

222 Home Maintenance and Improvement Inside Hours

1. A Complete a first aid or Cardiopulmonary Resuscitation (CPR) course.
2. A Invite a public safety official (e.g. fire or police official) to your home for a courtesy safety inspection. Report hazards identified.
3. A Install fire alarms and fire extinguishers in the home or shop, and repair and/or adjust safety features in need of attention (e.g. guards, clearances, etc.).
4. A Construct a locking storage cabinet or shed for tools.
5. A Document all unsafe situations in the home and list strategic locations for safety equipment. Diagram your home and mark the approximate locations of the items.
6. A Build a lumber /metal/material storage rack for tools and supplies commonly used around the home.
7. A Design fire escape plans for four locations.
8. B Gain employment in or establish and maintain a part-time business in home maintenance and improvement. (200 points per six weeks.)
9. B Interview a professional who owns and operates a home maintenance and improvement business. List resources needed to establish a small business of your own. Present your findings to the class.
10. B Observe and/or assist a professional who is employed in the home maintenance and improvement profession. (30 points/hour of work)
11. B Compare different careers in the home maintenance and improvement profession. Include salaries, educational levels, additional required, etc.
12. C Keep records on a home maintenance and improvement enterprise.
13. C Organize a Neighborhood Watch program in your local area.
14. C Organize and conduct a safety workshop for homeowners.
15. C Train for and participate in a home maintenance and improvement or related career development event.
16. C Invite and host an educational speaker at an FFA meeting on the topic of home maintenance and improvement.
17. C Develop and conduct a demonstration related to the safe use of hand and power tools to perform skills in home maintenance and improvement.
18. C Apply for an award related to activities in home maintenance and improvement.
19. C Volunteer to provide handyman services to a local nonprofit organization.
20. C Participate as an officer or committee member at chapter meetings and at district, area, state, and national FFA conventions.
21. C Serve as an officer of an agricultural committee or club.
22. D Develop an efficient system for storing lumber and metal used in home maintenance and improvement. Put the system into practice.
23. D Build a tool board for the home shop. Use labels or silhouettes to show location for each tool.
24. D Acquire a set of no less than 20 hand tools for fasteners, fittings, etc.
25. D Compile a bill of materials for a home project, valued at no less than \$100, which requires the purchase of several different building materials.
26. D Make a display of wood and/or metal fasteners.
27. D Safely use the hand and power tools you have available to you around the home.
28. D Replace blades, sandpaper, bits, etc., on a minimum of three home shop power tools.
29. E Install a drip irrigation system for the lawn or home orchard.
30. E Install an underground sprinkler system in your yard.

- 31.E Estimate the material cost and labor requirement to re-plumb a building (including fixtures)
- 32.E Replace a wax ring under a toilet.
- 33.E Repair or replace a plumbing fixture.
- 34.E Make a display of lawn irrigation equipment.
- 35.E Make a display of metal and PVC plumbing pipes and fittings.
- 36.E Clean/replace a minimum of five sprinkler irrigation heads or bubblers.
- 37.E Using PVC or galvanized pipe, fittings, and a sprinkler head, construct a portable sprinkler for home use.
- 38.E Replace washers in faucets.
- 39.E Install new male and female ends to a garden hose and splice a leaky hose using the proper fitting.
- 40.E Unclog a blocked drainpipe using a hand-operated plumbing "snake"
- 41.E Clean out a clogged drain using rotary equipment.
- 42.E Attach a sweat fitting and flare connector to a copper pipe.
- 43.E Install/replace a faucet in the home.
- 44.F Give a demonstration of an electrical installation. (e.g. junction box, wall plug, etc.)
- 45.F Estimate the material cost and labor requirement to re-wire an existing building. Show all calculations.
- 46.F Make a display of electrical hardware, uses, and approximate costs. Include twenty items in the display.
- 47.F Make a diagram of your home electrical system including wire sizes and fuse or circuit breaker amp city ratings using the proper symbols.
- 48.F Construct a display of ten different kinds and gauges of wire commonly used in the home. Indicate their amperage rating, applications, and approximate costs.
- 49.F Install a Ground Fault Circuit Interrupter (GFCI) outlet in the home or shop.
- 50.F Install a fluorescent lighting fixture in the home or shop.
- 51.F Operate an electrical power tool using a portable A/C generator.
- 52.F Replace a defective end plug on an electrical extension cord.
- 53.F Use two different methods for joining two lengths of electrical wire.
- 54.G Make a cost comparison between brands and types of A/C and heating units. Determine the brand or type with the best energy efficiency for the price. Check at least ten units from three dealers.
- 55.G List the steps you would take in increasing energy efficiency for your home or a building of at least 1,100 square feet.
- 56.G Compute the energy efficiency rating (EER) for five central and five window air conditioning units.
- 57.G Perform a maintenance check and service and A/C unit.
- 58.G Diagram the basic operation of three, commercially sold, solar heating systems.
- 59.H Apply sheetrock to walls in a room. Properly tape and apply joint compound.
- 60.H Apply a commercial waterproofing to masonry. Cover a minimum of 160 square feet.
- 61.H Complete a painting job (a minimum of 160 square feet) using an oil-base or latex paint. Clean the painting equipment following completion of the job.
- 62.H calculate the number of gallons of paint required to paint the entire interior or exterior of your home. Diagram the home and list the area of each wall.
- 63.H Estimate the cost of repainting or doing wall repair in a house. Itemize the costs.
- 64.H Eradicate rodents around the home by setting rodent traps and/or approved bait. Record the results.
- 65.H Calculate the square footage in your home. Draw a floor plan and indicate the square footage in each area.

66.H Prepare a metal and a wood surface for painting.

67.I Interview a home insurance agent. Report to the class on the most common means of illegal entry into a home. Report on the most effective home security system.

68.I Install a garage door opener in the garage of the home.

69.I Construct a door jamb and hang the door.

70.I Design a home security and itemize costs for complete installation.

71.I Install hardware used for latching/locking a door.

72.I Service a garage door opener according to the manufacturer's specifications.

73.I Replace a damaged screen on a screen door or window.

74.I Apply weather stripping to the doors and/or windows in the home.