Levitation Device:** Creating levitation effects using electromagnetic fields.
120. **IoT-Based Water Quality Monitoring System:** Monitoring water quality in lakes or rivers using IoT devices.

ATL Project Ideas for Class 12

121. **AI-Powered Personal Health Assistant:** Providing personalized health advice based on individual data.
122. **Smart City Pollution Control Model:** Demonstrating systems to monitor and reduce pollution in urban areas.
123. **Blockchain-Based Supply Chain Management System:** Tracking products from manufacturing to distribution using blockchain technology.
124. **DIY Quantum Computing Simulator:** Simulating the principles of quantum computing in a practical model.

125. **IoT-Based Disaster Management System:** Predicting, detecting, and managing natural disasters through interconnected sensor networks.
126. **AI-Driven Stock Market Predictor:** Forecasting stock market trends and prices using artificial intelligence algorithms.
127. **Smart Grid Energy Management System:** Optimizing the distribution and management of electricity in a simulated urban environment.
128. **DIY Bionic Prosthetic Limb:** Building a prosthetic limb controlled by signals from muscle movements.
129. **Autonomous Drone for Search and Rescue:** Developing a drone capable of autonomously locating and assisting people in emergencies.
130. **IoT-Based Smart Agriculture System:** Implementing automated systems to monitor and manage agricultural practices using IoT technology.
131. **AI-Powered Mental Health Chatbot:** Providing support and guidance for mental health issues through AI-powered interactive conversations.
132. **DIY Fusion Reactor Model:** Creating a model demonstrating the principles and potential of nuclear fusion energy.
133. **Smart Water Management System:** Efficiently managing water resources through advanced monitoring and recycling technologies.
134. **AI-Based Early Cancer Detection System:** Developing a system for early cancer detection using AI to analyze medical images.
135. **IoT-Enabled Smart Factory Model:** Enhancing manufacturing efficiency and automation through IoT integration in a simulated factory setting.
136. **DIY Brain-Controlled Prosthetic Arm:** Designing a prosthetic arm that can be controlled directly by the user's brain signals.
137. **Blockchain-Based Digital Identity System:** Implementing a secure and decentralized system for managing digital identities.
138. **Smart Traffic Management System with AI:** Using AI algorithms to optimize traffic flow and reduce congestion in urban areas.
139. **DIY Atmospheric Water Generator:** Creating a device that extracts drinking water from atmospheric moisture.
140. **AI-Powered Personalized Learning System:** Developing a system that adapts educational content and methods to individual learning styles and progress.

More ATL Project Ideas That You Should Know!

Here are **100 more unique ATL project ideas** for different classes, keeping in mind that none of these should be duplicates of the ones you already listed.

ATL Project Ideas for Class 5

1. **Wind-Powered Car:** A small car that moves with wind energy.
2. **Plant Watering Alarm:** A device that beeps when plants need water.
3. **Self-Watering Plant Pot:** A pot that waters plants automatically using gravity.
4. **Mechanical Bird Feeder:** A feeder that dispenses food when birds land on it.
5. **Sundial Timekeeper:** A simple device to tell the time using sunlight and shadows.
6. **DIY Solar-Powered Lantern:** A lantern powered by solar energy.
7. **Static Electricity Detector:** A device that shows the presence of static electricity.

8. **Windmill from Recycled Materials:** Build a working windmill using waste materials.
9. **Solar-Powered Fountain:** A mini fountain that runs on solar power.
10. **Paper Cup Phone Amplifier:** Create a sound amplifier using paper cups.

ATL Project Ideas for Class 6

11. **DIY Barometer:** A device that measures air pressure and predicts weather changes.
12. **Handmade Waterwheel:** A wheel that turns with flowing water to generate motion.
13. **Solar-Powered Bug Repellent:** A bug repellent that works using solar power.
14. **Perpetual Motion Spinner:** A spinning device that uses magnets to keep moving.
15. **Simple Steam Engine:** Build a small steam engine from household materials.
16. **Plant Growth Recorder:** A device that records how fast plants grow.
17. **DIY Magnetic Compass:** A basic compass using a magnet and needle.
18. **Bamboo Water Filter:** A water filter made from bamboo and natural materials.
19. **Battery-Powered Boat:** A boat that runs on a small battery-operated motor.
20. **Mini Water Desalination Plant:** Build a small system that turns salt water into fresh water.

