



GREAT NECK PUBLIC SCHOOLS

"Where Discovery Leads to Greatness"

#DiscoverGreatness

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Curriculum Profile: Know Your Car

<u>Department</u>	Technology Education	
<u>Course Name</u>	Know Your Car	
<u>Course Length</u>	½ year	
<u>High School Credits</u>	.5 unit of credit	
<u>Description</u>	This course is a must for all students who intend to drive a car. The operation and functions of all mechanical components are covered. Consumer knowledge is stressed. Lab work and lectures cover everything from "buying a car" to doing maintenance and repairs. Auto ownership is not a prerequisite.	
<u>Target/eligible students</u>	11,12	
<u>State Learning Standards Link(s)</u>	https://www.nysed.gov/career-technical-education/technology-education-learning-standards	
<u>Primary texts and materials</u>	Auto Upkeep-Basic Car Care, Maintenance, and Repair Michael E. Gray and Linda E. Gray	
<u>Scope/Sequence</u>		
<u>Week 1</u>	INTRODUCTION TO CLASS PERTINENT HANDOUTS INTRODUCTION TO SAFETY: GENERAL, TOOL AND LIFT SAFETY LESSONS SAFETY MULTIMEDIA	
<u>Week 2</u>	SAFETY REVIEW SAFETY TEST INTRODUCTION TO SHOP AREA TOOL ROOM LESSON CLEAN-UP ASSIGNMENTS	
<u>Week 3</u>	INTRODUCTION TO THE AUTOMOBILE AUTOMOTIVE MILESTONES VEHICLE IDENTIFICATION NUMBERS ENGINE SIZE AND CONFIGURATION THE FUTURE OF AUTOMOBILES DEMONSTRATIONS	
<u>Week 4</u>	BUYING AN AUTOMOBILE PURPOSE OF BUYING WHERE TO BUY: DEALER VS. PRIVATE ROAD TESTING VEHICLES FINANCING INSURANCE AND TITLE LICENSE AND REGISTRATION	
<u>Week 5</u>	OVERVIEW OF MAINTENANCE AND REPAIRS COST OF REPAIRS, MAINTENANCE AND GAS FLUIDS OVERVIEW TYPES OF FLUIDS: ENGINE OIL, TRANSMISSION, COOLANT, BRAKE, WINDSHIELD WASHER, POWER STEERING, ETC.	

	COSTS DEMONSTRATION ON FLUIDS LUBRICATION SYSTEMS LESSON LESSON ON OIL CHANGES WORK SESSION ON OIL CHANGES AND FLUIDS
<u>Week 6</u>	FILTERS OVERVIEW: OIL, AIR, PCV, GAS LESSON ON FILTER REPLACEMENTS DEMONSTRATION ON FILTERS WORK SESSION ON FILTER REPLACEMENTS LESSON ON FUEL SYSTEMS: TYPES OF GAS, FUEL ECONOMY, ALTERNATIVE FUELS, HYBRID CARS.
<u>Week 7</u>	COOLING SYSTEM LESSON ELECTRICAL SYSTEM OVERVIEW LESSON ON ELECTRICAL SYSTEM ELECTRICAL TERMS BATTERY LESSON STARTER LESSON ALTERNATOR LESSON DEMONSTRATION ON BATTERIES AND ALTERNATORS WORK SESSION ON BATTERIES
<u>Week 8</u>	WORK SESSION ON STARTERS WORK SESSION ON ALTERNATORS LESSON ON FUSE PANEL AND FUSES LIGHTING SYSTEMS DEMONSTRATION ON LIGHT AND BULB REPLACEMENT WORK SESSION ON REPLACEMENT OF LIGHT AND BULBS
<u>Week 9</u>	LESSON ON BATTERY CHARGING DEMONSTRATION ON TYPES OF CHARGES: PORTA PACK, STANDARD CHARGER, JUMPER CABLES IGNITION SYSTEMS LESSON DEMONSTRATION ON SPARK PLUGS AND WIRES GAPPING REQUIREMENTS
<u>Week 10</u>	LESSON ON COOLING SYSTEMS PURPOSE OF COOLING SYSTEM COMPONENTS OF COOLING SYSTEM RADIATORS THERMOSTATS HOSES AND BELTS FANS COOLANT RECOVERY TANK
<u>Week 11</u>	SUSPENSION AND STEERING SYSTEM LESSONS PURPOSE OF SUSPENSION SYSTEM COMPONENTS OF SYSTEM IDENTIFY FRAME OR UNIBODY SHOCKS SPRINGS STRUTS PURPOSE OF STEERING SYSTEM COMPONENTS STEERING WHEEL LINKAGE AND POWER STEERING PUMP
<u>Week 12</u>	TIRES AND BALANCING LESSONS TYPES OF TIRES TIRE PLIES TIRE SIZES TIRE GRADING

	LOAD RATINGS TIRE WEAR AND TROUBLESHOOTING TIRE BALANCING LESSON TIRE ROTATION DEMONSTRATION WORK SESSIONS ON BALANCING AND ROTATION OF TIRES
<u>Week 13</u>	BRAKING SYSTEM LESSONS PURPOSE OF BRAKING SYSTEM TYPES OF BRAKES: DISC VS. DRUM ANTI LOCK BRAKES EMERGENCY BRAKES WORK SESSION ON BRAKES
<u>Week 14</u>	DRIVETRAIN LESSON PURPOSE OF DRIVETRAIN COMPONENTS OF DRIVETRAIN: GEARS, TRANSMISSION, DRIVESHAFT, CLUTCHES FRONT-WHEEL DRIVE VEHICLES REAR-WHEEL DRIVE VEHICLES FOUR-WHEEL DRIVE VEHICLES ALL-WHEEL DRIVE VEHICLES
<u>Week 15</u>	EXHAUST AND EMISSIONS LESSON PURPOSE OF EXHAUST AND EMISSION SYSTEM COMPONENTS OF EXHAUST SYSTEM: EXHAUST MANIFOLDS, EXHAUST PIPES, MUFFLER, HANGERS AND CLAMPS EMISSION COMPONENTS: CATALYTIC CONVERTER, PCV VALVE AND SYSTEM, EGR, CHARCOAL CANISTER, OXYGEN SENSORS
<u>Week 16</u>	AUTO CARE LESSON AUTO PAINT JOBS AND FINISHES HAND WASH VS. CARWASH WASHING- TYPES OF WASH AGENTS DRYING WAXING AND COMPOUNDING INTERIOR CLEANING, VACUUMING ASSORTED CLEANING AGENTS AND THEIR PROPER USES
<u>Week 17</u>	REQUIREMENTS FOR SAFE CAR OPERATION: WHAT'S NEEDED? ITEMS NEEDED TO BE CARRIED IN A CAR SAFE LOCATIONS FOR WORKING OR EMERGENCY REPAIRS
<u>Week 18</u>	LAB WORK MAKE-UP SESSIONS
<u>Week 19</u>	FINAL EXAM REVIEW AND TEST HAND OUT REVIEW PACKET FINAL EXAM FINAL EXAM MAKE-UPS
<u>Week 20</u>	SHOP CLEAN-UP INVENTORY MATERIALS TOOL ROOM CLEAN-UP
<u>Additional Notes</u>	