4-H Foods Series
Discovering
Cake Decorating

Learning is 3D!

To help you get the most out of your learning, each project meeting has the following parts:

**Dream it!** Plan for success

**Do it!** Hands on learning

**Dig it!** What did you learn?
What Skills Will You Learn?

To complete this project, members must:

- Spend a minimum of 15 - 20 hours completing the project work.
- Complete the listed activities, OR a similar activity that focuses on the same skills, as you and your members may plan other activities.
- Plan and complete the Showcase Challenge
- Complete the Portfolio Page.
- Participate in your club’s Achievement (see the inside back cover for more information about 4-H Achievement).

This project is being offered in Manitoba, with permission from Saskatchewan 4-H Council.

Achievement (project completion) requirements for 4-H Manitoba apply to this project and are described above. The amount of time spent on project work may exceed the minimum 15 hours, depending on the project that you have chosen and the activities within the project.

This project was selected to be offered by 4-H Manitoba because it provides members with the opportunity to meet Manitoba 4-H project learning objectives. These objectives include technical skills, communication, meeting management, leadership skills, as well as community involvement and real world experiences.

Showcase Challenge and My Portfolio Page

At the end of the member’s section are the “Showcase Challenge” and “My Portfolio Page”.

The “Showcase Challenge” page gets members to think about their accomplishments and explain or demonstrate how they were successful. There is information to help them decide how they will best “Showcase” their learning to family and friends.

Record Keeping is an important part of every 4-H project. “My Portfolio Page” is used to keep track of members’ 4-H experiences. As each member learns skills this is recorded on the portfolio page. When the Portfolio Page has been completed and confirmed by the leader, then it becomes a record of the member’s completion of the project and participation in other 4-H activities beyond the project.
4-H leader assessment of members will occur throughout the project as you observe the progress and learning of each member. Record what you see and hear. Your feedback should be positive and specific (not just “well done”). Share feedback with members often so they can act on your suggestions. How you choose to observe and record is up to you. Remember that members may improve throughout the project year and that records should be updated to reflect when they showed their best learning.

Projects promote technical, communication, meeting management, and leadership skills, as well as community involvement and real-world experiences. In addition to the specific skills members are to learn in each activity, these learning goals for members are important: Following instructions - Working with others - Using supplies safely - Using the key words - Improving with Practice - Respecting timelines.

**4-H LEADER TIPS FOR SUCCESS!**

- Page 2 in each guide summarizes what the member must do to complete the project.

- Depending on time available, groups size and member abilities, you may wish to break the activities in each section into more than one project meeting.

- The internet has lots of interesting websites and educational activities. We do not endorse any website or any products they may sell. Information/products will be used at your own discretion.

- Safety is a number one priority. Care has been taken to create safe, age appropriate activities throughout this manual. As leaders, it is important for you to emphasize safety rules and adapt activities to safely match your members’ abilities. Ensure members have a good understanding of safe practices when using tools, that they use the right safety equipment when necessary, and that good supervision is provided. A quality experience needs to be a safe experience.

- The multiple intelligences theory teaches us that people learn in at least 8 different ways. All individuals will be stronger in some ways of “intelligences” and weaker in others. It follows that the more ways we teach, the more members we will reach. Throughout this project, you will find a mix of teaching and learning methods. Teaching projects using a broad blend will help increase the learning potential of all members.

- Projects are designed to teach many skills, but the 4-H member is always more important that the subject matter. Stress cooperation in the activities to develop teamwork and cooperation skills. These are valuable life skills. Ensure the work is completed in a manner that members feel good about themselves and their efforts. This can be done by assigning tasks based on member’s individual abilities. Modelling and expecting supportive behaviour (i.e. no “put-downs”) in the group also contributes to a positive experience.
4-H LEADER TIPS FOR SUCCESS!

- There will be opportunity for experimentation and applying skills that members have learned throughout this project. Experimenting can be frustrating, but learning through trial and error is an important life skill. Explain to members that it is alright to either go on to the next activity or do the activity again if they need the practice. Help the members work through their challenges until they are satisfied with the final results. Creating inventive 4-H members will be very rewarding.

- Celebrating success is an important but sometimes overlooked part of our lives. We encourage you to use the final section to empower the members by celebrating all they have learned in a fun manner. Anything that you do to add to the spirit of fun and the sense of accomplishment of each member will likely be remembered as the highlight of their 4-H year.

Have fun and thanks for your belief in young people!

**Showcase Challenge**

Have members use their Member Manual to help them in organizing what they have learned. The form of the showcase can vary according to the wishes of the members and leaders, and the member’s ability. Information could be presented in many forms, some of which are: posters, pamphlets, written reports, speeches, computer presentations displays, etc. Suggestions are listed on the Showcase Challenge page at the back of the Member Manual. The best results are almost always obtained when members are allowed to present their information in the style of their choice.

**Portfolio Page**

Once members have completed all the activities they will have a lot of information recorded in their manuals. These are products of their learning. As a final exercise in the project, members and leaders will pull together all this learning in completing the Portfolio Page in the Member Manual. Members and leaders must indicate how they know the member was successful at a particular skill. Leaders will find evidence if they think about what they have observed members doing, what discussions they have had with members, and what the members have produced. If leaders think that members need to go back and improve on any skill, this chart helps them clarify what needs to be done.
Now that you have finished this project, it is time to think about how you will share your experiences and knowledge with others. You may put your new skills to work by helping at a community event or at your club Achievement or teaching others about your topic. The goal of the Showcase Challenge is to help highlight your new skills and help you understand how you can use them. It can be an opportunity to receive feedback from others on your project. So go back through your manual and find some highlights of your learning (what you are proud of) and think about how you will “showcase” it.

**Showcase Challenge**
*Bringing it all together!*

Dream It!
Here are some Showcase Challenge Suggestions:

- Demonstrate something you made or learned about
- Act out a play
- Teach a class
- Use your new skills to help with the Club Achievement plans
- Make a poster or display
- Make a video or slideshow
- Organize a special event
- Or come up with your own idea. It is up to you and your leader!

My Showcase Challenge Plan

My showcase idea: __________________________________________________________
________________________________________________________________________
What materials and resources do I need? _________________________________________
________________________________________________________________________
Who do I need to help me? ___________________________________________________
________________________________________________________________________
When do I need to have things done by? _________________________________________
________________________________________________________________________
**Do It!**
Insert or attach your finished product or a photo of you sharing your skills in your Showcase Challenge.

**Dig It!**
Now that you have showcased your project skills;
- How did your Showcase Challenge go?

- What would you do differently next time?

- How will you use your new skills in the future? *(in different situations?)*
**My 4-H Portfolio Page**

Name: __________________ Date: ____________ Year in 4-H: ______
Club: ____________ Hours Spent on 4-H: ____ (Project and Other 4-H Activities)

---

**Project Name: __________________ Skills Chart**
To be completed by the leader and the member based on observations and conversations throughout the project. **This generic 4-H Portfolio Page is for use with all projects without a project specific 4-H Portfolio Page printed in the manual.**

<table>
<thead>
<tr>
<th>Meeting Date</th>
<th>Activities we did... During your project you did activities to help you learn new skills. Identify these activities below.</th>
<th>Skills I learned... Identify the skills learned in the activities completed in your project.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Additional Comments/Activities:

---

**Leader Point of Praise!**

I am most impressed by...

I acknowledge that the member has completed the 4-H project requirements.

Leader's Signature: __________________________
Above and Beyond!

In addition to project skills, 4-H also increases skills in meeting management, communications, leadership, community involvement through participation in club, area, or provincial 4-H events or activities. List below any activities you participated in this year in 4-H.
(Some examples include Executive Positions Held, Workshops, Communication, Community Service, Rally, Bonspiels, Conferences, Judging, Camps, Trips, Awards, Representation to Area or Provincial Councils, etc)

_____________________________________       _______________________________________
_____________________________________       _______________________________________
_____________________________________       _______________________________________
_____________________________________       _______________________________________
_____________________________________       _______________________________________**
Feel Free to add additional pages that include awards, certificates, new clippings, photos or other items that describe your 4-H involvement.

Member Point of Pride!

What I learned…

What I need to improve on…

What I want others to notice…

Member’s Signature: _____________________________________

Point of Praise! Another’s perspective on your achievements in 4-H.

(community professionals, MAFRI staff, 4-H club head leaders, 4-H Ambassadors, friends of 4-H)

I am most impressed by…

I believe that you have learned…

In the future I encourage you to…

Signature: _______________________________
4-H Achievement

4-H Achievement is... a 4-H club celebration when members have completed their projects. Achievements are planned by the club to give recognition to members and leaders for their accomplishments in their 4-H projects and club activities.

A 4-H Achievement can take many different formats: from choosing a theme, to member project displays, to members using their new skills for the event (entertainment, food, decorating, photographer, etc.), to members presenting their project to the whole group, the options are endless and open to the creativity of the members and leaders in each club!

Clubs may also plan their Achievement to promote 4-H to the community or to recognize sponsors and others who have helped the club.

Members and leaders - be sure to check your project books for the project completion requirements, so you will be ready for your club’s Achievement celebration!

If you have any questions, comments or suggestions for this or other 4-H projects contact:

Manitoba 4-H Projects
Manitoba Agriculture Food and Rural Development
1129 Queens Avenue
Brandon, MB R7A 1L9

Email: 4h@gov.mb.ca
Phone: 204-726-6613
Fax: 204-726-6260

This manual is for educational use only and is not intended as professional advice.

For more information about 4-H and the many 4-H opportunities available please visit

http://www.gov.mb.ca/agriculture/4-h/
What is 4-H?
4-H is an international youth organization involving more than 7 million members in 80 countries around the world.

In Canada, 4-H began in 1913 in Roland, Manitoba as a community-based organization dedicated to growth and development of rural youth. Today’s 4-H program reaches both farm and non-farm youth across Canada. The motto of “Learn to Do by Doing” is embodied in the program, as 4-H focuses on skill development as well as personal development of life skills such as communications, leadership and citizenship.

4-H Motto
“Learn To Do by Doing”

4-H Pledge
I pledge,
My HEAD to clearer thinking,
My HEART to greater loyalty,
My HANDS to larger service,
My HEALTH to better living,
For my club, my community, and my country.

4-H Quality Equation Principles

Quality People
- Promote responsibility, respect, trust, honesty, fairness, sportsmanship, citizenship, teamwork and caring.

Quality Experiences
- Provide members with personal development and skill development experiences.

Quality Projects
- Promote and value quality effort.
- Promote high quality, safe food production within industry standards.

Manitoba 4-H project material is developed by
Manitoba Agriculture, Food and Rural Development (MAFRD)
# Table of Contents

Introduction ................................................................................................................................. 1

Overview of the Project .................................................................................................................. 3
  Unit One Requirements ................................................................................................................ 4
  At Achievement Day ..................................................................................................................... 4
  A Note to the Leader ....................................................................................................................... 5

Supplies You Will Need .................................................................................................................. 6

Before You Bake and Decorate
  Kitchen Safety ............................................................................................................................. 7
  Metric or Imperial? ......................................................................................................................... 8

Baking Supplies
  Scraper or spatula, what’s the difference? ................................................................................. 9
  Cake Pans ...................................................................................................................................... 9
  Baking Pan Sizes .......................................................................................................................... 10
  Activity 1: Understanding Pan Capacity ................................................................................. 11
  How Much Cake Batter? ............................................................................................................. 14
  Preparing Baking Pans or Cake Tins ....................................................................................... 14
  A Few Reminders ....................................................................................................................... 15
  A Few Words about Ovens .......................................................................................................... 16
  How to Read Recipes .................................................................................................................. 16
  Collect Recipes ........................................................................................................................... 17
  What about Allergies? .................................................................................................................. 17
  Things to Know about Flour ...................................................................................................... 18

Baking a Cake
  Walking Through the Steps ........................................................................................................ 19

  Levelling a Cake .......................................................................................................................... 21
Making a Layer Cake ................................................................. 23
Planning the Cake Design ............................................................ 24
  Look at the Whole Cake .......................................................... 25
  Repetition .............................................................................. 25
  Balance .................................................................................. 25
  Colour .................................................................................... 26
  Repeating a Pattern or Design .................................................. 26
  Evenly-spaced Designs ........................................................... 27
  Proportion ............................................................................... 28
  Number of Flowers .................................................................. 28
  Focal Point ............................................................................. 28
Looking for Ideas ........................................................................ 29
  Activity 2: Finding Ideas for this Project ................................ 30
Making Icing ................................................................................ 32
  Understanding the Ingredients .................................................. 32
  Buttercream Icing Recipe ......................................................... 34
  Chocolate Buttercream Icing Recipe .......................................... 35
  How much icing will I need? ...................................................... 35
  Icing Consistency .................................................................... 35
  Activity 3: Make Different Icing Consistencies ...................... 37
Icing a Cake ................................................................................ 38
  Crumb Coat ............................................................................. 38
  Final Icing Coat ....................................................................... 38
  Activity 4: Demonstrate Icing a Cake ..................................... 40
Cake Boards ................................................................................ 41
  How to Cover a Cake Board ..................................................... 42
  Activity 5: Covering a Cake Board .......................................... 43
Cake Storage ................................................................................ 45
Activity 23: Share Creative Designs and Decorate Your Cake ......................... 117
Activity 24: Theme Cupcakes ............................................................................................. 119

Shaped Pans for Character Cakes

Using Shaped Pans – Famous Character or Other Shapes ................................. 120
Icing a Shaped Cake .............................................................................................................. 121

Activity 25: Select, Bake and Decorate

a Shaped Cake and Calculate the Cost to Make It ..................................................... 123

Activity 26: Cake and Cupcake Designs for Achievement Day .......................... 127
Activity 27: Optional Practice Cake and Cupcakes for Achievement Day ...... 129

Achievement Day Tips ................................................................................................................ 130

Common Baking and Cake Decorating Conversions – Imperial to Metric ......... 131
Introduction

Maybe you have seen some of the cake or cupcake decorating shows on television, where teams of people make elaborate, huge cakes or hundreds of cupcakes for weddings or events. What they can do with cake and icing in a short amount of time is amazing! Remember, all these people began like you, learning the basics of cake decorating. They practiced their skills and gradually learned enough to be experts.

