



**COLORADO STATE UNIVERSITY  
EXTENSION**

MG6427  
Member's Manual for  
**Seniors only**  
*Advanced*



# **4-H Advanced Cake Decorating Units 10 –12**

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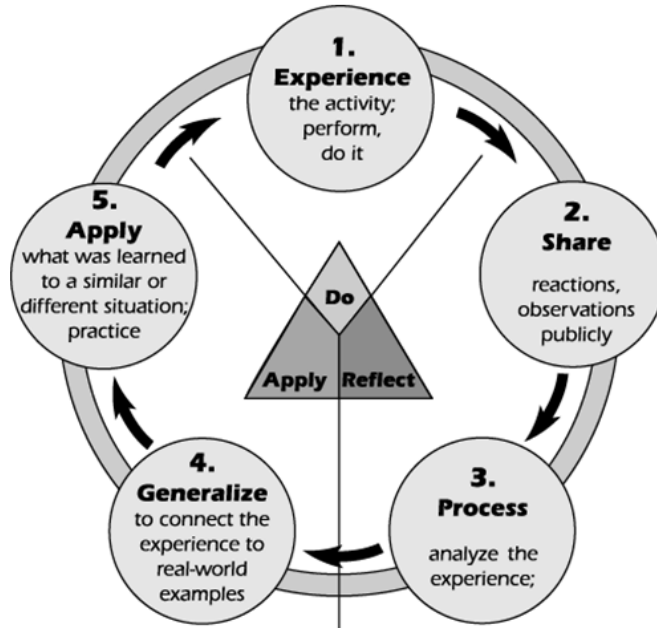
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The 4-H program encourages a process that allows youth to first learn by doing before being told or shown how, and then to examine the experience. The experiential learning model developed by Pfeiffer and Jones (1985), modified by 4-H, includes five specific steps:



The Experiential Learning Process guides youth through a process of discovery with little guidance from others. A situation, project or activity is presented that allows for individual thought and problem solving. Outside assistance is provided at a minimum and supports learning by questioning at each stage. Youth in activities reflect on what they did, how they learned and what could be applied to a life situation.

1) Experience Questions: How is it working? What else might you try? What might make it easier?

2) Share Questions: What happened? How did you feel? What was the most difficult?

3) Process Questions: What problems seemed to reoccur? What similar experiences have you had?

4) Generalize Questions: What did you learn about yourself? What did you learn about the activity? How does this relate to something else in life? How did you decide what to do?

5) Apply Questions: Where else can this skill be used? How will you use this in the future? What will you do differently after this experience?

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## ADVANCED CAKE DECORATING MANUAL UNITS 10 – 12

(Units 10-12 are for Seniors Only)

### Overview: Learning Experiences Emphasized

(Refer to manuals and state fair requirements for exhibit requirements)

#### UNIT

**\*10**—One decorated cake or cake form of three or more tiers of graduated sizes, using supports. Separator plates and pillars may be used, but not required. A bottom base border is required.

**\*11**—One molded or shaped object on a decorated cake, a cake form or an independent display in a case (no larger than 10 inches) to protect the item from harm.

**\*12**—A detailed notebook describing your project including your goals, plans, accomplishments and evaluation of results. You may use pictures or any records you have kept to provide evidence of your accomplishments. **Your main project exhibit is your notebook and will count for 75 percent of the placing score.** If an item was made as part of your project, a sample may be displayed as further evidence of the quality of your project but is not your main exhibit. Displays must not be over a 1 x 1 foot exhibit area or consist of more than three items.

\* Units in this project manual

<b>Note: Units 10-12 are for senior members only.</b>
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## **Advanced Cake Decorating Unit 10 —Tiered Cakes**

For weddings, anniversaries, formal parties and other equally elegant or festive occasions, the tiered cake has long been the eye-catching center of attention. The artistic design, the graceful structure, the endless variety of dramatic decorating effects all contribute to the fascination of the tiered cake. These combined qualities have not only made the tiered cake a favorite, they assure its continuing popularity. Impressive as they are, towering tiers of cake are well within the realm of achievement for any aspiring decorator, once the basic techniques for proper assembly are acquired.

Unit 10 cake decorating provides new experiences in working with supports and separator plates, as you decorate a more elaborate cake of three or more tiers of graduated sizes. Pillars are optional.

Practice these skills until you have them mastered.

### **Goals for Unit 10**

1. To build on skills developed in previous units.
2. Learn to use supports, separator plates and pillars while decorating cakes.
3. Design and decorate a cake of three or more tiers of graduated sizes, developing an overall design which is attractive and tied together by color, line, and design.
4. Use special tips for special purposes.
5. Decorate a minimum of three cakes (or use cake forms) plus your exhibit cake (total of 4). Each should have three or more tiers of graduated sizes. Two of the four cakes must be real cakes. Forms are preferred for the exhibit cake.

### **Exhibit for Unit 10**

1. One decorated cake or cake form of three or more tiers of graduated sizes, using supports. Separators and pillars may be used but are not required. A bottom base border is required.
2. Your completed Cake Decorating e-Record in a sturdy binder/notebook should accompany the cake. Records are important, too. Keep a record of each cake you do. Either take a picture or make a simple drawing. Then write a short explanation of what you did and what you learned with each cake you decorated.



## Decorated Cake

1. A real cake or an artificial cake form may be used. The cake must have three or more tiers and use supports. Pillars and separator plates may be used but are not required.
2. Cake should be placed on a firm base which will not sag with the weight of the cake. The board should be in proportion to the diameter and height of the cake.
3. The cake board must be covered with a food safe material; examples are aluminum foil, *Wilton--Fanci-Foil wrap*, or freezer paper. If you use a decorative or gift wrap paper or fabric, it must be covered in food quality plastic wrap.
4. The design should be suitable for the size and shape of the cake. It should show good use of color and a pleasing combination of decorations.
5. Artificial stamens for flowers, leaves, wire stems, floral tape, special occasion ornaments, tulle and ribbon, and filler flowers may be used. All other cake decorations must be edible.

