

A FEW IDEAS FOR DEMONSTRATIONS AND ILLUSTRATED TALKS

There are lots of ideas for demonstrations and illustrated talks. It is suggested that 4-H members and leaders look through the entire list as there is some overlapping of subjects and hopefully these ideas may stimulate you for additional ideas.

As you plan your demonstration, you need to

1. Select a single, simple idea on which to build your demonstration
2. Plan the body of the demonstration
3. Plan the conclusion, include handling questions
4. **Then** plan your introduction and select the title

This approach sounds like it is in reverse order, but it works! Try it! Many people try to select a title, then plan the body of their talk and so forth. Bad idea!

These possible demonstration or illustrated talk ideas may stimulate your thinking. This list is based on one that is many years old, so some of the topics may sound a bit dated. If you come up with new ideas, please be willing to share them!



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This list includes ideas in each of these project areas!

Animal Science	Dairy	Geology	Outdoorsman
Automotive	Discovering 4-H	Home Grounds	Photography
Beef	Dog Care	Home	Poultry
Bicycle	Electricity	Improvement	Rabbit
Career	Entomology	Home	Rope Work
Exploration	Farmstead	Management	Sheep
Child Care	Improvement	Horsemanship	Small Engines
Clothing	Food Arts	Horticulture	Swine
Crafts	Foods	Knitting	Tractor
Crops	Forestry	Money World	Woodworking

ANIMAL SCIENCE

- Digestive tract of cattle
- Importance of Amino Acids
- Digesting carbohydrates
- Understanding Crude and Digestible Protein
- Phenotype of Animals
- Genotype of Animals
- Heritability Estimates

AUTOMOTIVE CARE & SAFETY

- Washing or waxing a car
- Removing tar spots, rust spots, tree sap, insect spots
- Cleaning glass surfaces
- Caring for tires
- Care of Chrome

- Cleaning the interior
- Care of the battery
- Changing oil and oil filter
- Cleaning and adjusting points
- Cleaning and adjusting spark plugs
- Testing a thermostat
- Flushing & care of radiator and hoses
- Different viscosities of oil
- Changing a wheel
- Changing a tire
- Cleaning a carburetor
- Packing a wheel bearing
- Hand signals
- Walking along roads
- Riding bicycle safely
- Bumper strips
- How to use a jack

- Check tire pressure
- How to keep records

BEEF PRODUCTION

- Grooming for show
- Clipping head and tail
- Dehorning a calf
- Tattooing
- Castrating
- Handling in the show ring
- Spraying for external parasites
- Trimming feet
- Training horns, shaping and polishing
- Castrating
- Tying the animal for various operations
- Care and use of a syringe
- Making a rope halter
- Handling, loading and hauling to prevent bruises and scars
- Constructing a back rubber to control parasites
- Mixing a ration
- Mixing Minerals
- Care, maintenance, and adjustment of hair clippers
- Taking a forage sample
- Construction and care of grooming and show equipment
- Registering an animal:
- Treating for bloat
- Building a back scratcher
- How to build Artificial Shade
- Internal Parasites
- A stair-step loading chute
- A hazard-free feedlot
- The cuts of beef
- Cattle loading
- Beef Breeds
- Bedding a truck
- Making and using a canvas slapper
- Face Fly Control
- How to fit the animal for. show
- How to keep a good feed record
- Feeding steers
- Halter breaking Calves
- Inheritance with cattle
- How to vaccinate calves
- Weighing and measuring feed
- Bedding a stall
- Drenching a calf

- Teaching a calf to lead
- How to determine weights by measurements
- How to make a blanket from bran sacks
- How to control lice on cattle
- How to use the beef score card

CRAFTS

- Ceramics made easy
- Using a camouflage
- My personal Stationary

CROPS

- Selecting planter plates
- Testing seeds for germination
- Taking a soil sample
- Cleaning and adjusting a sprayer
- Tissue testing
- Testing for soil acidity
- Testing weight of grain
- Testing moisture content of grain
- Inoculating legume seeds
- Treating seed for disease control
- Weed seed & plant identification
- Handling & Storage of chemicals
- Determining & preventing harvesting losses
- Interpreting a soil test
- How seeds germinate
- Life cycle of a plant
- Parts of a seed
- How soil is formed
- Parts of a flower