This year you will learn the basics of cake decorating, right from baking a cake to icing and decorating it. You will practice lettering, edging and decorating cakes and cupcakes using icing.

There are different types of icings. Some are soft and easy to spread with a knife; some are great for squeezing out of a tube to write letters or flowers; one type needs rolling with a rolling pin and can be molded into shapes or draped like fabric; and another popular icing called royal icing is often used for tiered cakes or more intricate designs as it dries hard. Because they each have different qualities, you need to learn a bit about them, how they are useful and when to use them.

Buttercream icing is the most commonly used icing for cupcakes, birthday cakes and on ice cream cakes. It is easy to make and work with, stays soft, can be coloured, spread and shaped when squeezed through special tips or tubes. This year you will concentrate on learning decorating skills using buttercream icing.

Cake decorating can transform a plain, delicious cake into a special dessert. Decorated cakes or cupcakes are parts of birthday, anniversary, wedding and seasonal celebrations. A cake can be an elegant centrepiece on the table, or be a reflection of a person’s hobbies or interests. It can be humorous, dramatic or scary. A cake can be elaborate or simple. With basic skills and imagination, your decorating creations can reflect your personality and the special occasion.
Besides learning basic cake decorating skills, you may be able to think of simple, creative ways to use candies or other objects you have at home to personalize birthday cakes. You know a few carefully placed chocolate chips on a plain cupcake suddenly becomes a face with expression, and that personalizing a simple cake with piped letters and decorations can make a birthday cake. So, instead of piping icing for the entire design, why not use licorice to draw a musical staff and notes for a karaoke party cake, or place a small toy car on an icing road to celebrate someone getting his driver’s license? If your little brother is crazy about a superhero, you could make an icing scene with a “kids’ meal” character as your centrepiece or you may want to use a specially-shaped pan for your character. Use your imagination and have fun adding character to your cake creations!

If you have ever flipped through a magazine that has pictures of decorated cupcakes, gingerbread houses or cakes, you may wonder how they decorated them. If you look on the internet, you can find thousands of images of cakes for almost any occasion. As part of your 4-H project, you will look at pictures of cakes to try to figure out how the cake was decorated, what shape they started with, the type of icing they probably used and how they made some of the designs and patterns on it. That way, as your cake decorating skills develop, you can learn to copy or adapt cake designs that you see.

Cake decorating basics do not change, but people’s expectations of cake appearance or style change over time. Over the years, more cake decorating tools have become available, particularly for working with fondant (also called sugarpaste or gum paste). Fondant is often used in combination with other types of icing. At the end of Unit Two, you will be introduced to both royal and fondant icing, to give you a “taste” of what is to come if you continue learning to do by doing through 4-H cake decorating.

Cake decorating is a skill anyone can master. It is a fun and delicious art. With the right ingredients, tools and practice, you are on your way to many years of cake decorating.
Overview of the Project

This *Cake Decorating Basics Reference and Activity Manual* has a lot of information in it, and you may master all the skills one year. You will build and develop your skills with practice, and this project is planned for you to learn the techniques well enough that you are comfortable with them and can build on them as you become more experienced. You can take Unit One again if you want to strengthen these skills before working on more advanced cake decorating. You can take each level for more than one year. Once you have mastered most of the skills in a Unit, you can add more advanced techniques, but do not need to use them on your Achievement Day cake or cupcakes.

Why take cake decorating over a few years, and not just go straight to Unit Three? It takes a lot of practice to become good at the techniques. The skills you learn in Unit One are needed in Unit Two, or you will find it difficult and frustrating.

Your family will be glad to know that you will be making and decorating a lot of cakes and cupcakes this year. They will be impressed with your special desserts and creativity of how you use the things you learn. To challenge you and help you see what possibilities you can experiment with at home, you will be introduced to techniques in the next level, but not be evaluated on it.

To develop good decorating skills, it is best to start with the basics and become comfortable with using buttercream icing before you start using royal icing or fondant. The skills you learn now can be used with other icings and in more complicated ways later. As you get better, and can do more, you will see the potential to try things in a new way, combine decorating techniques, different icings, and let your creativity and curiosity lead you to try more complicated things even now. It all takes practice, so the more you bake and decorate, the more you will learn.
• Present six cupcakes on a cake board. Cupcakes must be made by you, the member and decorated with buttercream icing. Cupcakes will be related in theme, but not identical, and use at least two different tips, though this may not necessarily be on an individual cupcake. Cupcake design can incorporate other edible decorations. Cupcakes will be evaluated on quality and cleanliness of workmanship, overall design (use of colour, balance, spacing) and skill with decorating tips.

• Display a completed Record Book.

A Note to the Leader

Cake Decorating Basics is intended to be a project that members will take in one year. You may have a variety of capabilities in your group, and should encourage those who are ready for more advanced skills to challenge themselves and try them. Skills develop with practice and they build on each other.

If you have a group of young, inexperienced decorators, they will not likely be ready for the more advanced techniques included in Unit Two until the end of Unit One. These skills may be simply introduced to help members as they evaluate pictures of cakes to determine if they can copy them or how they would change the cake design to be able to do it.

Fondant is popular and can be introduced to create characters. The fondant techniques which require more skill will be the focus of Unit Three.
Supplies You Will Need

- Icing Tip #s: Round 3 or 4, Star 1M, 12 and 16, Petal or Ruffle 102 or 104, Closed Star 131, Grass and Fur 233, Leaf 352
- Two or more icing couplers
- Icing bags – three if featherweight, minimum 12 if disposable
- Practice board (may be cheaper to place one order for the class)
- Flat spatula or offset spatula
- Parchment paper
- Cake turntable (optional but recommended)
- Food colouring (minimum three primary colours of red, yellow and blue)
- Toothpicks
- Ingredients to bake cakes and make icing at home
  - Oven
  - Cake pans
  - Muffin tins
  - Cupcake papers
  - Electric mixer
  - Computer with internet access
- Printer
- Camera
- Pens, pencils
- Crayons
- Paper
- Tape
- Scissors
- Variety of candies
Before You Bake and Decorate

Kitchen Safety

You probably want to make icing and start decorating immediately, but there are a few things that need to be talked about first, like safety in the kitchen. Some of it will seem like common sense, but a few reminders are in order:

- Wash your hands with soap and water before you start.
- Make sure the counters are cleared off and clean so you have enough space and a clean surface to work on.
- Check the recipe to learn where the oven racks should be before you turn on the oven. If the recipe doesn’t say, assume the top rack needs to be in the middle of the oven. Put it there before you turn the oven on.
- When you plug in the mixer, the cord should not be hanging where it can catch on anything while you work.
- Make sure all the necessary supplies and tools are clean.
- Read through the recipe and take everything out that you will need. Do you have enough counter space?
- Never stick your fingers or scraper into the mixing bowl when the beaters are still turning.
- Don’t double-dip. It is very tempting to taste as you go, but it is extremely important that you do not double-dip. If you taste what you are making, use a clean spoon in the batter or icing, and pour the batter into a different spoon which will go into your mouth. If something touches your lips, it does not go back into the baking.
- When opening the door of a hot oven, keep your face back. A rush of hot air will come out as you open the oven door and it can steam up your glasses, obstructing your vision briefly, or be uncomfortably hot on your face.
• Wear oven mitts when you put things into and take them out of the oven. Be extra careful of the top oven rack if you are removing something from below it.

• Place cooling racks on a clean counter top so they are ready before you open the oven to take out something hot.

• If you are using a burner, choose one that is similar in size to the bottom of the pot you are using. Turn pot handles to the inside so they can’t catch on things or be bumped off the stove.

• Clean up the kitchen immediately after your creation.

• If you are sharing the kitchen with others, keep your part tidy and be respectful of others’ space. Communicate with them if things are hot, if you are walking behind them. Be especially vigilant when you are carrying something hot or sharp.

**Metric or Imperial?**

Because most of the cookbooks and recipes online are in imperial, this manual will use imperial measures only. A chart of imperial and metric conversions you will need for cake decorating is at the back of your manual. You can convert recipes from one measurement system to the other.
Scraper or spatula, what’s the difference?

These words can be confusing because they are often used for the same item or two entirely different things. A scraper is a name given to one type of spatula which is a flexible rubber or silicone-tipped tool used to scrape a bowl. Another type of spatula is the metal, straight, flat and flexible bladed item used to smooth icing or lift cookies off a pan. (Sometimes it is even used to describe an “egg flipper”.) Usually you will know which one you need based on how it will be used.

Cake Pans

Heavy, sturdy pans will hold their shape better (not warp or dent easily).

Dark or shiny – Bright, shiny surfaces reflect the heat away from what you are baking, which keeps it from browning. You’ll want to use shiny pans for cakes. (Dark, dull metal and nonstick finishes absorb and hold the heat, which helps a darker crust form.)

Metal or glass – Generally you will want to use metal pans. Glass pans are made with poured liquid glass, which gives them a curved edge instead of a top corner when they are turned out.

Springform – They are taller than most regular pans and the bottom sits inside the clamped circular outer wall. Be sure you have the bottom right-side-up and sitting snugly in place before adding any batter. Some people call this a cheesecake pan.

Tube pan – There are many different types of one-piece tube pans. A Bundt pan is a brand name for a one piece tube pan that has a specific fancy design. If a recipe calls for a Bundt pan, there are other types of tube pans you can use instead of this exact one, such as a swirl tube. An Angel Food pan is
usually is a two-piece, tall, plain tube pan. If the recipe calls for a tube pan, use a one-piece pan unless it specifically says to use a two-piece pan.

**Baking Pan Sizes**

Cooks refer to pans by their dimensions, such as 8”x8”, or by their capacity, which is what the pan holds. For instance, a regular loaf pan is approximately 9”x 5”x 3” and holds almost eight cups of water, which gives it an eight cup capacity. If you are not sure of the pan capacity, before you start baking, place it in a sink and fill a large measuring cup with water. Pour the water into the pan, and keep filling the pan till it starts to overflow. How much water did it take? That’s your baking pan capacity. If the pan is made from two pieces, the water will leak out, so measure something dry like sugar or rice into the pan instead.