## Tips for e-Records

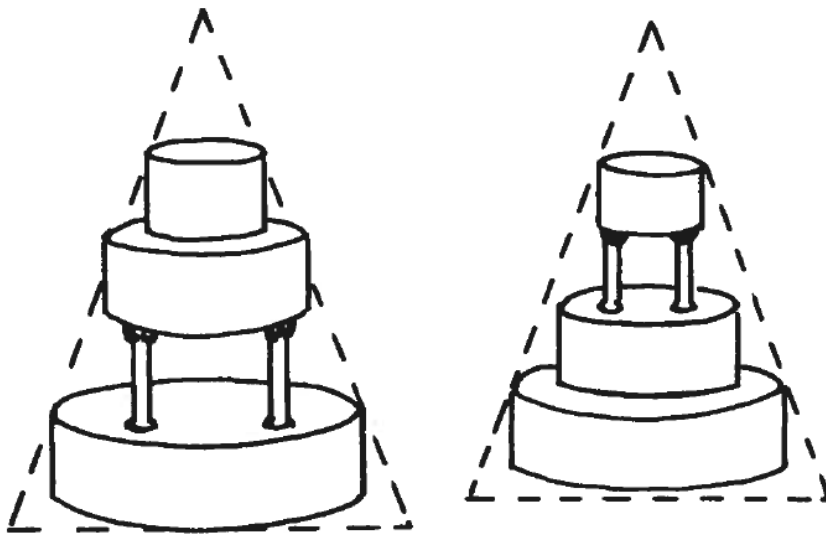
1. Cake Decorating e-Records should be neat and complete. Instructions should be followed.
2. Cake Decorating e-Records should show that a minimum of three cakes plus the fair exhibit cake have been made (total of 4). Two of the four cakes must be real cakes. Forms are preferred for the exhibited cake.
3. Cake Decorating e-Record books will count for 25 percent of the placing score.

## Project Planning Guide

### Graduated Tier Sizes

The cake should be in proportion, graduating sizes as you go up. As a guideline, all layers should fit within a triangular shape, drawn from the edges of the bottom layer to the edges of the top layer, and extended until the two sides meet.





When designing cakes with separator plates and pillars, the triangle rule becomes more flexible. The eye determines a pleasing triangular shape, though a tier or two may not fit exactly on the ruled triangular line.

### **Suggested Things to Do**

1. Look through cake decorating books or go to the Internet for suggestions for size of tiers when combining three or more.
2. Stack cake pans of different sizes, leaving any space needed between layers and check to see that they conform to the triangle rule, or are pleasing to the eye.

### **Assembling a Tiered Cake**

The tiered cake, like any other architectural structure, needs a strong foundation on which to stand. A sturdy network of wooden dowel rods, plastic pillars, pegs, hard plastic straws (example bubble or fat straws) and separator plates gives the cake its necessary foundation and the framework on which to build.

The classic tiered cake assembly shown here can be adapted for any multi-layer cake, be it two, three, four or more tiers. Wedding cake tiers are usually two layers deep, with the base tier deeper than those above.

**NOTE:** Every tier must be placed on cake board or a cake plate as part of the tier set.



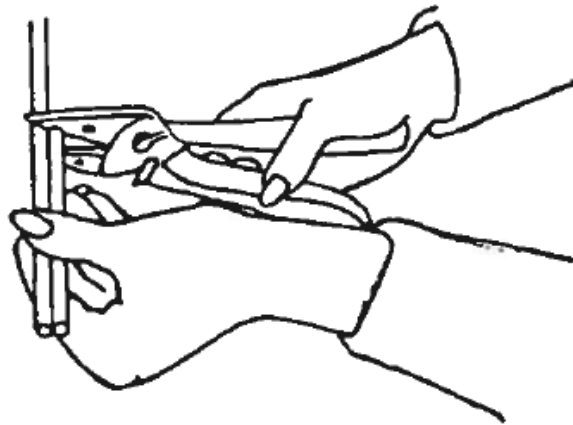
Figure 1: Picture taken from Wilton website: [www.wilton.com](http://www.wilton.com)

### Stacked Construction:

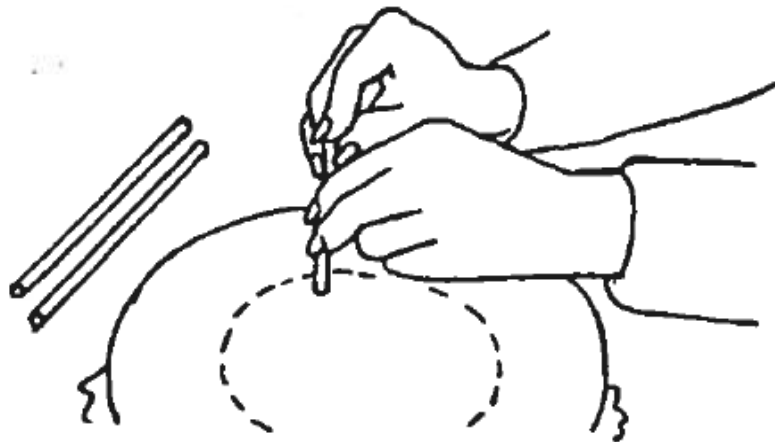
1. Ice all tiers and allow to air dry before assembly. Place bottom tier on sturdy base board 4 inches larger than the tier's diameter.
2. On the top of the bottom tier, press a cardboard cake circle the same size as the tier or separator to be placed above it to imprint an outline where you want the tier to go. Remove cake circle.
3. Measure one dowel rod at the cake's lowest point. Using this dowel rod for measuring, cut five or seven dowel rods depending on the size of the cake (using wire cutters, a small saw, a new dog nail clipper, etc.) the same size. Be sure the dowels are smooth and level. Smooth out any ridges left after cutting.



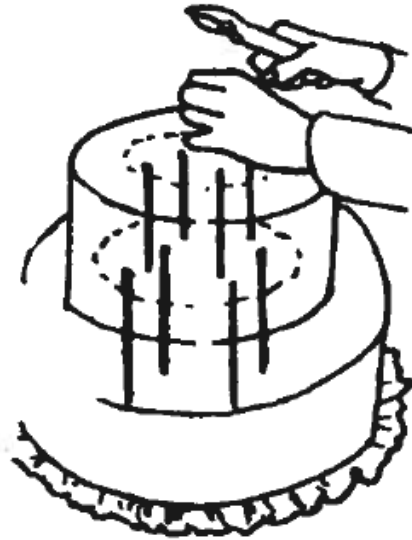
Figure 2: Pictures taken from Wilton website: [www.wilton.com](http://www.wilton.com)



4. Push each rod into the cake. Make sure they touch the base of the cake stand or plate.



5. With dowel rods in place, sprinkle coconut or extra powdered sugar inside the imprint on the bottom tier. Place next tier over dowels.
6. Repeat procedure using four to six dowel rods for the second tier.



