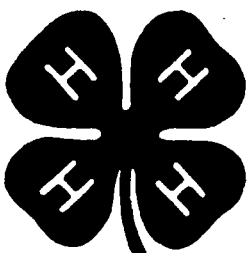


Modelcraft



Adams County 4-H

Modelcraft

There are 5 units in Modelcraft. Unit One has three skill levels for ages 8, 9-10 and 11. Aside from the age restrictions in Unit One, you may exhibit no more than one entry per unit, however, you may exhibit in as many units as you wish.

Your modelcraft needs to be displayed on a base that is no more than 2 times the length, width and height of your model. The base should be a solid composition at least 1/8" thick. (No cardboard.) The skill level must be displayed on the base.

Old and new models may be displayed on a diorama.

Exhibit Requirements:

1. Completed Project Properly Mounted
2. Completed Record Book ACG001

Units

Unit 1. Snap Together Models:

- a. Skill Level 1 - Age 8
- b. Skill Level 2 - Age 9-10
- c. Skill Level 3 - Age 11

Unit 2. Glued Model

Unit 3. Basic Use of Dioramas - Models from Unit 2 may be used.

Unit 4. Advanced Use of Dioramas - Models from Units 2 and 3 may be used showing detailed sketch, blueprint or photo charting progress of model. Be able to explain changes made to the display of the model with more advanced uses of dioramas.

Unit 5. Die Cast Models in Dioramas

Units 2 through 5 are each divided into three age groups:

1. Junior - Ages 8-10
2. Intermediate - Ages 11-13
3. Senior - Ages 14-18

MODEL CRAFT

Model aircraft, cars, trains, and the many other model subjects are far more than mere toys. When carefully assembled the result is a miniature replica of a life-sized working object. The manufacturers of modern modelcraft develop the models as painstakingly as the manufacturers of the "real thing." Even science fiction creations have amazing detail.

START RIGHT

Select a good, large, well-lighted place to work, preferably a spot where you can leave your model and return later to resume work. Wear old clothing. Cover your working surface with newspaper or a similar material to protect the finish. Take your time when assembling a model. It is better to build fewer models and do each well. Neatness, ability to follow directions and workmanship will result in a high quality product.

TOOLS

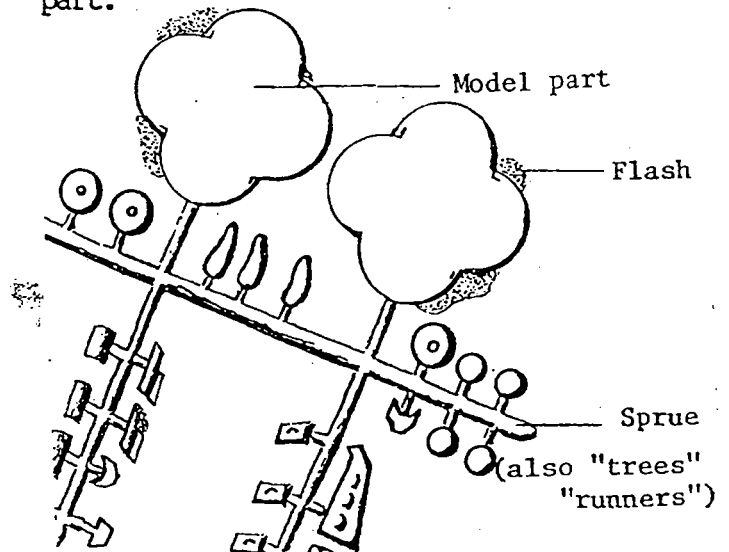
Modeling tools can be a lifetime investment. They should be selected with care if you want truly outstanding models. The right tool makes model-building easier, more fun and assures a better product. If you continue making models you'll add tools over the years. Following are some basic tools used by most model enthusiasts. Some of these may already be available in your home. Have your tools at hand, ready to use, so you won't be tempted to take shortcuts or omit steps.

- a hobby knife
- extra knife blades (check with your leader or a person who makes models for the best shapes and sizes)
- sharp-nosed tweezers (check for different types available)
- paint brushes - #3 round brushes, #000, 00 and 1 - also one or more flat brushes
- emery boards
- sand paper - 300, 600 grit, wet-or-dry
- ruler (straight edge)
- toothpicks (round and flat for different uses)
- old soft-bristle toothbrush

ASSEMBLY

Choose something simple for your first model. Open your model container carefully and keep all parts together so nothing is lost or misplaced. Usually the parts of the model are numbered. These numbers are either on the model part or on the sprue next to the part. Take inventory to be sure all pieces are in your kit. Read the instructions which come with your model. Be sure you understand the instructions before starting your model building.