BICYCLE

- Signals for driving
- Lights for night driving
- Horns
- Parking
- Coast Coasting
- Care of tires
- Hauling Passengers
- Adjusting the chain
- Adjusting Peddles
- How to measure chain tension
- How to adjust the seat to fit the rider
- Handlebar adjustment

CAREER EXPLORATION

- Your future is up to you
- What is a career
- Career Decisions Difficult --Myth or Fact

CHILD CARE:

- Bathing a baby.
- Feeding a baby (or toddler)
- Entertaining a child
- Making toys for children
- Preparing a child for bed
- Going baby Sitting
- Making a picture book
- Dressing a baby (or toddler)

CLOTHING

- Threading a sewing machine
- Threading a needle and preparing for hand sewing
- Equipping a sewing box (good & bad examples, select suitable ones & tell why)
- Preparing fabric for cutting, straightening ends, pulling on bias, shrinking
- Laying a pattern
- Transferring a pattern markings
- Cutting out a garment (pinning and cutting), notches, with grain
- Stay stitching
- Seam finishes
- How to clip, grade & turn curved seams
- Sharp stitching a facing
- Reinforcing a kimono sleeve
- Putting in hems (use one or more types)
- Setting a sleeve (with moderate fullness or ease)
- Easing in fullness
- Placing of buttons & buttonholes
- Putting in a zipper
- Making a continuous placket
- Covering' a Belt
- Making thread belt guards
- Making different kinds of seams
- Altering a pattern (select one or two situations)
- Adjusting sewing machine (for different materials and threads)

- Putting on a collar
- Stitching darts
- Color coordinating a wardrobe
- Making buttonholes
- Pressing during construction
- Matching stripes or plaids
- Accessories for the costume
- Applying trimmings
- Mitering a corner
- Care and use of Steam iron
- Three ways to finish seams on cotton fabrics
- Choose clothes to suit the figure
- How to press wool
- Marking methods
- How to alter a pattern
- Removing stains from fabric
- Equipping a sewing box
- Using attachments
- Sewing on buttons, snaps, hooks & eyes
- Making repairs (mend tear, darn socks)
- Laundering a sweater (or other garment)
- Shining shoes
- Ironing a blouse
- Demonstrate good sewing habits
- How to make a pin cushion
- How to select anklets
- How to make a scarf
- How to use scissors
- Pinning before basting
- How to baste
- Making a pot holder
- Making and using a hem gauge
- Making seams for a slip
- Making neck finishes for a slip
- How to select materials
- How to select a pattern
- How to cut out a dress
- How to make scuffs
- Cutting Joining bias binding
- Pressing a cotton dress
- Preparing a garment for exhibit
- How to put in a shirt sleeve placket
- How to make a bound placket
- How to use a fitted facing
- How to darn
- How to make a slip strap
- How to lay a slip pattern on the material

- Scoring a slip
- Shrinking cotton materials
- Preparing a garment for exhibit
- Choosing your becoming colors
- Shrinking wool
- Darning a snag or tear in a wool dress
- Selecting suitable accessories for a wool dress

KNITTING

- Basics of knitting (cast on, bind off, knit stitch, purl stitch)
- Increasing and decreasing
- Ribbing
- Sewing a seam
- Blocking a garment
- Laundering a knit garment
- Knitting with two colors
- Making designs (cable, seed, etc.)
- Checking gauge
- Altering instructions for proper fit
- Care of equipment

DAIRY

- Estimating weight by measuring with a tape
- Removing excess teats
- Identifying an animal by photographs
- Care & handling of dairy equipment
- Floor plans for milking parlors
- Keeping a Dairy Record book
- Dehorning
- Testing milk for butterfat

DAIRY GOAT

- (see Dairy)

DISCOVERING 4-H

- How to adjust a bicycle seat for its rider
- Traffic Signs
- Traffic Signals
- Coasting
- Care of Bicycle tires
- Adjusting the chain
- Adjusting the pedals
- Handlebar adjustment
- How to make a first aid kit
- How to make a car bag
- How to make Thread Pictures
- How to make Dog Collars