Repeat procedure using 3 to 5 dowel rods for third tier.

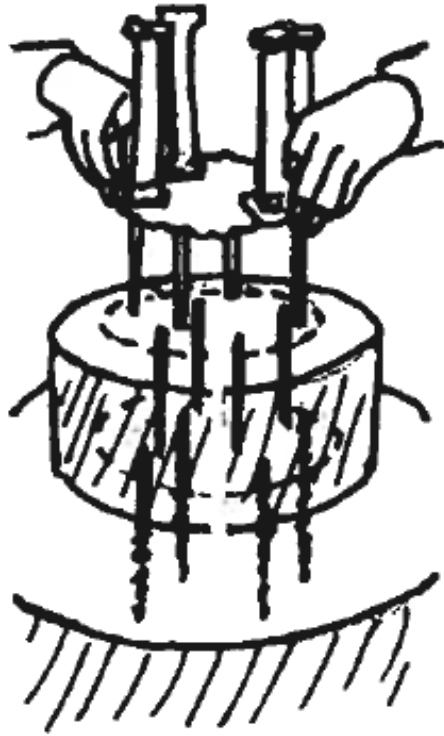
**Note** – additional tiers can be added.

Once the tiers are assembled, measure a dowel rod the height of the entire cake and sharpen the end with a pencil sharpener or knife. Using a hammer, lightly tap the dowel rod so it goes through the cake layers and boards all the way to the base. This will add additional structural support to your cake.

### Plate and Pillar Construction

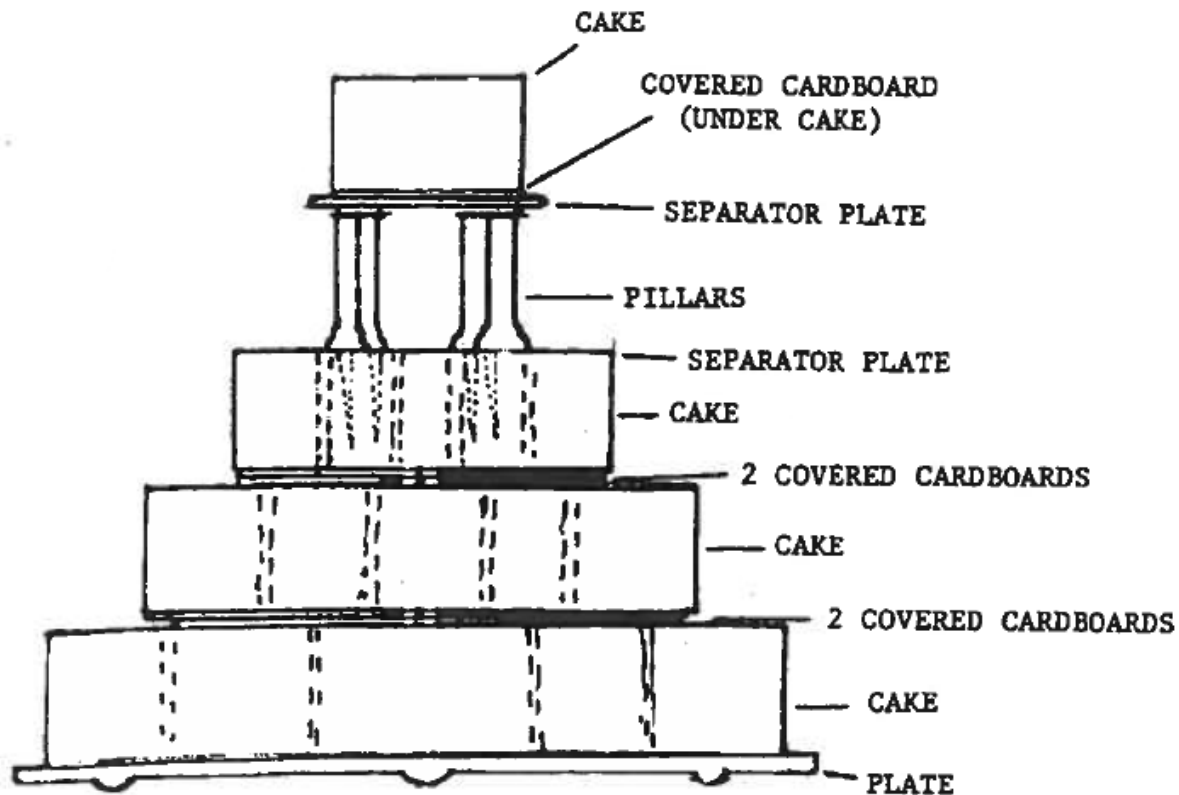
Tiers can be assembled with pillars between each tier or a combination of pillar/plate construction. To separate tiers with pillars and separator, place the separator plate on top of the tier peg side up. Place pillars on pegs and place next tier on a separator plate on top of the pillars. Generally, each tier is at least 2 inches smaller in diameter than the tier below it. (Always use same size top and bottom separator plates with each set of pillars.)





Tiers separated by pillars should be transported separately and assembled at the destination. Remove pillars as well from the plates and assemble when at destination.

Below is an example of combined construction



**TIPS:**

- Use the same procedure for cakes with more than three tiers. Always remove tiers separated by pillars and plates when transporting cake.
- Remove pillars from plates before transporting.
- Always cut dowel rods the same size, using only one master using the lowest point dowel on the cake from which to measure. Then cut all dowels to that measure. This will prevent gaps.
- Do not move dowel rods around while in the cake.
- Separator plate pegs should not be used in place of dowel rods. They should be used with dowel rods.
- Finely shredded coconut or confectioners' sugar, placed under cake circles or plastic plates, helps prevent frosting on the cake from sticking to the bottom of cake circles or separator plates.
- Use extreme care when inserting dowel rods into tiers so the cardboard between tiers does not bend.

### **Suggested Things to Do**

1. Visit a bakery or professional wedding cake decorator. Take note of how different sized tiers, supports, separator plates and pillars are used.
2. Look through cake decorating books or go to the Internet for ideas on using supports, separator plates and pillars and planning the design for the cake.
3. Explore the types of supports, separator plates and pillars. Determine what would best fit your needs.

### **Cake Top Ornaments**

Ornaments may be artificial or can be homemade. The size should be in keeping with the triangular structure of the cake and never so tall it would extend above the pinnacle of the triangular design.