The capacity does not mean how much batter you put into the pan. Like cupcakes, you don’t want the pan to be over two-thirds full, unless it is a very heavy recipe like fruit cake that does not rise as much. Using parchment paper around the edge of your pan, and extending it above the pan will give you a bit more capacity. You may need to adjust your recipe to fit a pan, such as doubling it, or use more than one pan if the cake recipe is too large.
Activity 1: Understanding Pan Capacity
(30 minutes)

Supplies needed
- A variety of different cake pans, bread pans, muffin tins, two-piece pans
- Access to water
- A liquid measuring cup (2 cups or larger)
- Several cups of dry, uncooked rice, macaroni or other small pasta
- Ruler or measuring tape
- Pencil
- Paper
- Calculator (optional)

Instructions
1. Gather everything you will need, including the chart you will fill in.
2. Wash your hands before you start.
3. For each pan, note what size it is called and measure its height, diameter or length and width. (for instance, a bread or loaf pan measures...)
4. Use a measuring cup and count how many cups of water, rice or macaroni it takes to fill that pan to its rim. If you are using water, put the pan in the sink and try to level it so you can fill it to the rim.
5. Do not mix the wet and dry stuff together. Be sure to use dry ingredients for any two-piece pan because the water will just leak out.
6. You can reuse the water and dry ingredients as you continue measuring and filling pans.
7. Clean up includes rinsing any pans you used rice or macaroni in, and drying them all before you put them away.
8. Beside your calculations, list approximately how much cake batter would be needed for each pan, assuming the pan should be about half or two-thirds full of batter. Note both amounts in the chart.
## Pan Capacity Chart

<table>
<thead>
<tr>
<th>Name of pan</th>
<th>Actual measurements</th>
<th>Capacity (total # of cups it holds)</th>
<th>Approximate # of cups of batter needed</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
What pans do you think you would like to use this year when you make cakes? What is their capacity? Keep that in mind when you are looking for cake recipes to help decide if it is a single batch of batter you will need to fill the pan.

Which baking pans does your family have at home? Ask if there are any other baking pans that are used seldom which may be stored somewhere else in your home and measure the capacity of those that are different sizes than the ones you measured with your group. Record those on the chart.
**How Much Cake Batter?**

Different cake mixes and recipes make different amounts of batter, and they do not all rise the same amount. With experience you will learn if a pan needs to be half or two-thirds full to give you the height of cake you want. Generally, a cake mix does not rise as high as some other cakes, so the pan needs to be more than half full. Two-thirds full is often a better estimate than half full.

This website has a chart telling you about the amount of batter you will need in different sizes of pans. [http://www.wilton.com/cakes/making-cakes/baking-party-cake-2-inch-pans.cfm](http://www.wilton.com/cakes/making-cakes/baking-party-cake-2-inch-pans.cfm)

Cake mixes come in different weights. A heavier mix will contain more flour and will require more liquid in it, which means it also gives you more cake batter to fill the pan. Even though the package says it can make two 8”x 8” pans, but it does not necessarily fill the pans half or two-thirds full and you will find that with most cake mixes the cakes are very flat.

**Preparing Baking Pans or Cake Tins**

Just because a pan says it is non-stick, does not mean it is ready for your cake batter. Pans need to be properly prepared for your cake to turn out without sticking. There are a couple recommended ways to do this:

**Parchment Paper**

Parchment paper works better than wax paper for lining pans. (wax paper can smoke in the oven). You can line just the bottom, but lining the sides may help it be less crumby when you are icing it.

For the bottom, place the pan on top of the piece of parchment paper, and trace around it with a pen or pencil. Cut just *inside* this line.

To line the sides, you will need a single strip of parchment paper that is longer than the circumference of the pan. Flip the pan edge along the length of paper to measure before you cut the paper off. Consider if your
parchment paper will go underneath the cake too. If it will, then be sure to cut the strip wider than your pan is tall. Fold over 1” of parchment paper along its long edge. Crease it so it naturally folds here and use that crease as a guide for snipping the 1” edge to the line at about ¾” intervals to help your paper fit around curves and into corners.

Lightly grease the pan to help hold the parchment paper to it when you pour in the batter. Place the edge piece into your pan, with the folded, snipped pieces along the bottom, so that the crease follows around the bottom edge of the pan. Add the bottom piece of parchment over top to cover your snipped edges.

**Shortening and flour**

You can use shortening or oil on your fingers or on a piece of wax paper. (shortening is better than butter). If you are using a spray oil, be careful to spray the pan thoroughly, but not everything on the counter! If the cake pan has a fancy shape, you may find a pastry brush is helpful to get into all the indented shapes. Sprinkle about two tablespoons of flour inside the greased pan and gently shake the pan so that flour sticks to all the greased surfaces. Turn the pan upside down and tap it lightly to remove the extra flour. Shiny spots need more shortening and flour.

**A Few Reminders**

- Make sure you measure ingredients accurately.
- Use measuring cups and measuring spoons, not table cutlery. Mug sizes and teaspoons for coffee may not be anything like what the recipe calls for.
- Use liquid measures for liquids, and ones meant for dry ingredients for dry stuff.
- Prepare cake pans before you start making the cake.
A Few Words about Ovens

Oven temperatures are not necessarily accurate. Use a small, bought oven thermometer which is placed in the oven, to check the temperature. It will give a more accurate reading than the one built in to your oven.

Is your oven level? If your cake has a sloped top, you will need help adjusting the feet on the oven when the oven has cooled.

Does the oven heat evenly? Some ovens will overbake cookies at the back of the cookie sheet before the front ones are baked. You may need to turn the pan partway through baking to help it bake evenly.

Some ovens also burn things on the bottom. Tricks that cooks use to help prevent this include putting a cookie sheet below the cake pan, using parchment paper on all their baking pans, and moving the oven racks to a higher position than normal.

How to Read Recipes

Lots of people rush to the fun part of putting ingredients together, but you will be more successful if you read the whole recipe before you start. Then refer to it as you bake.

At the top of most recipes is the head note (how much it makes, how many it feeds or the pan size). Some recipes have the oven temperature and pan size listed later, so if you don’t read the whole recipe, you may not remember to have the pans prepared or the oven preheated. All recipes will have an ingredients list and then in paragraphs or points, will tell you what to do with the ingredients, what order it should happen, and the timing or how long something should be done. Most cakes have two main parts (dry and wet ingredients) but they can be more complicated. Read the whole recipe to be sure you understand it and then refer to it as you go.

Take all the ingredients out before you start, put them on the counter in the order you will use them and move them aside as you are done with each
item. Every cook can tell you a story of making something and realizing later that they forgot to put in one of the ingredients. Cake batter looking like thick cookie dough made them realize they had not added any milk to the batter; that could be fixed. Sometimes, though, it was too late. When the biscuits turned out hard and flat, they realized they forgot to add baking powder. Refer to the recipe as you bake.

Collect Recipes

Collect recipes for cakes and icing. Most cooks are flattered to be asked for a recipe.

There are a variety of cake mixes and you may have a favourite flavour. Many older cooks have stopped making their angel food cakes from scratch and buy mixes now.

Cake mixes are generally light and fluffy, which means they can’t be used for three dimensional cakes, and one box may not fill up a pan you want to use. Even though the box says it will make two 8” pans, it may not.

What about Allergies?

Read the box if you are making a cake mix to be sure it does not contain any of the allergens you are avoiding.

If you are preparing something for a person with celiac, you can’t just substitute rice or potato flour for wheat flour. Find recipes meant for celiac cooking, and use the ingredients they recommend. Read your baking ingredients too, before you start, because some brands of ingredients surprisingly may contain malt; for instance a leading brand of cocoa powder was not malt-free, but a local store brand was okay.
**Things to Know about Flour**

**Can I substitute all-purpose flour for cake flour?**

Yes, but the substitution is not one to one. The general rule of substitution is 1 cup of all-purpose flour minus 2 tablespoons is equivalent to 1 cup of cake flour. Enriched flour is made from a different kind of wheat than cake flour is made from, so some suggest using 1 cup of all-purpose flour minus 2 tablespoons *plus 2 tbsp cornstarch* as a substitute for cake flour. Try to use what your recipe calls for, or see if using enriched flour makes a noticeable difference to how tender your cake is.

Sifted flour is also less than unsifted flour. If your cake recipe calls for sifted flour, and you do not sift yours, you will actually be putting in more flour than the recipe wants, which will make your cake heavier and drier than if you followed the recipe more carefully.
Baking a Cake

Walking Through the Steps

1. Preheat the oven.

2. Prepare the cake pan.

3. Mix batter according to recipe.

4. Pour the batter in and bake it.

5. Always begin checking your cakes at the earlier doneness time specified in the recipe. Set your timer a few minutes earlier than the shortest baking time called for and check to see if it is done. You can always bake longer.

6. When a recipe says to 'bake until done' you will need to learn from experience how long this may be, and to check other recipes of similar cakes for an idea of the earliest it could be done.

7. Use oven mitts to remove the cake from the oven.

8. Test to see if it is done. There are a few standard ways to check:
   - A toothpick inserted in the centre of the cake will come out either clean or with only a few crumbs clinging to it. If there is uncooked batter or many damp crumbs on the toothpick, return the cake to the oven and continue baking. Remember to set the timer and check the cake again after 3-4 minutes, and to repeat the test till you are satisfied the cake is done.
   - When a cake is done, the edges will begin to pull away from the sides of the pan. This shows that the cake will hold its shape after it is removed from the oven.
   - Usually cakes are baked until they are an even golden brown color over the entire surface.
• Using your index finger, touch the cake lightly in the centre. If the cake feels springy and the indentation bounces back completely when you remove your finger, the cake is done.

9. When it is done, cool the cake in the pan on a wire rack for 10 minutes (note that this is different for differently shaped pans or 3D pans).

10. Unmold the cake by sliding a knife around the edges if you used flour and grease. Put another wire cooling rack on top of your cake, and hold it there while you carefully turn the cake and both cooling racks over. Set the cake down (now upside down) on a cooling rack. If you have used a non-stick pan, do not use a metal knife which can scratch the finish; use a nylon, silicon or wooden knife instead.

11. Lift the pan off.

12. Cool a cake at least one hour, till it is not warm to your touch before you ice it.

13. Level the cake.

14. Brush off any loose crumbs before you start icing the cake.
Levelling a Cake

If your cake is lopsided, it is easy to understand why you would want to level it, but if your cake just has a baking bump in the middle, you may be used to seeing a curved cake with icing. Why bother levelling it? The bottom of your cake usually is the top when it is iced. When it gets flipped over, you want the cake to sit on a flat base or its edges will not rest on the plate or cake board. A large bump needs to come off.

Cool the cake completely before you try to level it.

If the cake has risen above the pan, you may be able to use the pan as your guide for cutting before removing the cake from the pan. If the cake is lower than the pan, carefully turn it out onto a cooling rack or plate, and then flip it over onto a level surface so the top is up again.

Cakes crumble less if they have been put in the refrigerator for even a short period of time. If your cake is very light and fluffy, it will be especially important to refrigerate it or put it in the freezer for several minutes to firm up before you try to level it.

Use a long, thin serrated knife (zigzag, saw-like blade or scalloped-edge knife). Saw through the cake with a gentle back and forth motion; put very little pressure on the knife; let the sharp edge do the work. Place your other hand on top of the cake to hold it still while you cut. Hold the knife in your hand and look to see if you are holding the blade flat. It will take practice holding the knife level for cutting wider cakes, and you will probably have to adjust your angle a bit as you slice. Peek at the far side of the cake to see if you need to adjust your slicing angle as you go.
To cut a cake that has been turned out of a pan, (for instance, it did not rise to the top of the pan), use a ruler or measuring tape to mark the lowest height on the uneven top. Poke several toothpicks at this height around your cake sides to mark your cutting line. You can buy cake saws which unfold and have adjustable legs to give you more precise cutting, but you can use a long serrated knife.

When you turn it onto a plate or cake board, you hide any small gap at the base with icing, either with the smooth icing or a decoration line of piped icing around the base.
Making a Layer Cake

Ideally, your layers will be identical in height. If you are using two different cake pans, you can measure the batter into each pan or use a kitchen scale to weigh the pans. Cut the top off to level each cake. Your two layers do not have to be the same kind of cake, but should be flavours that will taste good together.

If you are cutting a tall cake into layers, cut the top off to level it before you begin.

Then measure the total height with a ruler or measuring tape, and divide it by how many layers you want. Before you lift the layers apart, remove all the toothpicks. Before you lift off the top layer, poke a toothpick in each layer, one directly above the other, at the top of the layer, so you can reassemble it exactly.

To ice the cake, wipe off any loose crumbs and pipe a wide ring of icing around the outside of the cake. You do not have to do this, but it does help keep the crumbs down as you spread the icing. Use thin consistency icing to ice the bottom cake right out to the edges. Consider how thick you would like this layer of icing to be between the cakes and adjust how much icing you use. Spread the icing even thickness, but it does not have to be smooth.