ATL Project Ideas for Class 7

21. **DIY Solar-Powered Fridge:** A simple refrigerator that uses solar power.
22. **Self-Watering Garden System:** Automate garden watering using basic electronics.
23. **Windmill-Powered Phone Charger:** Charge your phone using a DIY windmill.
24. **Battery Made from Household Items:** Create a battery from items like vinegar, copper, and zinc.
25. **Water Leak Detector:** A system that detects water leaks and sends an alert.
26. **Solar-Powered Water Purifier:** Purify water using solar energy and simple materials.
27. **Hand-Cranked Generator:** Generate electricity with a hand-cranked device.
28. **Earthquake Early Warning System:** Build a system that detects vibrations and triggers an alert.
29. **DIY Water Thermometer:** A simple thermometer that measures water temperature.
30. **Miniature Solar-Powered Robot:** Build a small robot that runs on solar energy.

ATL Project Ideas for Class 8

31. **Automatic Window Cleaner:** A small robot that cleans windows automatically.
32. **DIY Solar Water Heater:** A water heater that uses solar power to heat water.
33. **Robot Vacuum Cleaner:** Build a small robot that can vacuum floors.
34. **Rainwater Harvesting System:** A model that captures and stores rainwater for use.
35. **Solar-Powered Street Lamp:** A streetlight that charges during the day and lights up at night.
36. **DIY Air Humidifier:** Create an air humidifier using simple materials.
37. **Automatic Door Opener:** A door that opens when someone approaches.
38. **Hand Sanitizer Level Detector:** A system that alerts you when the sanitizer level is low.
39. **DIY Smart Desk Lamp:** A desk lamp that turns on and off automatically based on room lighting.

40. **Smart Recycling Bin:** A bin that sorts waste automatically using sensors.

ATL Project Ideas for Class 9

- 41. **DIY Electric Bicycle:** Build a bicycle that runs on electric power.
- 42. **Solar-Powered Water Cooler:** A cooler that uses solar power to keep water cool.
- 43. **Automated Greenhouse:** Control the temperature, humidity, and watering of plants using sensors.
- 44. **Wind Energy Generator:** Create a small windmill to generate electricity.
- 45. **Smartphone-Controlled Robot Car:** Build a robot car that can be controlled with a smartphone.
- 46. **Solar-Powered Water Fountain:** Build a garden fountain powered by the sun.
- 47. **Simple Lie Detector:** A device that detects changes in heart rate or skin moisture.
- 48. **DIY Metal Detector:** Build a simple metal detector using coils and a battery.
- 49. **Voice-Activated Light System:** Control lights using voice commands.
- 50. **Miniature Waterfall for Decoration:** Create a small, working waterfall using recycled materials.

ATL Project Ideas for Class 10

- 51. **DIY Smart Thermostat:** A thermostat that adjusts room temperature automatically.
- 52. **Solar-Powered Car Charging Station:** A station that charges electric cars using solar power.
- 53. **AI-Based Language Translator:** An AI system that translates text or speech in real time.
- 54. **Smart Waste Disposal System:** A bin that sorts and compresses waste automatically.
- 55. **Fingerprint Lock System:** Build a lock that only opens with a specific fingerprint.
- 56. **DIY Solar-Powered Refrigerator:** A refrigerator that runs entirely on solar power.
- 57. **IoT-Based Smart Lighting System:** Control home lighting remotely using IoT.
- 58. **Biometric Health Monitoring System:** A system that tracks heart rate, temperature, and blood pressure.
- 59. **Rain-Powered Electricity Generator:** Generate electricity from rainwater.
- 60. **Self-Sustaining Garden:** Build a garden that uses solar power and sensors to maintain itself.

ATL Project Ideas for Class 11

- 61. **Smart Personal Assistant Robot:** Build a robot that helps with household tasks.
- 62. **AI-Powered Plant Care System:** Use AI to monitor and water plants automatically.
- 63. **DIY Solar-Powered Electric Fan:** Build a fan that runs on solar power.
- 64. **Voice-Controlled Smart Home:** Build a system that controls lights, fans, and appliances via voice commands.
- 65. **DIY Solar-Powered Refrigerator:** Build a small fridge powered entirely by solar energy.
- 66. **AI-Powered Voice Recognition System:** A system that recognizes and responds to voice commands.
- 67. **IoT-Based Smart Garden:** Use IoT to monitor plant health and automate watering.

68. **Smart Door Lock with Mobile App:** A door lock that can be controlled via a mobile app.
69. **AI-Based Personal Assistant:** Develop a virtual assistant using AI to help with tasks.
70. **Solar-Powered Air Conditioner:** Create an air conditioning unit powered by solar energy.

ATL Project Ideas for Class 12

71. **AI-Based Fitness Tracker:** Develop a system that tracks and recommends fitness routines.
72. **IoT-Based Energy Saving System:** A system that saves energy by controlling devices based on occupancy.
73. **Smart Wearable Health Tracker:** Create a device that monitors and reports health metrics.
74. **Blockchain-Based Secure Voting System:** Build a secure voting system using blockchain technology.
75. **DIY Home Security System:** Build a simple security system that detects motion and sends alerts.
76. **AI-Based Crop Health Monitoring:** A system that uses AI to monitor and improve crop health.
77. **Solar-Powered Vehicle Charging Station:** Develop a vehicle charging station that runs on solar power.
78. **AI-Based Learning System:** A system that customizes learning experiences based on the student's pace.
79. **IoT-Enabled Smart City Model:** Build a smart city model with IoT-controlled traffic and waste management systems.
80. **AI-Based Healthcare Monitoring System:** A system that tracks patients' vitals and reports them to doctors.