### **Filler Flowers**

Filler flowers may be used to fill in empty spaces around the main arrangement. When using fresh flowers, use flower picks to place flowers on the cake to prevent contamination issues with the cake.

Preserved baby's breath or artificial flowers may be used if appropriate for the design selected. Tulle and ribbon may also be used.

### **Transportation**

It is best to transport the cake as individual tiers – not stacked. Boxed or unboxed, place the cake on damp towels or rubber matting on a flat surface in the trunk or back of a van or SUV. Do not transport cake on the car seat.

### **References:**

Visit websites and go to the library and check out books on wedding cakes.

Key words to use in your search: wedding, anniversaries, tier cakes, tiered cakes

[www.wilton.com](http://www.wilton.com)

[www.bettycrocker.com](http://www.bettycrocker.com)

# Advanced Cake Decorating Unit 11—Molds

## (Seniors Only)

Unit 11 cake decorating provides an opportunity for you to mold and shape many edible materials. This may be used in preparing decorations for a cake, or an individual molded item.

Practice these skills until you have them mastered.

### Goals for Unit 11

1. Learn to mold and shape different edible materials.
2. Collect information on different molding and shaping materials.
3. Mold and shape at least three different edible materials. (Fondant, gum paste, molding chocolate, candy melts, rice cereal treats, etc.)
4. Collect information on at least three different molding and shaping materials.
5. Use decorator tips to achieve the natural likeness or effect desired in the molded or shaped item.

### Exhibit for Unit 11

1. One molded or shaped object may be on a decorated cake, a cake form or an independent display in a case (no larger than 10 inches) to protect the item from harm.
2. Your completed Cake Decorating e-Record in a sturdy binder/notebook should accompany the molded item. Records are important, too. Keep a record of each mold you do. Either take a picture or make a simple drawing. Include information on at least three molding or shaping materials used. Then write a short explanation of what you did and what you learned with each molded or shaped item you decorated.



Figure 4: Picture taken from Wilton website: [www.wilton.com](http://www.wilton.com)



Figure 5: Picture taken from Wilton website: [www.wilton.com](http://www.wilton.com)



## Molding Mediums

### Molded or Shaped Object

1. Should be firmly set.
2. Should be smoothly finished.
3. No drying cracks should show.
4. Seams should be joined smoothly with none of the joining materials showing.
5. If cornstarch or confectioners' sugar is used in molding, it should be brushed away and not be visible.
6. Color should be consistent throughout and compatible with the total design.
7. Figures should be in proportion and natural in appearance and coloring.
8. Size and shape should fit into the overall design.



Figure 6: Picture taken from Wilton website: [www.wilton.com](http://www.wilton.com)

### **Tips for e-Records**

1. Cake Decorating e-Records should be neat and complete. Instructions should be followed.
2. Cake Decorating e-Records should show that a minimum of three different materials were used in molding and shaping, plus the fair exhibit that has been made (total of 4). Include information on each material used with recipes, where ingredients and supplies can be secured, where and when this material should be used, how fast you need to work, and how fast it hardens.
3. Cake Decorating e-Record books will count for 25 percent of the placing score.

## Molds

Molds come in a variety of shapes and types including:

- Clear plastic sheets
- Clear plastic 3-dimensional molds
- Flexible molds
- Rubber
- Silicone molds
- Sugar

Handle molds with care. Follow the manufacturer's instructions for cleaning your molds.

Store molds flat and away from heat.

## **Sugar Molds**

There are three basic recipes to use with sugar molds.

### **Sugar Water Recipe**

2 cups granulated sugar

2 teaspoons water

Mix by hand, kneading for about one minute until sugar is moistened and packs like wet sand.

For tinting, substitute one-part liquid food color for water in the recipe.

### **Sugar, Meringue Powder and Water Recipe**

3 teaspoons meringue powder

3 teaspoons warm water

2 cups granulated sugar

Mix water and meringue powder until thoroughly dissolved. Add sugar and mix thoroughly to insure even distribution of all ingredients. The meringue powder acts much like egg white and gives the sugar a strong body which stands up well in humid climates and will not discolor with age.

## Filling the Mold

Only use sugar molds for sugar. In humid climates the mold should be dusted with cornstarch before mixture is inserted. Pack mixture solidly into mold and scrape off excess sugar mixture with a spatula so top is even with the edge of the mold. Place a pre-cut cardboard square over the mold and turn upside down. Lift off the mold. Let dry. Drying time varies with the size of the mold and whether it is to be solid or hollowed out. To speed drying, molded sugar can be placed in low temp oven until dry.

### Suggested Things to Do

1. Obtain instructions on basic sugar molding and try both hard and soft molds. (Soft molds may be listed under candies or mints in a recipe book rather than in cake decorating sections.)
2. Analyze the kinds of sugar molds (shapes) which would fit into your overall design. You may want to experiment with several different shapes and sizes of molds.
3. Try different coloring methods for molded sugar.
4. Try using equipment you have at home for molds such as plastic bells and cookie cutters.
5. Purchase or borrow molds of desired shapes.
6. Research information on sugar molding. Find different recipes, where ingredients and supplies may be secured, how to use sugar molds and information on when and where they should be used. This may include information on how fast you have to work and how soon the molded objects will set.



Figure 7: Picture taken from Wilton website: [www.wilton.com](http://www.wilton.com)

**NOTE:** Use royal icing to decorate sugar molds. Buttercream icing will leave a grease stain; the color will bleed into the sugar and it will deteriorate the mold.

### **Cream Cheese Mints**

3 ounce Package Philadelphia Cream Cheese

2 ½ cup Confectioners' sugar

Flavor to taste with mint flavoring or other flavorings may be added

Color as desired

1. Mix well.
2. Remove a small portion, dip into granulated sugar, and press into mold smoothing tip edge.
3. Unmold immediately.
4. Storage—refrigerate or freeze the mints in an airtight container.

### **Suggested Things to Do**

1. Research information on molding with a cream cheese recipe. Find different recipes, where ingredients and supplies may be secured, how to use the mold and information on when and where they should be used. This may include information on how fast you have to work and how soon the formed objects will set.
2. Try different coloring and flavoring recipes.
3. Make mints for some special occasion in your family or community schedule.

### **Molded Buttercream**

Buttercream frosting may be thickened with confectioners' sugar to a play dough consistency and molded or shaped into any shape desired.