Set your next layer on top of the bottom cake with its layer of icing.

Tip:
If your alignment toothpick is not at the top, but in the middle of the layer, you may accidentally flip the top layer over, which can make your cake lopsided, depending how you cut the layers.
Planning the Cake Design

Before you start to bake and decorate a cake there are several questions you need to ask yourself. Some of the answers you may know immediately and realize their impact on the size and design, while other questions may take some extra thought and homework before you can answer them. Here are some questions to think about before you begin baking:

- Is it for a special occasion?
- How many people will be eating the cake?
- What size of cake will be needed? Besides the number of people eating it, consider if the cake is a layer cake or not, and the size of pieces you think is appropriate. Remember it is better to have too much cake than not enough. It is also better to cut pieces smaller and those who want seconds can go back for it instead of having half-eaten pieces thrown out.
- Websites and books suggest different answers and you will need to judge about how large you want the pieces to be. Here are some websites that can help you with those calculations:
- Does it matter if it is a cake or if it is cupcakes?
- Are there any allergies to consider when selecting recipes or decorations?
- What is the timing like? (how much time I have, if it needs to be done ahead of time, etc.)
- Will the cake need transporting or storing?
- What supplies are available?
You may think those are all the things you need to consider, but there are a few more considerations which relate directly to the appearance of the cake, for instance:

- Theme or inspiration.
- Colours.
- Words.
- Shape of cake.
- The place you want people to focus their attention.
- Techniques you want to use.

**Look at the Whole Cake**

When you plan a cake, remember that there are sides and a top to plan. Often borders are used to cover the cake/plate seam and where the top meets the side of the cake, but not always. If you use a border, consider whether you want it to stand out or to blend in, and how that colour will be used somewhere else on the cake.

A cake needs to look good from all angles.

**Repetition**

When choosing colours, your cake will look like all the parts of it belong together if a colour is repeated in more than one place. For instance, if you use a blue border only at the bottom of the cake and do not use blue anywhere else on the cake, the blue border may look out of place. By repeating blue somewhere else such as an accent on the top of the cake, it visually links the side of the cake to the top of it. Not every colour has to be repeated.

**Balance**

You don’t want a cake to look like all the decorations are on one side and that you ran out of icing or ideas for the other side. You also don’t want it to look like it is crowded or empty. For instance, balance on a seesaw or teeter-
totter makes sense, that two equal-weight people can sit suspended in the air. You also know that you can put two small children on one end and find the equilibrium if an adult sits on the other end. The same sort of thing happens when you see something; your brain likes when it sees balance in cake designs.

There are different ways to create balance on a cake: A cake can look the same from every angle if everything is repeated at the same spacing or interval, all the way around, including on the top of it. (like a border or scallops) or with a decoration placed right in the centre of the top. If you purposefully space different decorations that are not identical in places to add “weight”, you can make a pleasing design too. For instance, “Happy Birthday” or a written name can be balanced by another design on the other half of the top.

**Colour**

Colour adds weight. Not really, but your brain notices it. A colour that shows up more on your background icing will seem “heavier”. It is really the contrast or difference in colour intensity that your brain registers as weight. For instance, if you have pale icing, then a bright, intense or dark colour looks “heavier” than something pale or that blends into the background. Another way of looking at it would be to consider two roses identical in size. If one rose is red and the other is pink, and they are both placed on a pale cake, the red rose will seem heavier and may need two paler pink roses to balance it visually. But if your cake icing is chocolate, a very pale or white decoration would seem heavier because its contrast pops out.

**Repeating a Pattern or Design**

This could be as simple as using a colour in more than one place, a drop flower as part of the border and also on the cake top, or it could mean that a design is repeated or placed equally all around the cake (like a seashell border, scallops, swags or tiny rosebuds spaced out on the border).
Evenly-spaced Designs

It is noticeable if you tried to space something evenly and then did not calculate well. You need to measure and mark the cake if you decide to make or place a design evenly around a cake.

If the cake is small, you may be able to “eyeball it”, or use very basic calculations for your spacing. For square or rectangular cakes, you need to decide if the same length sides will be identical, and if the overall repeat will be varied slightly to make it fit evenly on the sides, stopping at each corner, or wrapping around the whole edge.

To evenly space decorations, you can use a measuring tape and a calculator or this next way that does not require a lot of calculations. You still will need scissors and a piece of paper.

1. Decide whether you want to divide the cake into four, six, eight or more sections.

2. If you can, calculate it approximately by looking at it and dividing the portions in half and half again or thirds, place a small dot of the background icing (it is just a raised dot of the same colour as your smooth surface) at each “x” of where the design will repeat. Poke a toothpick mark at each dab of icing and see if it looks right or make any adjustments you think would help. Draw on other guidelines you need with a toothpick.

3. For a round cake, if it needs to be more exact or you cannot visualize it, make a two-inch wide piece of paper that is longer than the outside of your cake. Wrap it around the outside of your cake and cut it to the exact length (the circumference). Take the paper off, fold it in half and continue folding it in half or thirds (if you want it as six equal sections, not eight, for instance) until you have as many sections as you need. Unfold and place the long paper around the top of the side of the cake and attach it with a toothpick or large pin. Mark the cake at each
fold. Draw any other toothpick guidelines you need before you remove the paper.

4. You can use the same method for a square or rectangular cake, but make a tape for the different length of sides, not one that goes all the way around the circumference.

**Proportion**

Larger cakes need larger decorations or larger groupings of smaller decorations.

**Number of Flowers**

Generally an odd number is more attractive than an even number of flowers. (Five roses together instead of four in a bouquet).

**Focal Point**

What do you want people to notice on your cake? A focal point is a fancy word to describe what you want them to look at longest. It could be the words, a bouquet of your two-tone roses or the hairy spider you made with icing and candy. The focus does not have to be at the centre of the cake. Colour, size and location affect what people will look at.
Looking for Ideas

Through this 4-H project you will be asked to make several cakes and batches of cupcakes and you may not always feel immediately inspired and know what you want to try or what you are capable of doing with your developing skills. You can make cakes for whomever you want, for whatever special or not-so-special occasion and in a great variety of styles as you experiment and build your decorating skills.

It is easy to feel overwhelmed by the thousands of cake images on the internet, but if you have a theme or idea in mind before you begin looking, it will help you in your search for ideas. To help you get started, do Activity 2. Start by filling in the chart before you go online to look for ideas for cakes you may consider making this year. Narrow your internet search by looking for images of that item specifically. As an example, if the person is taking a steer project, some images to search would be cattle cakes, steer cakes or child farm cakes. You will find images that beginners can make and ones that require more skill. Some of them you will think are great and others you will not like at all. Remember that just because someone put the picture on the internet it does not mean that it is a great design.
Activity 2: Finding Ideas for this Project

(60 minutes including time online)

**Supplies**
- Chart of family, friends, groups who might like a cake, holidays
- Pencil
- Computer access
- Printer and paper
- Crayons

**Instructions**
1. Fill in the chart first.

2. For each person or group you listed, search online for images of cakes that suit that particular person and the things you noted about him or her. For each person or group, copy and print at least four cakes you like and also some you think are ugly or in poor taste.


4. Do not expect to be a perfect cake decorator. Sometimes a cake may seem a bit dry or your colour scheme may not be as attractive as you thought it would be or the lettering looks squished. You will get better with every cake you bake and decorate. Even people with lots of experience and who are paid to decorate cakes can make mistakes.

5. Check out this website completely dedicated to showing professional cake decorators and their poor cake designs – www.cakewrecks.com.
<table>
<thead>
<tr>
<th>Person, group or holiday</th>
<th>Things about them</th>
<th>Cake themes to search</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Finally! We get to the part you’ve been waiting for.

To learn to decorate with icing, you’ll need to learn to make it. There are many recipes for icing (cream cheese, peanut butter, buttercream, stabilized whipped cream, fondant, ganache, cooked caramel, royal...). You may already have a favourite flavour. Premade icing is expensive and you may prefer the taste of homemade icing, but it may be what you want or is available to sandwich cookies together. As you use different types of icings, you will learn which ones are suitable for piping and which ones are too goopy or hard to work with.

Cake decorating books and websites can provide information about the suitability and uses of different types of icings. For instance, a comparison chart can be found at [http://www.wilton.com/decorating/icing/icing-chart.cfm](http://www.wilton.com/decorating/icing/icing-chart.cfm).

One of the most common icings for decorating informal cakes, ice cream cakes and cupcakes is buttercream icing. It is easy to make, can be a great variety of flavours, can be coloured and stays soft. This project focuses on using buttercream icing, which is great for learning the basics in cake decorating. Many of the skills you learn working with buttercream icing are also ones you will need when working with other icings. A basic recipe is included in this Reference Manual. There are a surprising number of buttercream icing recipes and you can use whichever one, or ones you like.

**Understanding the Ingredients**

*Vegetable shortening* is not lard. It adds the creamy texture to your icing, and does not soften as quickly as margarine when it is warm. It can be purchased in bricks that you can cut to measure in a tub. If you need to measure it, scoop it into a measuring cup for dry ingredients and press it flat, trying to eliminate any air pockets and scrape it level. Another way to
measure shortening is to fill a larger liquid measure with water to a level you can recognize, for instance one cup, and scoop in your shortening until the water line reaches that first amount plus the amount of shortening you need. Then pour out the water. Chefs prefer high-ratio fat shortening, found in some of the popular name brands of shortening.

**Butter or margarine** adds flavour to the icing and adds to the creamy texture. Do not use tub margarine, because it liquefies too easily at room temperature. You will find it easier to work with icing that is not made completely with butter because it has a lower melting point, which makes it soften too fast for use with piping. If the margarine you use is yellow, tinting icing to colours that would contain no yellow can prove impossible (like making purple or blue icing).

**Flavours** are added to icing to make it taste better. Buttercream icing does not have much flavour other than being sweet unless you add a flavour. The most common flavour that recipes suggest is vanilla, but you can use flavours such as almond, rum, mint or lemon. Use which ever you prefer, pure or artificial extracts. Note that if the flavouring has a colour, it will also affect your tinting. You can purchase clear flavourings. Adding strong coffee, chocolate, orange or lemon rinds are other ways of changing the icing flavour.

**Milk or water** – Milk makes it creamier, but both are used to make your icing the correct consistency. Should I use water because milk spoils? Not necessary because the high concentration of sugar in icing helps to preserve it naturally.

**Icing Sugar (cane or confectioners or powdered sugar)** – Do not substitute table sugar for icing sugar. Sift it to be sure there are no lumps. Some recipes use the weight, as the amount can vary dramatically depending on if you sift it or not. (4 cups is about 1 pound or 454 grams).
Salt cuts down on the sweetness of the icing, making it more flavourful. Add salt to the liquid so it dissolves (otherwise you can sometimes see white salt specks in coloured icing).

Meringue powder (some recipes use it) is used to stabilize the icing, which means it helps keep whipping cream or other high-fat icings from melting or separating in warm or humid temperatures.

**Buttercream Icing Recipe**

Yields about 3 cups of stiff consistency icing

- ½ cup vegetable shortening
- ½ cup butter or margarine
- 1 tsp vanilla extract (or other flavouring)
- 4 cups sifted icing sugar
- pinch of salt (add to the liquid)
- 2 tbsp milk or water

Use ingredients that are at room temperature (not straight out of the fridge). Microwaving shortening or margarine to warm it up often liquefies it and ruins your icing. Let them warm on the counter.

Cream butter and shortening. Add flavouring. Gradually add icing sugar, keeping mixer speed low to avoid a cloud of icing sugar spraying all over. Scrape sides and bottom of bowl. When it is all blended, gradually add milk and beat at medium speed till fluffy. This amount of milk makes stiff icing. Gradually add more liquid to thin icing.

Cover with a damp cloth if you are using the icing soon.

Buttercream icing will last two weeks in an airtight container in refrigerator. Rewhip before using if you have stored it. Buttercream icing can be kept in a sealed container in the freezer for up to 3 months. Thaw it in the fridge the day before you need it and beat it well just before you use it. Do not thaw it in the microwave.
Chocolate Buttercream Icing Recipe

| Add ¼ cup cocoa to the icing sugar and sift them together before adding to the shortening/margarine mixture. Add 1-2 tbsp additional liquid. |

There are many different kinds of icing, and by experimenting, you will learn flavours you like with different cakes. A chocolate peanut butter icing is delicious on chocolate cakes! The more you bake and try new recipes for cakes and icings, the better you will be at understanding which icings you prefer to work with and combinations you want to try.