- How to make Spray can covers
- How to make a braided belt
- How to make a Fur pillow
- How to thread a sewing machine
- Show different kinds of hand stitches
- How to regulate stitch length on your sewing machine (show several different lengths)
- How to make an Electromagnet
- How to make a Circuit Board
- How to make a Killing Bottle
- How to make a Collecting net
- How to make a pinning block
- How to make a spreading board
- How to make an insect display box
- How to mount insects
- Identifying insects
- How to build a Plant Press
- Packing the Plant Press
- Mounting Pressed plants
- How to separate sand, silt and clay of soils
- How to make a vegetable or fruit salad
- Equipment needed for making
- Cooking outdoors
- Stages of germination
- Rooting Plant cuttings
- How to build a Terrarium
- How to make string bubbles
- Build a Family Art Gallery
- Making articles of clay
- Stitch a wall hanging
- How to make a wooden article
- How to make a Card index for your rock specimen
- Identifying Rocks and Minerals
- Testing for hardness
- Making a crystal garden
- How to build book ends
- How to build a Paddle Wheel Boat
- Constructing a Birdhouse
- Constructing a nine block puzzle

DOG CARE & TRAINING

- Showing dogs
- Lifting and carrying a puppy
- Building a kennel
- Feeding a dog
- Controlling fleas, ticks, mites
- Grooming a dog

- Bathing a dog
- Keeping a dog healthy
- Handling an injured dog
- Obedience training
- Teaching a dog tricks
- Registering a dog
- How to build a dog house
- Parts of a dog
- Care of newborn puppies

ELECTRICITY

- Making simple repairs
- Using heat lamps
- Building equipment that uses electricity
- How to build an appliance tester
- How to make a hot plate
- Today's adequately wired home
- Illuminated street numbers
- Clean motors for longer life
- How to make a portable yard light
- Automatic flood lighting
- Safety in using electricity
- Making an electric motor portable
- Making a toy motor
- Making and using a test light
- Reversing a motor
- Care and use of electrical appliances
- Selecting a lamp and shade
- Tying an underwriter's knot
- Using a light meter
- Choosing a light bulb
- Installing safety devices
- Cleaning a motor
- Splicing electrical wires
- Proper repair of extension cords
- How to put on my pin-up lamp
- Meet Mr. Light Bulb
- Mr. E. Electron extends his power
- Report control switching
- Fuse protection
- How to select & use proper light switches to control modern home lighting
- Simple lighting protection for you
- Fuse protection
- De-beaking and wing notching turkeys with electrical equipment
- How to select a good lamp .
- Wiring--Central helper for the home
- Wiring a room

- Reversing and care of split phase motors
- How to wire a two-way switch
- How to wire a relay
- How to use the volt, amp and ohm meters
- Making an electric brooder
- Making a trouble light
- How to read an electric meter
- The inefficiency of long extension cords
- Saving lives with a heat lamp
- Not defective but inadequate wiring
- How to make a western union splice
- How to wire a 4-way switch
- How to use a quick check analyzer
- Making a crystal radio
- Making a pigtail splice
- Building an intercom set
- Wiring multiple switches
- Remote control switching
- How to wire a switch, breaker, light & receptacle
- Importance of good lighting
- Inefficient use of electricity
- Friend or foe
- Equipping a portable study center
- To shed new light
- How to measure wattage
- How to check wiring layout
- Care and use of electric iron
- Making a new connection with appliance plug
- Selecting electrical equipment
- Proper use of tools

ENTOMOLOGY

- Making a killing bottle
- Identifying insects
- Mounting insects
- Collecting insects
- Controlling insects
- Making an insect net
- How to handle bees

FARMSTEAD IMPROVEMENT

- Constructing farm buildings
- Types of fences
- How to design a feedlot
- How to construct a cattle guard
- How to construct a farm gate

- Locating a farm pond
- Paints and their use
- How to plan a farm water system
- Arranging a farmstead
- Figuring crops, feed and livestock balances

FORESTRY

- Making a leaf press
- Mounting a leaf, fruit or wood specimen
- Transplanting seedlings
- Using a compass
- Controlling and fighting fires
- Controlling insects and animals
- Cruising timbers
- Identifying trees