### **Suggested Things to Do**

1. Obtain instructions on how to make buttercream icing for use in shaping.
2. Learn to make different shapes using buttercream frosting.
3. Evaluate the quality of your work.
4. Research information on buttercream frosting for shaping. Find different recipes, where ingredients and supplies may be secured, how to use the mold and information on when and where they should be used. This may include information on how fast you have to work and how soon the formed objects will set.

## Modeling Mediums

### Gum Paste

Gum paste has been identified with the culinary arts for centuries. It is usually used for single shapes that can be shaped quickly (small animals on a log cake). It may also be used for forming beautiful, lifelike natural flowers, dolls, etc.

Gum paste dries faster than molded sugar, but more slowly than pastillage.

#### Gum Paste Recipe

- 1 tablespoon Gum-Tex or tragacanth gum
- 1 ¼ tablespoons Glucose
- 3 tablespoons Warm water
- 1 tablespoons Lemon juice
- 1 lb. Confectioners' sugar (more or less)



Figure 8: Picture taken from Wilton website: [www.wilton.com](http://www.wilton.com)

1. Mix warm water and glucose until glucose is absorbed.
2. Add the gum tragacanth and lemon juice and mix thoroughly.
3. Add small amounts of confectioners' sugar until you can work the mixture with your hands. Continue adding small amounts of confectioners' sugar as you knead the mixture on a table top. As soon as the mixture is pliable and can be shaped without sticking to your fingers, you have added enough sugar (a pound, more or less) and the gum paste is of correct working consistency.
4. If you are not going to use the gum paste mixture immediately, place it in a plastic bag and then in a covered container to prevent drying. When stored properly, your gum paste will keep for several months. Gum paste handles best when it is several days old.

#### Suggested Things to Do

1. Obtain instructions on how to make and use gum paste.
2. Learn to make different shapes using gum paste.
3. Evaluate the quality of your work.
4. Research information on gum paste. Find different recipes, where ingredients and supplies may be secured, how to use gum paste and information on when and where it should be used. This may include information on how fast you have to work and how soon the formed objects will set.

## Pastillage

This is a French word which comes from *pastille*, a firm, jelly type gum sweet. Pastillage is a very white, pliable pastry dough used to make pastry decorations such as ribbons, bows, and large-scale three dimensional pieces. The dough is a combination of confectioners' sugar, cornstarch, gelatin, and sometime gum Arabic; it is kneaded until it is soft and smooth, and rolled to the desired thickness and cut and formed. It is very strong and dries rock hard. Although the dough is easy to roll and cut, it dries out quickly. Food coloring may be worked into the dough prior to rolling or the finished piece may be airbrushed or painted with rehydrated cocoa powder, edible food coloring or if only for decoration petal or luster dust.

### **Ewald Notter Pastillage Recipe**

850g (6 3/4 cup) Powdered Sugar

150g (1 1/8 cup) Cornstarch

10g (4 sheets) Gelatin Sheets (can substitute powdered gelatin 2 envelopes dissolved in 60g cold water)

30g (1 1/2 tablespoons) Corn Syrup or Glucose

15g (1 tablespoon) White Vinegar

1. Place the glucose (corn syrup) and white vinegar in a small pan.
2. Bloom the gelatin in cold water. Start this while you are prepping your sugar and starch so it has plenty of time to soak up water—you want it well hydrated. (To substitute recipe with powdered gelatin use 60-80g water)
3. Weigh and sift your powdered sugar and cornstarch together so they are well combined.
4. Place the dry ingredients in the mixing bowl and warm your wet ingredients with the bloomed gelatin and let that melt –but not too hot (do not let boil, just warm enough to melt the gelatin).
5. Gradually pour the melted gelatin mix into the dry ingredients while stirring with the paddle on the slowest speed.
6. Let that stir until it all comes together then turn it out onto a very clean surface dusted with powdered sugar and kneed until smooth

### **Recipe Continued:**

7. If it seems too dry and crumbly moisten your hands and continue kneading—repeat until the consistency is smooth and cleans up the surface. Can add 2 teaspoons of warm water at a time if it is still too dry until correct consistency is reached.
8. The pastillage dough should be like bread dough but not as soft or sticky.
9. Flatten into a disc and triple wrap tightly with plastic wrap. Can be placed into a Ziploc bag with a damp towel if the climate is dry to help prevent the pastillage from drying out. Keep any portion that is not being used wrapped at all times.

### **Suggested Things to Do**

1. Obtain instructions on how pastillage is made and how to use it.
2. Learn to make different shapes using pastillage.
3. Evaluate the quality of your work.
4. Research information on pastillage. Find different recipes, where ingredients and supplies may be secured, how to use pastillage and information on when and where it should be used. This may include information on how fast you have to work and how soon the formed objects will set.

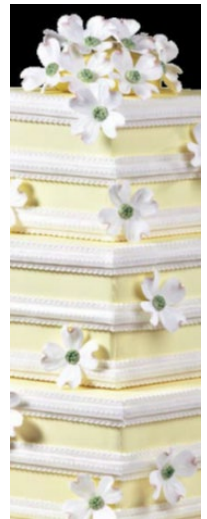


Figure 9: Picture taken from Wilton website: [www.wilton.com](http://www.wilton.com)

## Fondant

Fondant is often used for floral and figure shaping or to completely cover a cake or molded object.

Explore using the variety of fondants out on the market.

For recipes and tips on using fondant, refer to Unit 8.

### Suggested Things to Do

1. Learn to roll out fondant and cover a cake or molded object.
2. Obtain instructions on how to prepare and use fondant in shaping.
3. Learn to make different shapes using fondant.
4. Evaluate the quality of your work.
5. Research information on fondant. Find different recipes, where ingredients and supplies may be secured, how to use shaped and rolled fondant and information on when and where it should be used. This may include information on how fast you have to work and how soon the formed objects will set.



Figure 10: Picture taken from Wilton website: [www.wilton.com](http://www.wilton.com)

## Marzipan

Marzipan is a thick pliable mixture of almond paste, sugar, glucose, and sometimes egg whites. It may be colored. It is used extensively in creating edible figurines such as animals and flowers, and also rolled into thin sheets and used to cover cakes and pastries. Confectioners' sugar, rather than flour, is used to work with marzipan. If the dough is overworked, the almond oil will rise to surface and make the dough sticky; this may be corrected by kneading in a bit of water and confectioners' sugar. Owing to its high sugar content, marzipan dries out quickly and should be kept covered. If it becomes too dry, it may be reconstituted with a bit of water, but this will reduce shelf life. It is best to store in an airtight container in a cool place.