How much icing will I need?

This comes with practice and you can find estimates of icing required to decorate a variety of cake sizes and shapes by looking at cake decorating websites or in cake decorating books. For instance a single batch of buttercream icing will decorate a layer cake that is six inches across, but it may not be quite enough icing for an eight-inch layer cake. A chart mentioned earlier about cake batter also suggests the amount of icing it takes to ice a cake. [http://www.wilton.com/cakes/making-cakes/baking-party -cake-2-inch-pans.cfm](http://www.wilton.com/cakes/making-cakes/baking-party -cake-2-inch-pans.cfm)

Icing Consistency

One of the most important things about icing a cake is icing consistency.

Consistency refers to how stiff (or thick) the icing is at room temperature. Your recipe usually will not tell you how stiff the icing is. This is something you need to learn about and use your experience to judge for yourself. Consistency depends on the amount of liquid added to the icing sugar and shortening, and also the temperature of the icing. Cooling icing makes it
harder to manipulate, but if it is too warm, it will start to separate, look oily and become runny. If it starts to separate, you cannot necessarily fix it.

A video about icing consistency can be found at the Wilton website. http://www.wilton.com/decorating/icing/icing-consistency.cfm

There are a few different ways to decide what consistency your icing is. One of the easiest ways is by sticking your straight spatula into a few inches of icing in a container. If the spatula stands up straight when you gently jiggle the bowl, it is stiff icing; if it starts to wiggle and tip at an angle, it is medium consistency; if the spatula slowly flops over, it is thin consistency. A quick flop means it is too thin, so add more icing sugar to stiffen it to the consistency you need.

- Stiff icing is used for roses and other shaped flowers whose petals stand up.
- Medium icing is used for borders and things that lie flat on the cake like stars and flowers whose petals don’t stand up. (Add about 1 tsp of liquid to every cup of stiff icing.)
- Thin icing is used to ice a cake, for piped printing or writing and for leaves. (Add about 2 tsp of liquid to every cup of stiff icing.)

If your icing is too stiff, add a small amount of liquid. If the icing is too thin, add icing sugar. Your hands will warm up a pastry bag, making the icing thinner as you continue to work with it. If the icing was the correct consistency to start, but becomes too thin from your hands on the piping bag, put it in the refrigerator.

Remember when you decorate cakes in summer that the sun beating through a car window or the heat at an outdoor celebration can melt the icing. What a disappointing mess.
Activity 3: Make Different Icing Consistencies

(20 minutes)

Supplies

- Ingredients to make buttercream icing:
  - ½ cup vegetable shortening
  - ½ cup butter or margarine
  - 1 tsp vanilla extract (or other flavouring)
  - 4 cups sifted icing sugar
  - pinch of salt (add to the liquid)
  - 2 tbsp to ¼ cup milk or water
- Electric mixer
- Spatula

Instructions

1. Discuss icing consistency.

2. Make buttercream icing in groups of two or three. One group make it medium consistency, one group make it thin.

3. Discuss how much liquid was added to each different icing consistency and how the group determined they had made their required icing consistency.

4. Everyone should test each batch of icing to determine if they agree it on its consistency.

5. Be sure to clean up your work space and equipment.

Something to think about

Which icing consistency did you make?

Was it easy to tell the difference between the consistencies of icing?
Icing a Cake

Some cakes are more crumbly than others. For any cake, putting it in the refrigerator for several minutes makes it less crumbly when you ice it.

Crumb Coat

Use thin consistency icing. (Icing that is too stiff grabs at the cake more and pulls up crumbs.)

To ice a cake without any crumbs showing (cookies and cream appearance), a crumb coating is done first. This is a thin layer of icing, covering the entire cake. You will still see the cake through the icing, but it will help seal in the crumbs. Set the cake aside till it is dry to the touch. This helps to keep crumbs from loosening and coming into the next smooth layer of icing. Even if you plan to make fluffy, purposefully uneven icing, a thin crumb coat will prevent crumbs from showing through.

Final Icing Coat

Using a flat spatula or table knife, plop icing on the top of the cake and use it for the top and sides. Some prefer to ice the top first, while others like to do the sides first. If you happen to catch any crumbs on your spatula, scrape those off onto the side of your bowl and be sure you have enough icing to cover your crumb coat. You do not want to see the cake through the icing. Placing the cake on a turntable will help you turn the cake without having to lift off the spatula when you coat the sides. A longer spatula or knife works better than a shorter one.

Tricks to help smooth the icing

- Water – Dip your flat spatula in a glass of warm water and tap it or shake it gently to remove the drips. Hold the spatula as flat to the top or edge of the cake as possible while you gently drag the spatula over the icing to smooth it. Dip the spatula back in your glass of water
when it starts to grab the icing. Use water sparingly, because it will take a long time for the cake to “set” (dry enough that when you gently touch it with your fingers, no icing sticks to them), if you have used a wet spatula. Too much water will pool on the top of the cake.

- **Finger tips or spatula** – When the icing is almost smooth and has “set” (dry enough that when you gently touch it with your fingers, no icing sticks to them), lay a piece of wax paper, parchment paper or paper towel over top of it and very gently use your fingers, palm or a spatula to pet or rub it smooth. Do the cake sides too.

  The icing will take on the texture of the paper towel, and you may or may not like this effect. If you are using something with texture, double check the sides and top of your iced cake to be sure you did not miss adding texture to any parts of the icing.

  Your cake does not have to be *perfectly* smooth. You’ll get better with practice. Your decorations can be put over imperfections and that is what people will be looking at later.

**What about the top and side “corner”?**

  This takes practice and a spatula held almost flat against the side or top you are working on. Chefs like to use the offset (bent handle spatula, looks like a long, narrow egg-flipper) for this. Extra icing you scrape off as you work on this corner? Be sure to put it back in the bowl so you aren’t just dragging it around every time you work on the corner.

  After you ice the top and sides almost smooth, use your spatula, held as flat to the cake top as possible. With an arched motion, sweep from the outside edge where the little bit of extra icing is, towards the middle of your cake top. Do this all the way around and the final “extra” icing should be spread on your top instead of at this corner.

  Cover it with a border later. You will notice that many iced cakes have a border piped over this hard-to-perfect edge.
Activity 4: Demonstrate Icing a Cake

(15 minutes)

The leader should demonstrate or show a video about icing a cake, including the crumb coat, leaving the cake aside to “rest” to form a crust and then final icing.

You can search it on the internet and preview videos you may want to use to show the group or suggest members watch at home if they would like. Here are a few videos:

- http://www.marthastewart.com/268441/cooking-school-how-to-frost-a-cake
- http://video.about.com/baking/How-to-Frost-a-Cake.htm

Note that cupcakes do not need a crumb coat because you decorate the top, not a cut or turned out edge and the cupcake top is firm.

Something to think about

Had you iced a cake before? Did you use a crumb coat or try to make just one thicker coating of icing?
Cake Boards

What is a cake board? To display your cake at Achievement Day, or if you have a cake larger than any plate, you will need a cake board. These help you transport the cake and they are covered in aluminum foil or a decorative paper (either plasticized or covered with plastic wrap).

You can buy cake boards, and if you do not think you will get your board back from the person you gave the cake to, this may be a great option. Try calling a local bakery to see if they will sell you a couple cake boards. Cake decorating supply stores may also sell them. If neither of those work out for you, search online for cake board distributors. You will need to be able to tell them the size and shape of your cake.

You can make your own cake boards. What board you use depends on the cake size and weight. For light cakes, you may use thick corrugated cardboard, but for larger or layered cakes, a plywood or pressed hardboard base is best, or you can glue two or three layers of corrugated cardboard together. You can also cover sturdy cutting boards, which may be a cheaper option if you find one the right size and don’t have wood lying around, or someone to cut it for you.

You will want a few cake boards that can be used for more than one shape of cake. Cake boards do not have to be the same shape as the cake, but they often are. They need to be larger than the cake to give you room to hold the board securely in your hands, which means approximately four inches wider than your cake or cake pan dimensions. Much wider than that and it just gets heavy and awkward.

Use heavy duty aluminum foil because it is stronger and will not tear as easily at the corners. Place the foil so that the dull side is up.
How to Cover a Cake Board

Directions for how to cover a cake board are given in the next activity. Videos or how-to websites you may find helpful include:

- http://www.youtube.com/watch?v=KVIC0mnhVk
Activity 5: Covering a Cake Board

(30 minutes)

*Adult supervision required if cutting cake board yourself (add 30 minutes)

Look at the cake pans you have at home and think about which one or ones you will use the most often. If they are almost the same size and shape, you may be able to use the same cake board for them, but if they are different shapes such as round or rectangular, you will need more than one cake board to present and transport your cakes.

Supplies
- Board made of sturdy material (1/4” or 3/8” plywood or thick corrugated cardboard or a couple layers of corrugated cardboard) approximately four inches wider than a cake you plan to decorate. Use a cake pan you have as the basis.
- Utility knife and measuring tape if you are cutting the cardboard
- Heavy duty aluminum foil or paper wider than your cake board
- Glue stick or white glue
- Pencil
- Scissors
- Tape

Instructions
1. Measure and select a strong base for your cake board, making it approximately four inches wider than your cake pan dimensions.
2. Place it upside down on the shiny side of the aluminum foil you plan to use, and draw around it.
3. Then draw another outline about two inches around that.
4. Cut it out at the wider line.
5. For circles, cut the paper diagonally about every inch, to the inner circle. For cake boards with corners, be careful because corners tear easily. Fold the sides and corners in neatly and tape them down.

6. Put some glue on the top of the cake board, line it up with the inner outline, and set it glue-side down.

7. Flip it all over and smooth out the air bubbles. Fold the edges over and glue them down too.

8. Sometimes people will see the bottom of the cake board, so you can cover over the bottom with another piece of paper, cut slightly smaller than the cake board and glue it on. Covering the bottom will help to keep the taped edges flat.

9. Cover the back of the cake board with foil too.

Something to think about

What problems did you run into as you covered your first cake board?

What worked well?

What would you do differently when you cover other cake boards? (materials, adhesives, tricks you think will help next time)
Cake Storage

How should you store your cake? That depends on the type of cake and icing you have used. Cakes with buttercream icing can be stored at room temperature (on the counter) for two to three days, refrigerated for one week or frozen for up to two months. The cakes need to be wrapped well in plastic and foil or placed in airtight containers to prevent their drying out.

When a cake thaws it may “sweat” (little droplets of water form on the top as it is thawing). You may find that bright icing colours weep (spread) when a cake is thawed or that food colouring in the beads of water can be ultra pigmented and give the cake a freckled look. Do not freeze cakes with any curd fillings, fruit, gelatin-thickened items or whipped cream. Buttercream and cream cheese icings freeze very well.

Ice cream cakes should be kept frozen till shortly before they are used. If you are decorating a plain ice cream cake, you will need to work quickly to keep it from thawing, especially around the edges.

Cakes decorated with whipped cream or that contain fresh or canned fruit will need to be kept in the refrigerator. The fruit adds extra moisture and they can go bad at room temperature.

Sunlight is not a good thing for cakes. It can change colours and cause the icing to soften, even to the point of it separating and dripping off your cake. What a mess! Store the cake in a covered box out of direct sunlight, or put it in a cooler or fridge if you have space. Make sure you find a box that does not squash the cake top.

Humidity can soften royal and buttercream icing. When the humidity gets high, prepare your royal icing using only pure cane confectioners’ sugar (not beet sugar or dextrose), and add one teaspoon of meringue powder to the recipe. Buttercream icing can be stabilized with one to two tablespoons of meringue powder.
Transporting your Cake

You may think that someone in the car holding your cake on their lap is a good idea, but there are other safer ways to get it to its next location. Put it in a cake box – a clean, sturdy box that fits the cake board or plate. A box the size of the cake board will keep the cake from shifting and squashing the sides of the cake.

Put the box on carpet foam, a non-skid mat or a damp bath towel on the floor of the car. Do not put it on the seat of the car because a fast stop could send it sailing forward either to tip onto the floor or crash into the seat or dash in front of it. If it is cool or cold outside, the cake box could be put into the trunk, still on a mat of some sort to keep it from sliding around.

Take along a utility knife to cut the side off the box and slide the cake out when you get to your destination. (It will be hard to wiggle your fingers under the cake board or plate and lift the cake out of the box without wrecking some of the side decorations.)