FOODS

- Proper measuring
- Safety in the kitchen
- Packing for a picnic
- Packaging foods for the freezer
- Setting the table
- Mixing techniques
- Preparing a broiler meal
- Canning with the pressure canner
- Preparing a specific food (cookies, angel cake, milk drink, etc.)
- Preparing vegetables for the freezer
- Meal planning
- Cooking outdoors
- Lunch box meals
- Foods for a party
- Cook-out know how
- Chuckwagon delight
- A bit of better batter
- Coffee can cookout
- How to make breakfast pancakes
- One-minute frosting
- Jigsaw sandwiches
- Assembling a quick lemon cheese cake
- Bar-B-Que for Patio
- The art of salad making
- Tempting tacos
- 4-H chuck wagon
- Meal in a box
- Tricks and Treats with Milk Fancies
- How to frost a cake
- Good cocoa is easy to make
- Milk drinks that bring calls for more

- Make your own chocolate sodas and milk shakes
- Creamed chipped beef with hot corn bread for a quick meal
- Let's do a twist
- Have a coffee klatch
- The secret of fluffy soufflés
- Cheese casserole and scalloped dishes
- From waffles to vegetables with cheese sauce
- Cream soups with evaporated milk are nutritious
- Serve salads with variety--Use cottage cheese
- Eggless salad dressing with evaporated milk is a budget saver
- Cheese in salads or dressings add spice to the meal
- Whipped toppings dress up desserts--try whipping evaporated milk
- Have a cranberry sherbet for Sunday dinner
- Velvety custards can be used so many ways
- A cheese cake that is different
- The art of making cream cheese
- Cottage cheese is easily made at home
- Using buttermilk for cooking
- It's easy to sour evaporated milk
- Preparing the infant feeding formula with evaporated milk
- How to make a fruit drink
- How to make no cook candies
- How to make cookies
- How to measure ingredients
- Kitchen safety
- How to prepare fresh fruits
- How to make sandwiches
- How to freeze sandwiches
- How to wrap foods for freezing
- Choosing freezer containers
- How to freeze fruit
- Storage of fresh fruits and vegetables
- Drying vegetables and fruits
- How to soft cook an egg
- How to place and remove dishes at the table
- When to use knife, fork, spoon or fingers
- How to stack dishes

- How to make baked apples
- How to make applesauce
- How to buy fruit
- How to make fruit plate
- How to Cook eggs
- How to select eggs
- How to plan breakfast
- Making a biscuit mix
- Making biscuits or shortcake
- Preparing, cooking and serving a green vegetable
- Some ways to use leftovers in a salad
- Making and serving deviled eggs
- Preparing and using white sauce, as with creamed eggs
- Cookies for picnics
- Some ways to serve an egg a day
- Sandwiches for supper
- Setting the table for a company supper
- How to be a gracious hostess
- Making picnic sandwiches
- Good manners in the dining room
- How to make a salad
- How to make a salad dressing
- Simple milk desserts
- How to plan a cook out
- How to make quick breads
- How to can meats (hot or cold pack)
- How to freeze meat (pick one type)
- Length of storage
- How to make Jelly
- How to cook frozen meats
- How to make food storage budget
- Setting a table for a buffet supper
- Decoration for a tea table
- Sandwiches and cookies for tea
- Varieties of yeast rolls
- Testing a Jar, lid and rubber
- Packing tomatoes in a Jar
- Wrapping preserved products for gifts
- How to use a pressure cooker
- Preparing vegetables for processing
- How to make yeast bread
- How to barbecue
- How to make ice cream
- Demonstrate use of tools
- How to use a broiler
- How to deep fat fry
- How to plan the day's meals
- How to make a cake

- How to make a sandwich bar
- Low calorie foods
- How to plan a food budget
- How to make a pie
- How to make cheese dish
- How to arrange tables for teas for receptions

FOOD ARTS

- How to can a low acid vegetable
- How to can acid fruits and vegetables
- How to dry, curd, brine, pickle or smoke meat
- How to dry, cure, brine, or pickle fruits or vegetables
- How to can meat, poultry or fish
- How to freeze meat, poultry or fish
- Making Jellies, Jams & preserves