Always have your hobby knife nearby. Experienced modelers cut parts from sprues. Breaking them may either leave unwanted plastic or break the part. Unwanted plastic that adheres to the model part (called flash), must also be cut away. Examine parts to see how they go together before cutting. It is easier to remove more flash later than to put back plastic that has been removed. Resist the temptation to remove all the small parts from the plastic runners (sprue) until each is needed. Small parts can be lost or mis-identified. Instruction sheet drawings may not look like the actual plastic part and the identification number may be your only means of finding the proper part.



Often modelers divide a model into subassemblies and do these individually. Fit parts together to see how they combine before using any glue. If a part doesn't seem to fit, examine it closely. Don't try to force it! You may have it turned a wrong way or you may have mis-read instructions. Occasionally you'll have to trim plastic or adjust parts to fit but don't be hasty. Again, think! Read directions carefully to see if parts are to be painted before assembly.

Some model builders wash parts in luke-warm water with a few drops of detergent to remove the oily material used to separate the plastic from the mold. Oils of any sort will prevent proper adhesion of paint and cements. A soft-bristle toothbrush will help remove stubborn materials. The brush treatment dulls the finish to give the paint and cement a better attaching surface.

GLUES AND CEMENTS

Use glue sparingly. Some easy models can be snapped together without glue. Beginning modelers should use tube-type fast-drying cements. Older and more experienced model makers should investigate other plastic cements on the hobby shelves. Never use the fast bonding "super" glues! Read the labels of glue and cement containers about dangers of breathing the fumes and fires. Work in open, airy places away from open flames or people smoking. Toothpicks are useful tools to remove unwanted glue or to help in spreading cement evenly.

Most plastic glues used in modelcraft dissolve plastic to create a weld. The more cement used the more of your model that dissolves. The better the parts fit the less glue required and the better the weld. Most plastic glues "dry" fast so be sure you are ready before applying cement. Too much cement will melt and distort plastic, even when it is painted. The easiest way to correct this is to avoid it happening in the first place. Cement on fingers will transfer to the model as fingerprints. Craft putties may be used to fill poorly-fitting joints. White glues are used to attach non-plastic to plastic.

For a faster-setting glue, Epoxy-type glues may be used by experienced modelers. White glue or epoxy should be used to attach clear (transparent) parts. Solvent cement will etch and cloud plastics. White glues also have the advantage of peeling away with a toothpick. Use the modeling knife to cut away unwanted glue. Epoxy and white glues should set 24 hours before clamps are removed or parts handled.

WARNING: Always try glues and cements on flash or sprue to see how it reacts before applying to the model. Some glues and paints will melt and distort your plastic model!

It is wise to let each glued part set before handling. Therefore you may wish to glue subassemblies and later, after the cement has dried, combine parts. Slow-drying glues may require 24 or more hours to dry completely - parts may be clamped using clothes pins, paper clips or other things. Rubber bands or twine may be used also. Beware that glue does not cement the clamp to the model parts. Cross-action tweezers may also be used to "clamp".

PAINTING

Use adequate ventilation when working with both paints and glues.

Paint on plastic looks like paint on plastic. Better model-builders recommend careful sanding and priming before painting. To do a good job requires care and skill. Again, think! Some parts should be painted before you glue. Some painting must be delayed until parts are totally assembled. Paint on joints to be glued must be removed or the cement won't hold. Avoid any paint on "clear" plastic areas - paint will "fog" clear plastic.

Examine the model for irregularities on the surface. These will show after a primer coat. Correct them with light sanding. Wash parts with luke-warm water to remove sanding powder, fingerprints and other foreign material. Allow the plastic to dry thoroughly. Just before you apply paint (or primer) clean the model with a paint cloth to remove any lint or dust particles. A bit of dust will look like

a golf ball on a scale model. Use of rubber gloves when handling the model after washing will avoid re-introducing finger prints. Paint will not adhere to areas with fingerprint oil.

Before using primer on models, it must be thinned considerably. Always test primer and paint on waste plastic before applying to the model.

If you brush-paint your model, have different sized brushes for different paint jobs. The fewer strokes the less "brush-painted" it will look. Do an entire area at once as quickly (but carefully) as possible. If you are using enamel paints, a second coat should be applied NO SOONER than 30 minutes after the first, but NO LATER than 60 minutes. The second coat should be thinned even more than the first. A coat of paint on a model is equal to an inch of paint on a full-sized item! It is best to practice on a scrap to see that paint is the proper consistency.

If you spray-paint, test spray on paper or a tin can to determine spray pattern and distance to hold the spray nozzle from the model. Always start so you are moving toward the model and continue spraying past the model. Do not attempt to change directions when spray painting. The thinner the coat of spray the more detail will show through and the more realistic the completed model. Always move the spray can, never the model when spray painting. Spray paint when the room temperature is at least 70° and warm the spray can in warm water to 65-70°. Shake can vigorously before applying paint. Practice painting on a can to develop technique.