Tip:

If you have found the perfect cake box cut the side with a blade and reattach it with duct tape or packing tape. Then you can reuse it.
Activity 6: Bake, Level and Crumb Coat a Cake

1 hour at home

For your first 4-H cake, choose a recipe that you love to eat. Refer to the ideas chart you filled in to think about possible colours or for whom you may decorate a cake. You do not have to make the cake for anyone on the list, but it may help you decide colours or themes at your next group meeting.

At home you will be selecting a recipe, preparing a baking pan, baking a cake and levelling it, making buttercream icing and crumb coating a cake that you will decorate at your next meeting.

Instructions

1. Make a single layer cake no larger than 9”x13”.
2. Make a batch of buttercream icing, thin consistency.
3. Be sure the cake is completely cool before you ice it.
4. Level the cake and crumb coat it with icing.
5. Wrap and freeze the cake if you made it more than one day in advance.
   Wrap and refrigerate the cake if you made it the night before.
6. Freeze extra icing, noting that it is “thin” consistency.

To the next meeting remember to bring

- Cake already crumb-coated.
- Ingredients to make one batch of buttercream icing.
- Bring small, sealable containers or bowls.
- Two pastry bags, couplers and all your tips to every group meeting.

Note: No cake board is expected, but the cake needs to be on a plate or other flat surface. Dents or squashed icing can be fixed at the next gathering because this is only a crumb coat.
Disposable icing bags – These are clear plastic and come in packages with any number from a few to a box of a hundred. You can throw them out after one use or reuse them if they are washed like the featherweight bags.

Plastic freezer bags or sandwich bags – These are really a substitute for icing bags. You may find them a little awkward to use because they are not triangular, but square. Sandwich bags are small which makes them harder to hold on to and control your pressure. Freezer bags are thicker, more durable and come in a variety of larger sizes you may want to try. You select a corner of the bag to be your tip and prepare it like the triangular icing bags. These could be disposable or washed.

As with a parchment paper icing bag, sandwich bags can be used without purchased tips if you want a round opening or a leaf opening, depending on the way you snip the corner of your plastic bag. A round opening would be made with a straight snip across the very end of one corner and a leaf tip would be a V cut in the bag tip.

Parchment paper bags – These are often used when chefs have lots of fine work to do, and for melted chocolate. You cannot change the tip easily because the tip fits in with the icing, and there is no coupler used. Parchment bags can also be used without any tip at all, if you want a round opening. The size you tighten the parchment cone to or snip the point off, determines the size of a plain hole. Parchment bags are not reusable.

(Parchment bags are very useful when you are using a lot of colours and know you will only be using one particular tip type with this colour, or need more round tips than you own)

The first time you make a parchment bag, it seems complicated, but after you have made one or two, you will find it is an easy and inexpensive way to have a decorating bag that does not need washing. However, it feels different than other more flexible decorating bags and you may have a preference for which one you like to use.
If the directions in the next activity seem difficult to understand or you want a refresher before you make a parchment paper icing bag here are a couple websites you may find helpful. There are other videos and diagrams if you search on the internet.

- http://www.youtube.com/watch?v=lHHv22G8ixo
Activity 7: Make a Parchment Paper Decorating Bag

10 minutes

You may not use parchment paper decorating bags often and could forget how to make them if you do not make them often. This activity will lead you step-by-step through the instructions on how to roll your own parchment paper icing bag. After you make your first bag it is easy.

Supplies:

- Parchment paper approximately 12 to 14 inches long – a single piece of parchment can make two icing bags
- Scissors
- Tape

What to Do

1. Fold one corner of your parchment paper diagonally across to the other side of the paper, lining up the sides to make a right angle triangle. Press along the fold to crease it well. Cut the excess paper off so you have two identical triangles folded in a square of paper. Carefully tear or cut along this fold and you will have two identical triangles which can be used to make two parchment paper icing bags.

2. Place one triangle on a flat surface with the longest side away from you. The centre of this long side will become the parchment paper icing bag point. One point is facing you and the two narrowest points are pointing at angles away from you.

3. It does not matter which of these two narrow points you use first. Take one of those points and curl it over so the back of that corner is on top of your parchment paper, forming something that looks like a surfing wave. Bring that point to sit on top of the point that is facing you.

4. With one hand, hold these two points together to make one point.
5. Use your other hand to bring the final point over and around your tunnel to join the back of these points. You have formed a cone.

6. Adjust your points to bring the top of the cone into a tight sharp point.

7. Where the corners are all held together in a point, fold this point over, crease it, and fold it a couple more times to hold the cone together.

8. Tape a small strip along the lower outside seam near the point of the cone to hold it together.

9. If you are using an icing tip in the bag, you will need to cut off between ½” to ¾” of the tip. You want just over half of the icing tip to poke out of your cut opening. The parchment bag does not need a coupler because the tip sits inside the bag and the icing will hold it in place.

10. Without an icing tip, the parchment paper bag itself can be snipped off and used as a round icing tip. The amount of the parchment tip you cut off will determine the size of your tip opening and the amount of icing that comes out when you apply pressure to your filled bag.

11. Make two icing bags. Cut one to use with an icing tip.

**Something to think about**

If you think it would be helpful in the future, add diagrams beside the activity directions to help you understand them when you want to make a parchment paper bag in the future.

What would you change about the directions to make them easier to understand?
Let’s Do It!

This is the exciting part, but you may also be a bit anxious as you start on the cake. You’ve planned it, baked it, levelled it and made your icing in the consistency and colours you want. The cake board or plate is on a turntable. It is all ready, and so are you.

Decorating Steps

1. Spread a tablespoon or two of icing on the centre of your cake board where your cake will sit. Icing will act like glue. It helps to keep it from sliding off as people sing “Happy Birthday” and you carry the cake to the guest.
2. Carefully lift the cake and place it on the cake board.
3. Tuck small pieces of parchment paper under the cake edges to keep your cake board clean as you ice it.
4. Crumb coat the cake.
5. Ice the cake.
6. Use a toothpick to poke or draw any guidelines you need.
7. Think about the order you will decorate the cake. It may be better to draw the leaves before or after attaching or drawing flowers, depending on your design.
8. Practice piping on a piece of wax paper.
9. Lettering is done first to make sure you have enough room for it.
10. If you are attaching flowers or decorations made on parchment or wax paper, put a little dab of glue on the cake just before you set the decoration down, to help it stick.
11. Borders are usually done last.
12. Start borders at the back of the cake.
The bag position and your steady pressure will help you be a good cake decorator.

Working left to right or right to left: Right-handed people always work from left to right. If you are left-handed, you will work from right to left. That way you don’t drag your hand in the decorations you just made, nor is your hand blocking your view as you decorate. Everyone works left to right when printing or writing.

**It Takes Practice**

The more you practice, the better you will be at decorating cakes. Before you start decorating anything, it is best to get a feel for how to hold the piping bag, what angle you should hold your hand, how much pressure to apply and the hand motion you will need to make certain designs with each tip.

To practice, without wasting or eating all of your icing, use a practice board. A practice board is pictures of designs or patterns you plan to use, covered over with something plastic that you can scrape the icing from to reuse it. You trace the icing pattern that is under the plastic. Practice boards with a set of icing templates to trace are available from Wilton online or from other cake decorating suppliers. You can make them yourself by using pictures or drawings, wax paper and tape.
Activity 8: Make a Practice Board

5 minutes

Purchased practice boards have limited designs, and there will be things you want to try which are not preprinted on the cards from a manufacturer. Before you try something on a cake, it is best to practice it to be sure your icing consistency is good, you have the right size of tip opening to create the pattern and you know how much pressure to use on the piping bag. A practice board cut to the size of your cake top can also help you plan your design and make sure the lettering fits with the other decorations and border.

It is easy to make yourself a disposable practice board. If you are planning a border this disposable practice board (sheet) will give you enough space to practice moving from one shape to the next a few times in a line. If the practice is for lettering, you may want to use a piece of parchment paper cut to the same size as the cake top or size of the area you will be lettering.

Supplies

- Paper 8.5”x11”
- Pencil or pencil crayons
- New clear plastic sheet protector (office supplies to place in binders)

Instructions

1. Along the long side of the paper print Happy Birthday in large letters to fill most of the length of the paper.

2. Halfway down the page write Happy Birthday in cursive to fill most of the length of the paper.

3. Slide your Happy Birthday paper it into your sheet protector, and you have your first “template” for lettering two different styles with your practice board.
4. To make additional templates, you can draw them or find images on the internet and enlarge them to the size you want and place them inside your sheet protector.

5. When you are finished using your practice board, wipe it off with a damp soapy cloth and wipe it again with a clean, damp cloth to remove all the soap. Dry it with a cloth so it does not stick to other things or become moldy.

6. If you would like to have a larger reusable practice board, a piece of flexible clear plastic can be cut and kept with your cake decorating supplies. Shower liners, tablecloth protectors, or clear laminate can be suitable.

Tip:
As you make and use templates, add handwritten notes about which tip you have used, if that was a good choice, what icing tips you recommend or have tried, or other helpful information for yourself.
Colour

Colour is everywhere. Look around you. What colours do you see in your home? At school? What colours do you like? What colour combinations do you wear? Colour can be a way to personalize cakes.

You can decorate a cake with just white icing; some decorated wedding cakes are completely white and do not look plain. Their designs use texture and shadows to add variety. Most often there is more than one colour of icing on a decorated cake. It could be white with one colour, or a chocolate base with white decorations, or another combination of a few colours. Colour contrast helps the decorations show up. It creates impact.

How do I choose a colour scheme? That depends on the theme or feeling you want to create with your cake. A playful cake for a child’s birthday may use bright, primary colours, but your grandma may love flowers and you are inspired to decorate a garden on a cake for her. Be creative and experiment with colours. If you aren’t sure a combination will look good, a quick sketch of the cake and experimenting with a variety of crayons will help you plan it.

If anyone describes a colour to you and wants you to make a cake using it, ask for pictures or samples. When they say red, it could be poppy red, fire engine red or blood red. Their idea of red may be “warm” which has a bit of yellow in it, or “cold” which means it has the tiniest amount of blue in it; both are red. Your idea of periwinkle or olive green may not be the same as theirs. Better to be safe than sorry.

The Colour Wheel

When choosing and making colours for your cake, understanding the colour wheel will be important. It may seem like a school art class, but artists rely on their understanding of colour to mix an infinite number of shades, and you
will too when you try to make a colour that you do not have as a bought food colouring.

The colour wheel is a 12-colour circle based on the three primary colours, red, blue and yellow, which cannot be made from other colours. Secondary colours are made by equally mixing two primary colours together (making orange, green and purple) and then six tertiary colours can be made by mixing a primary colour with one of those (blue plus green makes blue green). Some colour wheels are complicated and use art vocabulary that you don’t need to worry about. Your concerns will be to recognize if the colour you want to make needs others added to it to change its shade or brightness.
Activity 9: Colour Wheel Exploration

30 minutes

When choosing and making colours for your cake, understanding the colour wheel will be important. It may seem like a school art class, but artists rely on their understanding of colour to mix an infinite number of shades, and you will too when you try to make a colour that you do not have as a bought food colouring.

Supplies

• Poster board or watercolour paper
• Scrap paper or a paper plate for practice
• Red, yellow and blue watercolours or tempera paints
• Paintbrush
• Pencil
• Bowl or plate a couple inches smaller than your colour wheel paper
• Water in a container
• Paper towel or rag
• Marker

Instructions

1. With a pencil, trace around the bowl or plate.

2. You may want to also sketch a small circle in the centre of this larger circle to be a guide for how close to the middle you will paint. Leaving a small space in the centre will help you to keep your colours from mixing accidentally.

3. Lightly number the outside of the circle from one to 12 as they would appear on a clock face.

4. Remember to clean your brush completely when you change colours. Wipe your brush on a paper towel to double check that there is no remaining colour in it before starting with a different colour. When
your water becomes so dirty that your brush leaves gray marks instead of a clean mark in your paper towel, you need to pour it out and get clean water.

5. Paint wedges of red, yellow and blue (the primary colors) between your two circles at numbers 12, four and eight. Pay attention to your inner, smaller circle line as a guide.