HORTICULTURE

- Taking a soil sample
- Treating seed
- Transplanting
- Fertilizing
- Care of tools
- Staking and pruning tomatoes
- Controlling insects or diseases
- Handling chemicals
- Harvesting and storing vegetables
- Cleaning and adjusting a sprayer
- Planting seeds or potatoes
- Planning the garden
- Selecting good strawberry, blackberry, or raspberry plants
- Setting strawberry plants, blackberry plants or fruit trees
- Mulching strawberries, blackberries
- Pruning grapes
- Pruning blackberries
- How to spray gooseberries and grapes
- Mixing Bordeaux mixture
- How to protect trees against rabbits
- Selecting fruit for exhibit
- How to control insects on strawberries

THE MONEY WORLD

- How to write a check
- Handling money
- How to figure interest (simple, compound, semi-annual, etc.)

- Savings account
- Stocks and bonds
- Preparing a budget
- Record keeping GEOLOGY
- Identifying different types of soil
- Identifying rocks and minerals
- Identifying fossils
- Testing for hardness
- How to use a map
- Care of rock, mineral and fossil specimens
- Making a rock, mineral or fossil display
- How fossils are preserved
- Uses of geology in everyday living

HOME GROUNDS

- Constructing a rock garden
- Planting bulbs or seeds
- Arranging flowers
- Making a corsage
- Picking and conditioning flowers
- Care of equipment
- Planting a window box
- Identifying plants, shrubs and trees
- Controlling insects
- Transplanting
- Propagating new plants
- Drying flowers for winter bouquets
- Pruning ornamental plants
- How to color flowers with chalk
- How to color flowers with dye
- How to trim shrubs
- Flower containers
- Flower arrangement shapes
- Types of arrangements
- How to plan a yard
- How to plan color schemes
- Advantages to screening buildings
- How to mow a lawn
- How to spray
- How to mix spray
- Preparing the ground and planting flower seeds
- Some ways to control insects and disease that affect annuals
- Transplanting flowers
- How to propagate perennials
- How to make and plant a rose cutting
- Propagation of shrubs and vines by tip, mound and vine layering

- Applying fertilizer to the lawn
- Weed control with 2, 4-D by the spray method

HOME IMPROVEMENT

- Selecting a study lamp
- Finishing or refinishing furniture
- Framing pictures
- Care and operation of equipment (vacuums, etc.)
- Cleaning a stove or refrigerator
- Waxing floors or furniture
- Organizing storage space
- Making accessories for the home
- Arranging furniture
- Selecting colors for decorating
- Care of table linens
- Cleaning silver
- Improving home lighting
- Making storage accessories
- Care of books
- Home filing system
- Correct laundering
- How to enamel varnished furniture
- Cleaning upholstered furniture

HOME MANAGEMENT

- Using a bulletin board
- How to clean metals
- Caring for floors
- Use of memorandum pads
- Measure, cut and play house
- Applying decoration to a pillow case
- Mounting pictures
- How to cut a dresser scarf
- Making a pattern for a chair cushion
- Making a chair cover
- Arranging furniture in a dressing unit, a bad unit, reading unit or a study unit
- Making a dressing table of orange crates
- Making a stool for a dressing table
- How to store shoes
- Storing hats
- Removing the finish from furniture
- Refinishing a piece of furniture
- Hanging pictures
- Making a dustless dust cloth
- How to make a wall picket
- How to make a knife rack

- Making a pot holder
- How to make removable shelves
- Making clothes pin bag
- Sharpening knives
- Polishing knives and forks
- Ironing a dress, slip or shirt
- Making a bed
- Washing dishes
- How to fold a fitted sheet

HORSEMANSHIP (also see beef)

- Care of the feet
- Care of the tack
- Cleaning a saddle or bridle
- Adjusting the equipment
- Saddling a horse
- Mounting and dismounting
- Types of bridles or saddles and their use
- Making a saddle blanket
- Checking for unsoundness in a horse
- Gaits of a horse
- Proper riding posture
- Western Riding Apparel
- English Riding Apparel
- Preparing a horse for show
- The overnight Trail Ride
- Rope magic
- Grooming a horse
- Cleaning an English saddle
- Parts of a horse
- Horse Physique
- No hoof--no horse
- Know what you are buying
- Parts of a saddle
- Lets dress right
- Soap your saddle
- Know your colors
- Tips for trail riders
- Your working stable
- Emergency rope halter
- Stable management
- Clean feet
- Bits and biting
- Selecting a horse that fits
- Safety around horses
- Care of legs and feet.
- Horse of the desert
- Eight strand braid
- Common stable vices

