

Science Club Program Paramount Study

Week	Theme	Content Description	Activities & Experiments
Week 1	The Journey of Science	Introduction to the course schedule, rules, and basic scientific concepts.	Group discussion: "What is your favorite science?"
Week 2	Basics of Physics: Force & Motion	Understand the basic concept of force and the relationship between force and motion.	Demonstration: Car rolling downhill, friction experiments.
Week 3	Center of Mass & Gravity	Explain the concept of the center of mass and explore gravity's effect on motion.	Experiment: Finding the center of mass of objects.
Week 4	Friction & Sliding	Explore the effects of friction and its impact on motion.	Experiment: Relationship between friction and sliding speed using a skateboard.
Week 5	Air Resistance & Free Fall	Learn how air resistance affects falling objects and understand free fall motion.	Demonstration: Comparing free fall of a feather and a small stone.
Week 6	Basics of Electricity: Current & Circuits	Learn the basics of electric current and the structure and functioning of circuits.	Build a simple circuit using a battery, wires, and a bulb.
Week 7	Static Electricity & Charges	Understand static electricity phenomena and the concept of charges.	Demonstration: Balloon and paper scraps experiment to generate static electricity.
Week 8	Electromagnetism: Electricity & Magnetism	Study the relationship between electric current and magnetic fields and learn how electromagnets work.	Build a simple electromagnet using nails, copper wire, and a battery.

Week 9	Sound & Waves	Understand how sound is produced, propagated, and the basic properties of waves.	Demonstration: Sound effects using different materials.
Week 10	Light & Color	Learn the principles of light propagation and color.	Refraction experiment: Demonstrate light refraction using water and glass.
Week 11	Chemical Reactions & Changes in Matter	Study simple chemical reactions and changes in matter.	Volcano experiment: Reaction between baking soda and vinegar.
Week 12	Temperature & Heat	Understand the relationship between temperature and heat; study conduction, convection, and radiation.	Heat conduction experiment: Compare temperature changes in metal and wooden rods.
Week 13	Water Cycle & Environmental Science	Explore the water cycle and its transformations in nature.	Simulate the water cycle using plastic bags and water to show evaporation and condensation.
Week 14	Simple Machines & Lever Principles	Learn the basic principles of simple machines (levers, pulleys).	Build a lever: Demonstrate lever principles using rulers and objects.
Week 15	Space Exploration	Understand the basics of space technology and astronomy.	Rocket-building activity: Launch simple rockets made with paper and straws.
Week 16	Basics of Robotics	Learn the principles of robotics and understand robot components.	Build a simple mechanical arm or car to demonstrate robotic motion.

Week 17	Introduction to Programming: Logic & Control	Learn the basics of programming, logic, and control.	Programming practice: Use visual programming tools (e.g., Scratch) to create simple programs.
Week 18	Environmental Tech: Renewable Energy	Understand types and applications of renewable energy.	Build a solar-powered car: Drive a small car using solar energy.
Week 19	3D Printing & Future Technology	Learn the basics of 3D printing and explore its applications in various fields.	Demonstration: The process of 3D printing and displaying printed models.
Week 20	Tech Exhibition & Summary	Review 20 weeks of learning and prepare a mini science exhibition.	Exhibition: Display student projects from the course and conduct a mini exhibition.