General ATL Project Ideas for All Classes

81. **DIY Solar-Powered Fan:** A fan that works using solar energy.
82. **Voice-Activated Alarm Clock:** An alarm clock that works based on voice commands.
83. **Water-Powered Rocket:** Build a simple rocket that uses water pressure to fly.
84. **Recycled Materials Robot:** A robot made from recycled household materials.
85. **Smart Dustbin with Level Indicator:** A dustbin that indicates when it's full.
86. **Solar-Powered Desalination Device:** A device that removes salt from water using solar power.
87. **Wind Energy Water Pump:** A wind-powered pump to move water.
88. **Motion-Sensor Security System:** A system that detects motion and triggers an alarm.
89. **DIY Solar-Powered Water Heater:** A system that heats water using solar power.
90. **Smartphone-Controlled LED Lights:** Lights that can be controlled with a smartphone app.
91. **AI-Based Game Bot:** Build a game-playing bot that uses AI to learn and compete.

92. **Voice-Activated Personal Assistant:** A personal assistant that performs tasks based on voice commands.
93. **Rainwater Filtration System:** A simple system to filter rainwater for use.
94. **Smart Dustbin with Composting System:** A dustbin that segregates waste and starts the composting process.
95. **Solar-Powered Garden Lighting:** Build a lighting system for a garden that runs on solar power.
96. **IoT-Based Home Automation System:** A system that controls various home appliances using IoT technology.
97. **AI-Based Traffic Light System:** An AI system that adjusts traffic lights based on traffic density.
98. **Water-Powered Vehicle Model:** A small vehicle powered by the flow of water.
99. **DIY Electric Circuit Board:** Create a simple circuit board for learning electronics.
100. **Solar-Powered Water Purifier:** Build a purifier that cleans water using the power of the sun.

50 ATL Marathon Project Ideas 2024/2025

1. Smart Hydroponics System to Monitor Plants Using Sensors
2. Vertical Garden Made from Recycled Shipping Containers
3. Solar-Powered Irrigation System for City Farms
4. Mobile App Linking Local Farmers and Restaurants
5. Drone System for Checking Crop Health
6. Aquaponics System Mixing Fish and Plant Farming
7. AI-Based Pest Detection and Control System
8. Rainwater Collection System with Smart Distribution
9. Greenhouse Temperature Control Using Sensors
10. Precision Farming Robot for Small Farms
11. Food Waste Tracker App for Grocery Stores
12. Eco-Friendly Feed from Farm Waste
13. Urban Beekeeping System with Remote Monitoring
14. Smart Compost System to Manage Waste
15. Automated Sorting for Fresh Produce
16. Farm Traceability Platform with Blockchain
17. Crop Planning Tool Based on Weather
18. Indoor Mushroom Farm with Environment Control
19. Microgreens System for Restaurants
20. Soil Health Monitor with Real-Time Data
21. Farm Waste to Biofuel System
22. Smart Poultry System Using IoT
23. Hydroponic Nutrient Recycling System
24. Urban Farm Design Tool with AR
25. Crop Disease Predictor with Machine Learning
26. Smart Greenhouse Automation with Voice Control
27. Light Control System for Vertical Farms
28. Water Quality Monitor and Treatment for Farming
29. Farm Equipment Sharing Platform for Small Farmers
30. Automated Seedling Production and Planting

31. Livestock Health Monitoring with Wearables
32. Smart Fertilizer System Based on Soil Data
33. Farm Supply Chain Optimizer Using AI
34. Crop Yield Prediction with Satellite Data
35. Smart Storage System for Harvested Crops
36. Precision Irrigation with Moisture Sensors
37. Urban Food Forest Planning Tool
38. Farm Worker Management and Scheduling Tool
39. Smart Packaging for Fresh Produce
40. Automated Plant Disease Check with Image Processing
41. Farm Finance and Forecasting Tool
42. Eco Pest Control with Beneficial Insects
43. Greenhouse Ventilation and Cooling System
44. Farm Knowledge Sharing Platform for Farmers
45. Crop Rotation Tool with AI Help
46. Smart Harvesting Robot for Fragile Crops
47. Agricultural Carbon Credit Tracker
48. Precision Livestock Feeding with Analytics
49. Smart Soil Amendment Application System
50. Farm Market Price Predictor Using AI