- Unsoundness of legs
- Saddles, past and present
- Sitting the saddle
- Leads
- Cooling out
- The talking horse
- Horse shoes of interest
- Balanced feeding
- Tooth tales
- Elbow grease
- Parasites of horses
- Horse jumps
- The head--Key to a horse
- Breeding and foaling time
- Horse sense
- Skeletal structure
- Trimming the hoof
- Determining the horse's age
- How to ride a horse
- Parts of a saddle
- Unsoundness of the eyes
- How to bridle and saddle
- Making a rope halter
- Training a colt to lead and stand
- How to care for the colt's feet
- How to apply a Pratt's twitch
- Grooming a colt
- How to use the Scotch Hobble

OUTDOORSMAN (also see forestry)

- Selecting equipment
- Care of equipment
- Safe use of equipment
- Selecting a camp site
- Setting up and using camp equipment
- Outdoor cooking
- First aid
- Identifying birds, fish, snakes, mammals, flowers' or trees
- Making fishing lures
- How to clean a gun (Gun safety)
- How to carry a gun in the car; in the field (gun safety)
- How to correct the sight on a gun (gun safety)
- How to make a good pond a safe place to swim (Water safety)
- How to give artificial respiration or reserve breathing (water safety)

- How to handle a capsized boat. (water safety)
- How to break the hold of a drowning person
- How to preserve shakes
- How to identify poisonous snakes
- How to treat a snake bite
- How to mount tree specimens

PHOTOGRAPHY

- Loading a camera
- Posing a picture
- Holding a camera
- What makes a camera work?
- Mounting pictures
- Taking pictures indoors
- Selecting equipment

POULTRY

- Making a range shelter
- De-beaking
- Controlling insects or diseases
- Grading and handling eggs
- How to vaccinate for chicken pox
- Quality eggs
- How to candle an egg
- Eggs desirable for hatching
- Feeding rations
- Coccidiosis Control
- Feeding wet mash
- Laying records
- Feeding records
- Worm control and treatment
- Storing eggs on the farm
- How to clean dirty eggs
- Making chick feeders and waters
- Drawing a blood sample
- Culling
- Caring for baby chicks
- Sanitation measures
- Casing and storing eggs
- Mixing poultry feed

RABBIT

- Picking up a rabbit
- Tattooing a rabbit
- Building a hutch
- Caring for the litter
- Sanitation measures
- Feeding rabbits

- Caring of Pelts or wool
- Preparing Rabbits for show

ROPE WORK

- Splicing a rope
- Tying knots, hitches, etc.
- Making a rope
- Casting
- Making a halter
- Using pulleys and mechanical advantages
- Selecting rope and caring for it

SHEEP (also see beef)

- Blocking for show
- Docking and castrating
- Drenching for internal parasites
- Catching and handling
- Spraying for external parasites
- Shearing a sheep
- Determining the age of sheep
- Preparing drenching fluids
- Making a lamb feeding creep
- Grading wool
- Care of wool at shearing time
- Care of a fleece
- How to block a lamb
- Shearing skills
- Lamb docking
- How to Judge lambs
- Care of the ewe and lamb
- How to inspect ewes -(mouth, udder and fleece)
- Tying a fleece
- Preparing a bluestone drench
- How to tell when a lamb is fat
- How to handle sheep when Judging
- Preparing a 'mineral feed for sheep

SMALL ENGINES (also see automotive)

- Tuning an engine
- Repairing an engine
- Preparing an engine for storage
- Handling, mixing and storing fuel
- Trouble shooting
- Cranking an engine
- Safe use of lawn mowers
- My two-cycle engine
- Grades of oil
- How to get spark

- Adjusting a carburetor
- The importance of clean air
- Trouble shooting made easy
- Maintenance and safety check.
- Use of special tools
- How to correctly start and stop
- How to service engines
- How to tune engines
- How to prepare for winter storage
- How a carburetor works
- How a magnet works
- Identification of engine parts