Almond meal is also known as almond flour and is finely ground blanched almonds.



Figure 11: Picture taken from [hilahcooking.com](http://hilahcooking.com)



Almond paste is a soft past made from ground blanched almonds, sugar and glycerin. The British use the term Almond Paste for Marzipan.

### **Marzipan Recipe**

1 cup Almond paste

2 Unbeaten egg whites from pasteurized eggs

3 cups Confectioners' sugar

½ teaspoon Vanilla or rum flavoring

Knead almond paste in bowl. Add egg whites, mix well. Continue kneading as you add flavoring and sugar, one cup at a time, until marzipan feels like heavy pie dough.

Use confectioners' sugar when dusting the table to prevent the marzipan from sticking. After marzipan pieces are finished, brush with a warmed corn syrup to give them a glazed look.

**NOTE:** Cornstarch cannot be used when shaping marzipan. It causes yeast formation and bacterial bodies to form.

### **Suggested Things to Do**

1. Obtain instructions on how to prepare and use marzipan in shaping.
2. Learn to make different shapes using marzipan.
3. Evaluate the quality of your work.
4. Research information on marzipan. Find different recipes, where ingredients and supplies may be secured, how to use marzipan and information on when and where it should be used. This may include information on how fast you have to work and how soon the formed objects will set.

## Candy Leather

Chocolate or candy used for shaping is called chocolate leather or candy clay.

### Chocolate Leather Recipe

1 part glucose  
2 parts melted candy melts

1. Boil water in lower portion of double boiler, remove from heat and set top pan on. Add candy melts, stir until melted.
2. Heat glucose in separate pan until warm to the touch.
3. Combine with melted chocolate. Stir rapidly. Cool.
4. Store in a sealed container in a cool place.
5. Roll between plastic film, mold using a greased mold, hand model or sculpt into shape desired.

**Note:** If hands are too warm and chocolate melts, wash hands often to cool them, or apply a light coating of white Crisco\* to palms of hands or wear disposable food safe plastic gloves.

(Crisco is the brand recommended by professional cake decorators. There may be other high ratio shortening products which would also give satisfactory results.)



Figure 12: Picture taken from Wilton website: [www.wilton.com](http://www.wilton.com)

### Candy Clay Recipe

12 ounce Candy Melts, your choice of color or flavor  
1/4 cup light corn syrup\*

Melt Candy Melts following package directions. Be careful not to get the melted candy too hot. It should be thoroughly melted, but not hot. Add corn syrup and slowly/gently fold it into the melted candy\*\*, continue gently stirring until fully blended. Then turn mixture out onto a waxed paper-covered cake board.

**\*Hint:** You can also use glucose in place of corn syrup for a more translucent petal look. Just warm the glucose, being careful not to overheat before adding to melted candy. Let the candy clay set at room temperature to dry and firm, probably about 3 or 4 hours, then seal in plastic bag until ready to use. Candy clay will give the best results if allowed to rest overnight before working with it. You might notice some white residue around the base of the mound. Don't worry, it's just some of the fat/oil and when you knead the clay it will disappear into it. If there is a lot of it, you can trim it off before kneading the clay to soften it.

### **Candy Clay Recipe Continued:**

**\*\*Hint:** Don't stir fast when blending together, as you can cause the oils/fat in the candy to start separating and coming to the top, which will make the candy look very oily. If you see oil puddling around the clay once it has been turned out, you should place one or two paper towels on top and pat clay to absorb some of the oils.

**To Use:** Candy clay will be very hard at the start; knead a small portion at a time until workable. If candy clay gets too soft, set aside at room temperature or refrigerate briefly. When rolling out candy clay, sprinkle work surface with cornstarch or cocoa (for cocoa clay) to prevent sticking; roll to approximately 1/8 inch thick.

**To Tint:** White candy clay may be tinted using Candy Color. Knead in color until well blended.

**To Store:** Prepared candy clay will last for several weeks at room temperature in an airtight container.

### **Rice Cereal Recipe for Molding**

20 cup Miniature Marshmallows (divided)  
12 cup Crisped Rice Cereal  
12 tablespoons Butter  
2 teaspoon Vanilla



Figure 13: Pictures taken from pinterest

1. In a large pan, melt together the butter and 15 cups of marshmallows over low heat while stirring constantly. After the marshmallows are completely melted, add the vanilla.
2. Next, stir in the cereal. When the cereal is combined, mix in the remaining 5 cups of miniature marshmallows.
3. Using molding gloves or your hands, rub with butter and mold the basic shape that you want.
4. The trick is to compress the treats very well before shaping the mold.
5. When you have shaped the mold you may want to refrigerate it before putting it on the fondant or modeling chocolate.
6. When the shape is completely cool, then you can refine the design.

## **Suggested Things to Do**

1. Obtain instructions on how to prepare and use rice cereal treats, or chocolate leather or candy clay in shaping.
2. Learn to make different shapes using rice cereal treats, chocolate leather or candy clay.
3. Evaluate the quality of your work.
4. Research information on rice cereal treats, chocolate leather or candy clay. Find where ingredients and supplies may be secured, how to use them and information on when and where chocolate leather should be used. This may include information on how fast you have to work and how soon the formed objects will set.



Figure 14: Pictures taken from [www.wiltonbrands.com](http://www.wiltonbrands.com)

## Modeling Techniques

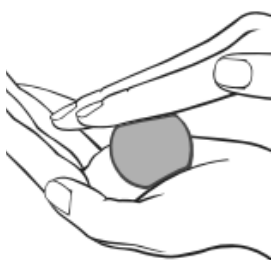
Modeling can be done with fondant, gum paste, candy clay or marzipan. Your work area should be smooth and non-porous. You can protect the work area by laying down a silicone mat or taping down a sheet of parchment or waxed paper. Be sure to have a small cake board or plate nearby so you can easily move figures to allow them to dry. You want to move your figures as little as possible to eliminate distortions.



Figure 15: Picture taken from Wilton website: [www.wilton.com](http://www.wilton.com)

The most accurate way to create consistent sized parts is to use a food scale to weigh equal amounts of your medium. You can also measure the diameter of a ball to get similar sizes.

