15-Day Self-Directed Learning Program for Mechanic Students

This 15-day program is designed to promote independent learning among mechanic students. Each day focuses on a key automotive topic, encouraging students to research, discuss, and practice the subject with hands-on activities and presentations.

Day	*Main Topic*	*Student Tasks*	*Outcome/Goal*
Day 1	*Workshop Safety & Tools*	*Research safety rules, types of tools, and how to use PPE. Create a safety poster or digital presentation in teams.*	*Understand and apply safety rules, identify tools confidently.*
Day 2	*Measuring Instruments*	*Research calipers, micrometers, gauges. Practice measuring different parts with guidance.*	*Measure components accurately, record results.*
Day 3	*Fasteners & Torque*	*Explore types of nuts, bolts, threads, torque tools. Practice tightening with a torque wrench.*	*Use fasteners properly, understand torque importance.*
Day 4	*Engine Types*	*In pairs, research types of engines (2-stroke vs 4-stroke). Create comparison charts or models.*	*Identify engine types and main differences.*
Day 5	*Engine Parts*	*Students identify and research internal engine parts. Use videos, books, or models.*	*Label all parts of an engine and explain functions.*
Day 6	*Lubrication Systems*	*Research engine oils, oil pumps, filters. Observe or perform an oil change.*	*Explain oil system flow and oil types.*
Day 7	*Cooling Systems*	*Investigate radiators, coolant, water pumps. Teams create a diagram of the system.*	*Understand overheating causes and cooling flow.*
Day 8	*Fuel System*	*Students research carburetors, fuel*	*Explain fuel delivery process.*

		injectors, filters. Observe or perform a filter replacement.	
Day 9	*Electrical Systems I*	*Explore batteries, starters, alternators. Watch tutorials and inspect a real system.*	*Test a battery and identify components.*
Day 10	*Electrical Systems II*	*Learn about fuses, lights, relays. Students test bulbs, fuses on a demo board or vehicle.*	*Replace bulbs/fuses safely and understand circuits.*
Day 11	*Brake System*	*Research disc/drum brakes and ABS. Inspect a real braking system in groups.*	*Identify brake parts and basic operation.*
Day 12	*Transmission*	*Study manual and automatic systems. Teams build a basic model or draw diagrams.*	*Explain gear shifting and basic transmission parts.*
Day 13	*Suspension & Steering*	*Explore shock absorbers, steering mechanisms. Inspect these on a real car or model.*	*Recognize worn-out parts and system purpose.*
Day 14	*Diagnostics*	*Learn about OBD scanners and error codes. Practice scanning and interpreting simple codes.*	*Understand basic fault finding and error reading.*
Day 15	*Project & Presentation*	*Each group presents what they learned with a demo, poster, or slide show. Optionally, take a short written quiz.*	*Reflect on learning, build presentation and teamwork skills.*