TRACTOR Maintenance

- Cleaning a carburetor
- Packing a wheel bearing
- Battery care
- Tuning a tractor
- Safe operation
- Filling and using a grease gun
- Care of the air cleaner
- Cleaning an oil filter
- How to clean and re-gap a spark plug
- How to check alignment of the cutter bar on a mower
- Making a coulter adjustment on a plow
- How to do a daily maintenance and safety check
- Proper use of tool/tools (do's don'ts, & why's)
- How to rivet
- Proper way to hook-up remote hydraulic Cylinders and use travel lock
- How to check cylinder compression
- How to grind a valve
- How to improve tire life and reduce wear
- Explaining the power drain of a tractor
- How to measure field losses of crops
- How to determine cylinder speed on a harvester

SWINE

- A stair step loading chute
- Bedding a truck
- Making and using a canvas clapper
- Using a heat lamp for pigs
- How to clip a pig's needle teeth
- How to ear notch
- How to spray for mange

- Preparing the hog house at farrowing time
- Weighing feeds
- Worming pigs
- How to give an iron shot
- How to fit swine for show
- How to trim a pig's feet
- Construction of a creep feeder
- Castration
- How to use a farrowing crate
- Safe hauling
- Making a moveable loading chute
- A hazard-free feedlot
- Mixing a gilt ration
- Treating for anemia
- Selecting breeding stock
- Examining and treating for lice and mange
- Probing for back fat
- Making a farrowing crate
- Making a hand gate for moving swine
- The meat type hog
- Swine breeds
- Saving little pigs
- Major diseases
- Swine sanitation
- Saving orphans
- Swine testing
- Sono-ray
- How to register a litter
- How to keep litter records
- How to care for a sow during farrowing
- How to mix rations
- How to vaccinate a litter
- How to make a heat lamp

WOODWORK

- Adjusting the plane
- Using the plane
- Squaring on a board
- Using up a board
- Using the hand crosscut saw
- Using a rip saw
- Sharpening the plane iron
- Setting the cross-cut saw
- Cutting, common rafters
- Figuring ,rafters with the square
- Filing the saw
- Fitting the wood chisel
- Sharpening the auger bit

- Sharpening the cabinet scraper
- Storage of tools
- Working area arrangement
- Replacing a hammer handle
- Reading plans and blueprints
- Preparing a bill of materials
- Determining grades lumber
- Uses of the framing square
- Cleaning of and care of paint brushes
- Selecting woodworking tools
- Storing lumber
- Making working ~ drawings
- Figuring board feet
- Measuring and marking wood
- Reading a rule
- Using the combination, square
- Using the level
- Using and testing the level
- Sawing of a board
- Sawing miters
- Using the coping saw
- Using the key hole or compass saw
- Planing end grain
- Marking and planing a chamber
- Different types of planes
- Using sand paper
- Making a dado and rabbet cut
- Using the brace
- Boring a hole in wood
- Different kinds of nails
- Fastening wood with nails
- Fastening wood with screws
- Using the automatic push drill
- Driving nails and pulling nails
- Toe-nail and drew nailing
- Determining the size of hole for screws
- Counter sinking
- Using the screw driver
- Fastening with glue
- Doweling
- Using the draw knife
- Using the spike shave
- Using rasps and files
- Sawing curves
- Painting with a brush
- Varnishing and staining
- Thinning and mixing paint
- Estimating amount of paint required
- Preparing the surface for painting
- Selecting and using oil stones
- Cleaning tools
- Using dividers
- Types of squares and their uses
- Marking holes for drilling
- Jointing a hand saw
- Perspective drawing
- Shop drawings
- Protective devices in the home shop
- Testing a square and level
- Gaging
- Sawing curves
- Assembling and disassembling the plane
- Kinds and uses for sandpaper
- Gaining
- Attaching butt hinges
- Sharpening twist drills
- Clinching and setting nails
- Determining size of tools
- Refinishing
- Planning the woodwork project
- Using the try square
- Common wood joints
- Using wood filler
- Different kinds of wood and their uses
- Woodworking tools
- Constructing and small project
- Repairing
- Selecting the proper tools and their uses
- Clamping glued joints
- Kinds of plywood and their uses
- Using the block plane
- Drawing from a pattern
- Enameling
- Selecting the paint brush