6. To make the secondary colours of orange, green and violet, you will be using combinations of primary colours: orange (red and yellow), green (yellow and blue) and violet (blue and red). Mix your two paints and try a colour sample on your scrap of paper before painting a wedge of the new colour in your colour wheel. The secondary colour will be painted between the two colours it is made of, leaving a gap between them. You will be painting secondary colour wedges at numbers two, six and 10, leaving gaps between the primary and secondary colours all the way around your circle.

7. Mix tertiary colors on your scrap paper or paper plate. At the appropriate gaps by the empty numbers on the colour wheel, paint wedges of red-orange, yellow-orange, yellow-green, blue-green, blue-violet and red-violet.

8. With a clean brush, blend the side-by-side colours together. Be sure to leave some of each original colour. Rinse and wipe your brush before you blend the next adjacent colours. Continue all the way around the colour wheel. (If some of your colours have dried completely, do not worry about them not blending smoothly.)

9. Leave the colour wheel to dry before you erase your pencil numbers.

10. Use a marker to label each colour around the outside of your colour wheel.

You will not use the bright, intense colours on the colour wheel very often, but paler, mixed colours mostly. To make paler icing, use less colour (or more icing) and to make more intense shades, add more colour; to darken it, add
black. To dull a colour, add a small amount of its opposite or complement on the colour wheel.

**Something to think about**

Look at your colour wheel. What is the opposite colour or complement to orange?

is the opposite or complementary colour to green?

You will use the colour wheel to create other, subtle shades such as a pale flesh tone or a mossy green. The colour wheel will be very helpful to you.
Colour Schemes

There are no right or wrong combinations of colour. It takes time and experience to understand which colours, shades and intensities go together. These are a starting point for you to consider:

**Monochromatic**
You can decorate a cake with shades of one colour (for instance, a light blue base with medium and dark blue accents). You need to make an obvious contrast in shade for it to work.

**Complementary**
This colour scheme is when you use two colours opposite, or almost opposite to each on the colour wheel, like orange and blue, or red and green. The two colours balance each other out.

**Adjacent**
There are a few different words for this colour scheme, but it is when you use colours side-by-side on the colour wheel, such as yellow, green and blue.

Use the colours in different shades and as small touches or the cake will look gaudy.

**Triad**
Three colours equally spaced on the colour wheel are used for this scheme. Green, purple and a yellowy orange would be an example of a triad, and you may see this on a cake with purple flowers that have contrasting stamens and green leaves.

**Polychromatic**
This means many colours are used together. Often this isn't really a lot of colours, but a small number of colours in a variety of shades (tints). Usually this is only done with soft, pale colours.
Activity 10: Colour Scheme Awareness

10 minutes

You probably have an awareness of colour schemes without knowing what they are called or why they look good. You may instinctively know some colour combinations that are appealing or nice to look at. You may also see some colour combinations you think are mismatches or colour intensities that seem oddly matched or do not go together.

It is easier to visualize a colour scheme if you look at a colour wheel.

Supplies

- Colour wheel you painted
- The description of colour schemes listed before this activity
- The people and space around you

Instructions

Look at the clothes you are wearing. What colours are they or what combination of colours make up the clothes? Find those colours on the colour wheel and record the type of colour scheme that you are wearing.

Look all around you at the room you are in, a picture on the wall, out the window, at the other people in the room to see if you can identify other colour schemes. Refer to your colour wheel and list of colour schemes and try
to find each of the following colour schemes in your surroundings. For each one you can identify, list the colours and what item or things were this colour.

- Monochromatic

- Complementary

- Adjacent

- Triad

- Polychromatic
Colour and Cake Decorating

Before you start colouring icing, have a plan for what the cake will look like:

- What will each colour be used for?
- What consistency of icing do you need to colour?
- How much will you need for each colour? (This comes with experience, and you'd rather have too much than too little prepared; it is frustrating and difficult to make the exact same colour again).

Keep in mind these points when you are tinting icing.

- It stains! Hands, clothes, counters, plastic bowls, wooden spoons…. (Magic Eraser works to remove it, as does bleach.)
- Make a batch of buttercream icing, and from it, take only the amount of icing that you think you will need and put it in a different glass bowl.
- Add a small amount of food colouring at a time. Drop by drop. Mix well before deciding if you need more.
- All colours are not created equal. Some colours are more powerful than others. Red in particular, is a strong colour so add it slowly and mix it in well before deciding if more is needed.
- Colours darken after a few minutes. You may not need quite as much food colouring as you thought, or discover that you made your colour too dark. Leave the icing for at least five minutes to see if it is the shade you want before you add more colour or use it.
- To lighten colours, add more white icing – that’s why you saved some of it.
- Some colours fade in bright light (pinks, purples and blues).
- It may take a different “primary colour” to make another colour. For instance, two different blues are needed to make purple or green…)

70 › Cake Decorating
• If you used yellow margarine, it is hard/impossible to make some colours that do not contain yellow, such as purple. Use white margarine or only shortening if you can’t make the colour you need.

• If you are making a dark colour, start with chocolate icing. Too much food colouring can change the taste of your icing.

• Red and black cannot be made with liquid colouring. Buy red and black pastes that are concentrated. For a deep red, you may find an aftertaste from so much paste food colouring, and you should look for no-taste red icing or gels. Or think of something you can use instead like sprinkles, dark cookie crumbs, licorice, candies, etc.

Food Colourings

You can buy a variety of food colourings. They are all edible but can create different effects. If you aren’t sure if something is really an edible food colouring, look for a list of ingredients and a best before date, which will be on food.

Paste colours are concentrated and come in a little jar with a lid. They are available in a wide variety of colours. These can be used to colour all kinds of icings and even diluted with alcohol or clear vanilla to be used as paint on your cake. (The tiny amount of alcohol evaporates and speeds up the drying. A paste colour thinned with water can take days to dry.)

Liquid colours are less concentrated. You may have seen a set of little bottles in the grocery store. You can make many colours from that simple selection, but have difficulty making some shades if the colour needs to be really precise. Specialty stores will carry more colours.
**Powder colours** are also called petal dusts or blossom tints. They are usually used dry and dusted onto icing. They can also be mixed into icing or diluted with alcohol or clear vanilla, similar to paste colours, to use as a paint. Look in specialty stores for these.

**Lustre colours** are fancy! Need gold or silver? These are a specialty dust that has a shimmer and can be used dry or diluted.

**Spray food colouring** is often used in grocery store baking departments because they can make lots of plain white cakes and add the decorations and colour once someone places an order for it. It is a fast way to colour a large area. It is hard to control the spray intensity and spread of colour. Practice spraying on scrap paper at first to learn how to control the spray for the effect you want. Remember to put the cake on top of newspaper to protect the counter.

**Colouring Icing**

Add colour gradually, drop by drop. Mix the colour in thoroughly with a spatula till there are no streaks of colour, being sure to scrape the sides of the bowl. Check the colour. Colours darken a little bit after a few minutes.

If you are using pastes, dip a clean toothpick in the food colouring and then dip it into your icing. Always use a fresh toothpick in the food colouring because icing in the food colouring can change its colour and make it unusable.

**How do I make different colours?**

This is where your understanding of the colour wheel comes in! Think about what colours would be used to make your new colour before you start.

The most thorough and best description of tips about mixing colours can be found at http://www.sugarcraft.com/catalog/colouring/colourmixingchart.htm.

These other websites have a lot of good food colouring information too:

- http://www.candylandcrafts.com/colourchart.htm
Round Tip Borders

**Dot borders** are just dots evenly spaced, touching each other, in a line. It looks professional if the dots are all the same size. It takes practice to make so many a consistent size, so use your practice board till you feel comfortable with it. Choose a round tip that makes it easy for you to make the size of dot border you want. You may prefer to use the next type of border instead.

**Snail Trail or Teardrop borders** use round tips but this time you hold the bag at 45 degrees. Hold the tip just above the surface and begin squeezing the bag. With constant pressure, watch a ball form, and then release the pressure and drag the icing tip to make a teardrop or trail. Stop moving the tip and apply pressure to form another ball, release the pressure and form its tail; continue for the rest of your border.

**“C” borders** are a connected series of scallops that look like the letter “C” one below the other. The “C” doubles back on itself where the icing changes direction to form the next letter, forming a scalloped edge. You may think it looks more like waves of water.

Begin by holding the bag at a 45 degree angle and touch the icing tip to the surface as you begin squeezing the bag to attach the icing. Hold the icing tip just above the icing surface as you would if you were lettering. Continue to squeeze the icing bag at a constant pressure to control the flow of icing as you move the tip as if you were writing the letter “C” and continue on to make another identical letter attached to the bottom of the first “C”. It takes steady pressure and practice to make the loops or letters a consistent size and spacing. If you make the loop larger and open, as in making a lowercase handwritten letter “e” it is more difficult to keep the open loop size consistent and it is a more difficult border to do well.

When you need to stop and then want to continue your border, finish the “C” and gently touch your icing tip to the cake as you stop pressure. Begin at
Activity 11: Round Tip Practice

20 minutes

Were you surprised to learn what decorations a plain round tip can be used to make? You will have the opportunity to experiment with the round tip to make lines, dots, balls, hearts, write “Happy Birthday” and create borders on your practice boards.

Supplies

- Thin consistency icing for lines, lettering and arcs
- Medium consistency icing for dots, hearts and snail trail border
- Tip #4
- Icing bag with coupler
- Practice board (bought)
- Practice Board (homemade)
- Tape
- Happy Birthday template made in Activity 7

Instructions

1. Fill an icing bag a third to half full of medium consistency icing. Use the round tip to practice small dots, large dots, a dot border, tear drops, a heart of two teardrops, a snail trail border and a straight line on your practice board.

2. Partly fill another icing bag with thin consistency icing to trace your Happy Birthday template and practice making drop arcs.

3. Try the “C” border with both icing consistencies to understand how the consistency affects your work.

4. Pipe a “C” border with flatter “C”s close together.

5. Pipe a “C” border with large “C”s far apart.
**Something to think about**

How did you do? What did you find easy to do with the round tip? What do you need more practice at?

Which borders did you like the look of?
13

TRIPLE STAR

Figure showing piping tips 13 and TRIPLE STAR, with examples of the designs they create.
Activity 12: Make Medium Icing, Tint Some and Practice with the Star Tip

30 minutes

**Supplies**
- Ingredients for one buttercream icing recipe
- Electric mixer
- Food colouring
- Small bowls
- Rubber spatula or spoons
- Practice boards (bought and homemade)
- Icing bags with couplers
- Star tip #12 or #16
- Toothpicks
- Small resealable containers

Make medium consistency buttercream icing.

Put about half cup of icing in a small bowl and colour it any colour you like. Blend it well.

Using the star tip, make stars, a star border, a block of solid stars, a zigzag border, a rosette, a rosette border, a shell, a shell border and a loop or “C” border on your practice board.

Fill in a square area using at least 30 stars to practice squeezing out identical stars and to understand how to space them to completely fill an area with colour. You will use this technique for the gel transfer in Activity 13 and also when you are decorating a character cake.

Adding variety to borders

You can combine borders in lots of ways. Why not create a border pattern that repeats a star in one colour followed by a shell of a different colour. One shape in a pattern of colours could be used too. Or add dots of another colour in every loop of your “C” border or leaves every-so-often beside your drop flower border. Add edible candies, sprinkles, etc.
**Something to think about**

How did you do? What did you find easy to do with the star tip? What do you need more practice at?

Which shapes did you like when they were done individually?

Which borders did you like the look of?
Activity 13: Plan and Decorate a Cake

30 minutes

Supplies needed

- Cake with crumb coat brought from home
- Thin consistency icing
- Medium consistency icing
- Practice board (a paper with designs, photocopies or piped patterns, tape and wax paper)
- Food colouring
- Toothpicks
- Small bowls
- Spoons
- Spatula
- Piping bags (a few) and couplers
- Tips – star and round
- Paper
- Pencil
- Pencil crayons (optional)

Instructions

1. Plan your cake and incorporate a couple different techniques you have learned using the round and star tips. Is there a theme or occasion for which you are making this cake? Think about that when you plan your design and how you will use the techniques you now know.

2. Sketch the cake on a piece of paper, drawing where the borders and other designs are, noting which tip and technique you will use, and its colour. Also note if it needs to be thin or medium consistency icing for that part as a reminder to yourself about which colours you need to
make and if they are all the same or different icing consistencies. You may find it helpful to use pencil crayons in your plans.

3. Colour only the amount of icing you will need. You can share or trade colours with friends.

4. Put a final coat of icing on your cake (thin consistency).

5. Decorate your cake using the round and star tip.

Freeze the remainder of your medium consistency icing and bring it to the group meeting.