It is always best to paint in a well-ventilated area with little dust moving. It is easier to cover light-colored paints with dark so paint light colors first. Allow paint to dry at least 24 hours before starting to work on the model again.

Some modelers make a "spray room" by cutting one side out of a large cardboard box and placing the model inside to be sprayed. By placing the model on a large sheet of paper the model can be turned during painting without touching it.

MASKING

On some advanced models you will find areas which need protection from paint. On flat surfaces, masking tape will work satisfactorily though some prefer magic-mend tape because it has a sharper edge and because it looks frosty if not pressed down completely. When painting two colors in the same area, apply the lighter color first. After the first color has dried completely (at least 24 hours) use tape to protect and separate the first color from the second. The second color should be applied as thin as possible. Cut through the paint along the edge of the tape after it has completely dried. Pull the tape back over itself in a peeling procedure to avoid peeling the paint off. Paint is more apt to peel off if: (a) you remove it before the paint has completely dried, (b) grease or oil from fingers was left on the plastic before painting, (3) you failed to apply a primer coat, or (4) you touched it with your hands in the process of painting.

Masking fluids, the consistency of heavy cream, may be applied to difficult-to-mask areas. Experienced modelers may wish to investigate this procedure if other methods prove unsatisfactorily.

DECALS AND OTHER DETAILS

The gauges, the buttons, the handles "make" the model. Never attempt to draw straight lines "freehand" - it doesn't work on a model. Use a ruler, masking tape, or other appropriate helps. Use a tiny (000 or 00) paint brush to add tiny paint decals. Practice on an old model or flash or on the sprue.

Decals should be applied after the final coat of colored paint and before any protective coat. Decals must be applied to a glossy surface to avoid "clouds" of trapped air bubbles. You'll need your hobby knife, pointed tweezers, a #1 paint brush, a bowl for water, paper towels, white facial tissue and a small bottle of decal softener or setting solution for a professional job. Practice applying decals on an old model first. Trim the decal as closely to the

color portion as possible, using scissors and the hobby knife. Lift the decal with tweezers, submerge in warm water for sixty seconds (1 minute), then remove the decal to the layer of paper towel. Never touch the decal with your fingers! Leave the decal on the backing paper a few minutes to remove excess water. Only when you can move the decal easily on its backing with your knife should you proceed.

Unless the model surface to which the decal is to be transferred is perfectly flat, you may want to apply a thin layer of decal-softening fluid to the area before transferring the decal. Hold the decal and backing paper over the exact spot where it is to be placed. Using your knife, hold the decal in place and use the tweezers to remove the backing. Wrap two layers of white tissue around your index finger and gently dab the decal starting at the center and remove water and air from between the decal with gentle pats. Be careful! The softening solution will soften the plastic. Allow 24 hours for the decals to set and dry. Before applying clear paint, test it on a decal to see that it doesn't etch it.

Dry transfer letters and numbers, available at hobby stores and stationery stores, may be applied to models. Dry transfers are easiest applied to flat surfaces. Protect dry transfers with a clear paint.

As you become more proficient as a modeler you will want to read manuals on "how to". Libraries and hobby stores may have books and periodicals that will prove helpful. Information on dioramas, lighting, photographing models, conversions and scratch building become important to the model enthusiast.

FINAL STEPS

When the model has been completed you can make it look more professional and prolong the life of your handiwork by applying a thin coat of clear, colorless paint. Spraying is recommended over brush-painting for this final coat. This coat prevents paint from deteriorating, anchors decals, even helps to disguise minor rough-edged separations. After the paint has dried

completely, complete your model with a coat of floor wax. Never apply any paint to clear plastic - add windows after applying the last coat of paint.

PARTING HINTS

Never throw away extra parts, decals and such. They may come in handy on the next model! Take care of your tools. Clean brushes and store them brush up. Keep a clean uncluttered work area. Don't expect someone else to clean up for you. Another person may loose parts, break a model or mess up a paint job. Avoid spattering paint or getting plastic cement on furniture. Use newspapers, cardboard boxes and other protective coverings. And above all, read and follow instructions provided with kits, on paint bottles or cans and wherever instructions are given. Re read them each time you use them. You'll save time, effort, and maybe a model!

Those working with wood models should sand and seal each wooden part before painting.

Good model building!

GLOSSARY of Modelcraft Terms

DIORAMA - A scenic representation with model figures and a realistic painted background.

FLASH - A thin sheet of waste plastic attached to the model part. It results from excess plastic spilling out of the mold. Flash should be removed with a sharp knife. If necessary sand the spot for smoothness. (see illustration)

PRIMER - A thin liquid preparatory coating used before painting

SPRUE - Also called "Trees" and "Runners". The waste plastic used to hold modeling pieces together in model kits. Usually sprue is rather round, but somewhat pinched at the point it connects to the model part. (see illustration)

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