### Basic Ball



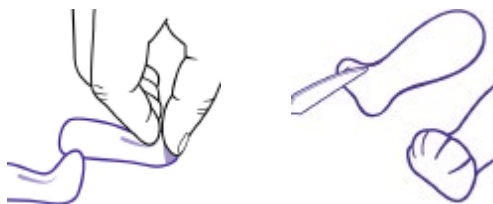
Every part you make for your character starts with a basic ball. Roll medium between palms of cupped hands until smooth and all wrinkles are removed. For best results, keep one hand still while the other hand rotates ball to shape it. **Hint:** applying more pressure or rolling faster will create heat, which helps to get rid of wrinkles.

### Shaping Logs



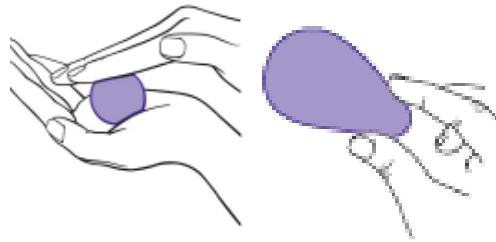
Logs are most commonly used to make arms and legs. Place the ball on your work surface. Using the palm of your hand, (not your fingers because your fingers will cause the log to have an uneven surface) apply even pressure and roll the ball into a log.

Once you shape a log you can bend it to form joints for elbows, hands, feet, paws, etc. To bend, gently pinch the end of the log, or bend where desired. Use cotton balls or tissues to support the weight of the material to keep the bend in place. Use a butter knife to add fingers and toes.



## Shaping Cones

Commonly used for the torso, main body part, or head. It should be symmetrical and smooth. Place ball on a hard, flat surface or in the palm of your hand. Using a single finger, roll one side of the ball until it starts to form a point.



## Forming Figures – people, animals, objects

When attaching limbs to main body parts, it is helpful to create a socket in the body using a ball tool to fit the part. After creating the socket, attach pieces together with a damp brush. Water can be used if pieces are still fresh. To attach dry pieces, use piping gel. For larger pieces, use toothpicks or raw spaghetti for additional support.



## Flowers

Many flowers and other decorations can be hand modeled using any of the mediums listed above. Use a combination of rolling, cut-out, and modeling.



Figure 16: Pictures taken from Wilton website: [www.wilton.com](http://www.wilton.com)

We encourage you to search books, magazines and online for ideas and instructions.

## Candy Mediums

### Hard Candy

***When using hard candy, it is extremely hot and can burn you!***

Transparent hard candies may also be made.

#### **Hard Candy Recipe**

1 cup granulated sugar

1/3 cup hot water

1/3 cup light corn syrup

1/2 teaspoon liquid food colors

1/2 teaspoon flavoring

Yield: 10 small lollipops or about 30 mini-candies.

1. Select mold suitable for hot liquids. Brush lightly with vegetable oil.
2. Combine sugar, hot water and corn syrup in pan. Place on high heat and stir with wooden spoon until all sugar crystals are dissolved. Wash down sides of pan with a pastry brush dipped in hot water.
3. Clip thermometer on side of pan and continue cooking without stirring. When the thermometer registers 300°F, remove pan from heat.
4. Let mixture stand for 2 minutes until bubbles disappear. Add flavoring and food color and stir to blend.
5. Pour mixture into prepared molds and let harden at room temperature for about 10 minutes.
6. When candy has hardened, unmold by inverting and gently flexing molds.
7. Hard candies will keep at room temperature for about 6 weeks.



Figure 17: Picture taken from thespruceeats.com

**Note:** Hard candy can also be used as windows/accents for cookie house construction and decorations on cakes.



### **Spun Sugar Recipe**

**CAUTION!** This medium is worked with at high temperatures and can cause burns if not handled carefully.

Before starting, place 2 dowel rods on the table with the ends sticking out from the edge of the table. You may need to put something heavy on the ends on the table to keep the dowels steady. Put newspaper on the floor below the dowels.

**CAUTION:** This is a messy process.

Recipe:

1 pound granulated sugar

8 ounce corn syrup

1 cup water

Mix together well. Cook to 290° F. While cooking, the sides of the pan should be washed down at least 2 times using hot water and a brush. This eliminates the crystals that form on the side of the pan. Remove from heat and add coloring. Dip a fork into the mixture and holding it about 2 feet above the dowel rods, sweep the fork in large arcs over the dowels. The sugar will fall in fine strands over the dowels. Continue until you have the amount needed. Take a small amount of the spun sugar (**CAUTION:** It may be hot. Consider using latex gloves) and mold the sugar into the shape you want.



Figure 18: Picture taken from thecurvycarrot.com

## **References**

### **Gum Paste**

Australian Book of Cake Decorating by Bernice Vercoe and Dorothy Evans is available for purchase online through several different books websites: Amazon.com; abebooks.com and several other places.

Also check out [www.wilton.com](http://www.wilton.com) for more information on gum paste.



## **Chocolate**

Chocolate Artistry by Elaine Gonzales is available online at Amazon.com.

## **General**

Check out these websites:

KitchenKrafts at: [www.kitchenkrafts.com](http://www.kitchenkrafts.com)

[www.wilton.com](http://www.wilton.com)

Also search the Internet by using these key words: gum paste, pastillage, chocolate artistry, marzipan, fondant and you will find many different ideas.

## **Sprinkles cake**

<https://www.mycakeschool.com/video-tutorials/sprinkle-fault-line-cake-decorating-tutorial/>

## **Molded flower**

<https://www.instagram.com/p/Bxk0iHrg7JT/?igshid=129w5ht4k527s>

## Advanced Cake Decorating Unit 12 — Create Your Own (Seniors Only)

Unit 12 Cake Decorating provides an opportunity for you to create your own 4-H cake decorating project. By now you have completed several units in cake decorating. You own or have access to a variety of cake decorating books or instructions. You have learned many of the techniques used in cake decorating. Now it is time to explore the cake decorating field. Pick out one or more areas you would like to learn more about and create your own cake decorating project.

### Goals for Unit 12

1. Build on other 4-H cake decorating units.
2. Plan, develop and evaluate your own cake decorating project. This may include such things as:
  - designing original patterns for cakes
  - experimenting with different cake and frosting recipes and writing up the results
  - learning new skills such as filigree, lace, curtaining, extensions, lambeth work, ganache, mirror glaze, drip cakes, and wired bouquets, etc.
  - experimenting with adjustments for high altitudes
  - exploring moneymaking aspects of cake decorating
  - participating in cake decorating shows and visiting with those involved in teaching commercial cake decorators or judging large shows
  - learning about international methods of cake decorating
  - exploring career possibilities in the cake decorating field
3. Share knowledge and skills with others.

### Exhibit for Unit 12

1. A detailed notebook describing your project including your goals, plans, accomplishments and your evaluation of results. You may use pictures or any records you have kept that provide evidence of your accomplishments. **Your main project exhibit is your notebook and will count for 75 percent of the placing score.** If an item was made as part of your project, a sample may be displayed as further evidence of the quality of your project but is not your main exhibit. Display must not require over a 1ft x 1ft area or consist of more than three items.
2. Label each item in your exhibit with your name and county.

## Judging Standards

### Project Plan

Must include the following:



1. Goals to be reached or things to be learned or done.
2. Resources which can be used; where information or help can be located.
3. What should be done and when it should be done.
4. How to determine what has been accomplished.



### Evaluation

Should include the following:

1. What was done, accomplished and learned.
2. How well you reached your goals.
3. The results of your project (may include a decorated item if that applies to your goals).

## Project Planning Guide

### Select a Topic

Consider your own interests and needs as you select one or two topics and create your own project. These topics might include such things as:

### Learning More Advanced Skills

1. Determine what skills you want to learn.
2. Locate someone who can give you help with that particular skill.
3. Follow through and exhibit some evidence of the skill developed.

## **Advanced Training**

1. General courses are sometimes available through school adult education programs, vocational schools or stores which sell cake decorating supplies.
2. Check out the Internet for videos on training for learning specific skills.
3. Instruction may be secured from people who do cake decorating all the time. (Prices for private instruction will vary.) Professional traveling instructors are another source for training.
4. Some cake shows have special sharing times and instruction.
5. Wilton has many opportunities for you to get training through their videos and online courses. Go to [www.wilton.com](http://www.wilton.com) and search for trainings.

## **Experiment with Cakes and Icings**

1. Use different cake recipes such as a basic white cake, cake mix, pound cake, fruit cake, carrot cake, zucchini or other vegetable cake, applesauce cake and spice cake.

Determine any adjustments which need to be made in the recipe because of altitude.

Note differences in the problems you have in decorating the cakes (crumbs, uneven tops or sides because of the fruit, nut or vegetable pieces, moisture in the cake affecting the frosting and others).

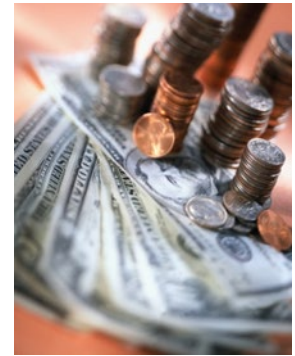
2. Note the changes which occur in frosting at different altitudes, when the humidity changes, and when different kinds of food coloring are used. What adjustments need to be made?
3. Experiment with different frostings for different purposes.

## **International Differences in Cake Decorating**

1. Collect cake decorating books printed in different countries or go to the Internet and search for cake decorating skills done in different countries. Study the skills shown and try to find similarities and differences between skills and instructions emphasized in different countries.
2. Visit with people associated with international cake decorating programs. Discover differences they find when judging or instructing in other countries.

### **Moneymaking Aspects of Cake Decorating**

1. Determine the market for home decorated cakes in your community or area. What kinds of cake would people buy? (Wedding cakes are usually in greatest demand, but what about birthday, anniversary and others?).
2. Check with your local and county health departments to determine what laws would be involved in regulating home baking for sale.
3. Determine the amount you would have to charge for a cake and compare the price with other cake decorators. (Consider the type and size of the cake, the kind of frosting, the cost of materials, how time-consuming the various flowers or decorations would be, the travel involved and so forth.)
4. See if people would make a contribution to your club or local charity in return for your decorating skills.
5. Decide if you can or should give a “price break” to members of your family or close friends for special occasion cakes.
6. Investigate opportunities to work part-time or during the summer in a local bakery or with a local cake decorator.



### **Career Possibilities in Cake Decorating**

1. Investigate summer or part-time jobs in a local bakery or cake decorating shop.
2. How many cake decorators are employed in local or regional bakeries? What other responsibilities do they have to assume? What hours do they work? What is the pay level? What are the career opportunities for people going into this field in the future?
3. Check into the potential for teaching cake decorating classes or giving individual instruction in your community.
4. Investigate opportunities to manage or own a cake decorating shop at some time.

### **Your Notebook**

Should include the following:

1. Goals
2. Plans
3. Accomplishments
4. Evaluation of your results



### **Write It Down**

1. Develop a plan which would be suitable for your topic.
2. Explore resources which are available.
3. Share your project plan with your parents and 4-H leader to get their approval or suggestions before you proceed with the project.



### **Carry Out the Plan**

1. As you proceed with your project, you will want to describe how you did the project and where and from whom you received information. Insert this information into your project report.
2. Explore how you can share your project through regular 4-H club meetings, local service clubs, newspaper articles, school reports or by blogging or tweeting your accomplishments on the Internet.

### **Evaluate Your Project**

1. Evaluation is a continuous process. Do not wait until the end to look back and see how you are doing. Use the “Suggested Evaluation Questions” page as you go along.
2. Write the results of your project in your record.

Resource: Self-Determine Manual, located at:

<http://co4h.colostate.edu/projects/manuals/Self-DetermineManual.pdf>

## Suggested Evaluation Questions

	Yes	No	Need Help
1. Have I set up goals that are possible to achieve?			
2. Do I follow or consider ideas from others?			
3. Am I shy about admitting that I don't understand something?			
4. Do I ask questions of my leader, parents, friends and others who might be able to clarify points I don't understand?			
5. Am I willing to share information with others when it might be helpful to them?			
6. Have I concentrated on the details of my projects?			
7. Do I try to summarize and relate my project to other 4-H activities in which I am involved?			
8. Do I really understand my goals and try to work toward them?			
9. Am I satisfied with my project at this point? (If not, how can I change it?)			
10. Am I motivating myself to plan and carry out a worthwhile project?			
11. Am I flexible about this project?			
12. Am I willing to compromise and take suggestions from leaders and others?			
13. Have I talked to qualified people who can make contributions toward my project?			
14. Do I know what resources are available and am I using them to my best advantage?			
15. Am I collecting pictures, and other resource materials which might be of use in my project?			
16. Am I using resource materials to help me reach or modify my goals?			
17. Have I been willing to look at my total project and determine whether I am really meeting my objectives?			
18. Have I grown personally in carrying out this project?			
19. Have I shared my project so it will help others in my club or community?			