Something to think about
Take a picture of your cake and fill in the Cake Journal about it. What colour scheme did you use?
Activity 14: Plan and Bake a Cake that will use a Gel Transfer of a Simple Picture and Lettering

60 minutes at home

Supplies

- Single layer cake baked (use a different recipe)
- Simple picture printed the exact size you want to use on the cake
- Printout of message using the exact font and size you want on the cake
- One batch of medium consistency icing but thin enough to ice your cake
- Computer
- Internet access
- Computer paper
- Sketch of your cake design

Instructions

1. Read the next section about gel transfers to help you understand what kind of picture you will need to find in this activity.

2. At home, plan a single layer cake that will use a gel transfer of a message you create with a lettering font on your computer and a simple picture or clipart you can print using your computer. Think about theme, colour scheme, balance and space as you plan the cake design. Enlarge or shrink the simple picture and lettering to fit on the cake top. You can use your computer to find a font that you like, type your message and then enlarge and bold it to the size you want on the cake.

3. Plan borders and possibly other decorations that you have learned to make.

4. Sketch the cake and be sure to write which tip number you will use for each part, including the lettering and how you will fill in the colours of the picture. Note the icing consistency needed for each part of the plan and the colour the icing will be tinted.
5. Select a different cake recipe from the one you made last time and bake a single layer cake.

6. Make one batch of medium consistency buttercream icing and thin enough to ice your cake. Do not tint any of it.

Bring the cake, icing, your icing bags, couplers, tips, food colouring, parchment paper, gel icing, your lettering and picture, the leftover frozen medium consistency icing and a container to safely transport your cake to the next group gathering.
A gel transfer can be used to exactly copy or trace lettering, designs or pictures onto a cake. Simple pictures or designs can be filled in using a round or star tip, and lettering styles can be copied precisely. Gel transfers of pictures with simple lines, such as those found in children’s colouring books work best for gel transfers. (More detailed pictures are best made using a different technique.)

Enlarge or shrink the picture or lettering you want on your cake to the exact size you want on your cake top.

Place wax or parchment paper on top and trace the lettering. Flip your wax or parchment paper over so that the letters are backwards and then pipe your message in buttercream icing or piping gel. (You can also use piping gel for the writing transfer, but may find it spreads out wider than you like. Use a clear piping gel or one close to your lettering or cake colour to help camouflage it and put it in the freezer for a few minutes before you lay it on the cake.)

Note that it will be backwards at this point. Use a small round tip to pipe buttercream icing in the same colour as your background.

Turn the parchment over and line it up before you place it on the crusted over cake. Gently lay it down and trace the writing lines with your fingers to transfer the icing onto the cake. Then you can pipe in a wider, contrasting colour over the transferred message.

If you have trouble seeing it, you can lay the transfer on top of the cake and trace it lightly with a toothpick and look for the indentation lines as your guides.
Activity 15: Decorate a Cake Using Gel Transfers

45 to 60 minutes

At your group gathering you will each decorate a cake using the gel transfer. As a group, review that section in your manual and ask questions if any of it seems confusing.

Before you start to decorate, look at the other members’ gel transfer pictures and sketches of what their cakes will look like. Discuss the themes or occasions each cake is designed for. Do the plans seem to be good designs with regards to balance, use of colour and space? Share your ideas.

Are any of the pictures that members brought to transfer onto their cakes more complicated than the others? Should some of them be simplified or altered before they are copied?

What icing tips are they using? Which techniques will they include?

Look at the colour schemes and pictures that have been selected and discuss them before any icing is tinted. Are there any changes you would like to make to your cake design before you start?

What order should things be done? Consider this before you start.

Some members may be able to share icing if they are using similar colours. If you and another member are using the same colour icing, discuss with them if they need it to be medium or thin consistency. The person who needs it thin consistency (for icing the whole cake or for lettering) will need to thin theirs once the colour is made.

**Supplies**

- Single layer cake (Activity 12)
- Simple picture printed the exact size you want to use on the cake
- Printout of message using the exact font and size you want on the cake
• One batch of medium consistency icing
• Sketch of your cake design
• Food colouring
• Icing bags, couplers
• Toothpicks
• Small bowls
• Plate
• Container for the safe transport of your cake

Instructions
1. Follow the directions for a gel transfer. If you do not have gel icing, you can pipe a thin line of icing using your smallest round tip instead.

2. Make the icing consistencies and tint them the colours you will be using for your design.

3. Ice your cake and let it rest for a few minutes to let it form a crust before you begin any gel transfers onto its surface. As it rests, prepare your gel transfers.

4. Place wax or parchment paper on top of your printed lettering and your picture. Trace them carefully with a pencil.

5. Flip your wax or parchment paper over so that the letters are backwards and then pipe your message using a small round tip line of buttercream icing or piping gel. (Piping gel spreads out a bit when it is used so you may prefer to use buttercream icing for finer lines. Use a clear piping gel or one close to your lettering or cake colour to help camouflage it.

6. Note that your lettering and picture will be backwards as you look at them.

7. Lay the piped pattern and lettering parchment paper on a plate and set it in the freezer for a few minutes before you lay it on the cake. This helps the icing to keep its shape while you flip it over and also
helps to keep the icing lines crisper and easier to see when they are transferred to the cake.

8. Turn the parchment over and line it up before you place it on the crusted over cake. Gently lay it down and trace the lines with your fingers to transfer the icing onto the cake. Then you can pipe in a wider, contrasting colour over the transferred message and outline your picture before you fill in colours.

9. Continue decorating your cake.

**Something to think about**

What do you think of the cake you decorated? Were you happy with the results?

If you have additional tips to include about gel transfers to help you next time you use it, note those in your activity book.

Take a picture of your cake and fill in the Cake Journal about it.
Cupcakes

Not only are cupcakes yummy individual cakes, they are great for experimenting with flavours, piping techniques, colour combinations and special effects. Decorating cupcakes is good practice and if you mess up on one, there will be others that look good.

Making Cupcakes

Paper or no paper?
You do not have to use paper liners when you make cupcakes if you prepare muffin tins like you would a cake pan, using shortening and flour. It is less messy if you use muffin tins lined with cupcake papers, though. Some recipes will even ask for metallic cupcake papers, which do not stick to the cupcake as much, but are expensive. Cupcake papers come in standard sizes and can be as plain or patterned as you like. Plain is cheaper.

How much batter should you put in a cupcake paper or cupcake liner? That amount varies depending on the cake recipe – some hardly rise and others will double in size. If your recipe does not say, fill the paper two-thirds full. If you really want to be sure, bake a test cupcake before you fill the other papers.

To fill the cupcake liner/paper, cooks recommend using small measuring cups or spring-loaded ice cream scoops. See what works for you and the particular batter you have. Some batters are thin, while others are thick. Some recipes will make rounded tops and other recipes tend to make flatter cupcake tops.

Note on your recipe or cake journal how full the cupcake papers needed to be filled to get the height of cupcake you wanted. Also write down if the cupcakes made with this recipe had flat or rounded tops. This will affect your cupcake design.

Follow the cake recipe for temperature and cooking time. If you are not sure, a standard would be 18-20 minutes at 350 degrees Fahrenheit, but check at
the earlier time. They should spring back to the touch or a toothpick poked in should come out clean or with a couple dry crumbs attached. Muffin tins come in several sizes, and that affects how long your cupcakes will take to bake. Mini cupcakes take about half the time, but super large ones only take a bit longer than a regular muffin tin size.

If your oven heats unevenly, remember to turn the cupcake pans half way through the baking time to help them bake evenly.

As with cakes, let the cupcakes cool completely before you start decorating them.
Activity 16: Bake Cupcakes and Find Decorating Ideas

60 minutes at home

Supplies

- Ingredients to make cupcakes
- Cupcake papers
- Internet access
- Paper and printer

Instructions

1. Bake two dozen cupcakes and put them in a container. (Freeze if made ahead of time or refrigerate if made the day before your group meets.)

2. Go online to search cupcake ideas/images, looking for cupcakes that use a round tip for dots, lines and lettering, and a star tip for stars, zigzags, swirls and rosettes. Can you find faces that you could make?

3. Copy five images and bring them to the next group meeting to share. You can look for ideas in books and sketch them too.
Activity 17: Grass/Hair/Fur Tip and Cupcake Swirl Practice

30 minutes

Supplies
- Tips 1M and 233
- Practice board
- Spatula
- Medium consistency icing
- Icing bag
- Coupler

Instructions
1. Use the practice board and 233 tip to make short grass that stands up straight being careful not to leave any gaps as you cover a larger area.

2. Try some long, wavy hair. Try fur, overlapping the hair.

3. Use your practice board and the 1M tip to make a classic swirl and a large rosette swirl to cover the top of cupcakes.

4. Fill another bag of icing and put a coupler in it, but no tip. Use this to create the mounded swirl similar to the rosette, mounding up the icing as you go to the centre.

Something to think about
Was your icing the correct consistency to make the grass or fur stand up?

Note several things you can make or use the grass tip for.
How did you do using the 1M tip?

Were you surprised that you could use your coupler as another icing tip? How might it be used for a cake?
Activity 18: Decorating Cupcakes

45 minutes

Share the ideas you found on the internet or sketched, and talk about how they made those designs. What do you like about them? What techniques are used? What other decorations, edible or nonedible are included? What kinds of faces could you find?

Supplies

- Cupcake ideas printed from the internet or sketched from books
- Thin consistency icing from home
- Medium consistency icing from home
- Round and star tips
- 1M tip
- #233 grass/hair/fur tip
- Icing bags
- Food colouring
- Small bowls
- Spatula
- Toothpicks

Plan some cupcake designs and experiment with the round tips, star tips, including the 1M and open coupler and the multi-opening tip you just tried. You can share or exchange icing with your friends to get the variety of colours you need to decorate them. Make at least six different faces.

Something to think about

What techniques did you use? Which ones were easy to use? Which ones do you need more practice with?
Take a picture of your cupcakes.

Fill in a Cake Journal about them and include the sketches or pictures you used for inspiration.
Activity 19: Drop Flower and Leaf Practice

30 minutes

Supplies

- Tips 131, 352 and 3
- Ingredients to make medium and thin consistency icing for flowers
- Electric mixer
- Icing bags and couplers
- Food colouring
- Rubber spatula or spoons
- Toothpicks
- Small resealable containers
- Practice board

Instructions

1. Make medium consistency buttercream icing. Put about ½ cup of icing in a small bowl and colour it any colour you like. Blend it well.

2. Take about a 1/2 cup of the white icing out, place it in another bowl and make thin consistency for leaves and stems. Tint it green.

3. Use your practice board to make star flowers.

4. Practice making drop flowers (turning your hand).

5. Use a small round tip to make flower centres in a contrasting colour.

6. Practice making leaves that are different lengths and widths to understand the pressure and movement needed. Make some short fat leaves. Then make some long thin leaves.

7. Make ruffled leaves to see what different hand movements do to the leaf shape.

8. Use your round tip to make stems and draw leaves coming out of them.

9. Add drop flowers to the stems.
10. Store the extra icing in airtight containers and freeze for the next group gathering.

**Something to think about**

Which flower shape did you prefer?

How did you do with your leaf, stem and flower design? It takes practice to make the flowers look natural in the stem.
Activity 20: Ruffle and Bow Practice

20 minutes

A ruffle can be a decoration or border on the cake or cover the entire cake surface as ruffle columns over the crumb coat. Bows can be drawn to hold together bunches of flowers or be decorations in their own right.

With practice you will become comfortable with this lopsided tip and what you can do with it. Always be sure you have the larger, wider end of the tip closest to the cake.

Supplies

- Tips 103 or 104
- Icing bag and coupler
- Medium consistency icing
- Practice board

Instructions

1. Use your practice board to make a series of ruffles.

2. For each border or line of ruffles, try to keep the ruffles consistently spaced and the same size. When you begin a new row of ruffles, try a different width and spacing for that entire line.

3. Vary the width and spacing of the ruffles.

4. Try to make an arch or semicircle of ruffles, as you would a scallop or swag decoration.

5. Practice making bows in a variety of sizes. The loops do not have to make a perfect figure eight, but can be floppy if both loops are similar in size and droopiness. Big bows may need larger petal or ruffle tips to look good. Make a large bow and see what you think of the balance between its ribbon width and the bow size.
6. Try a variety of wavy lines to see what you prefer for the dangling ribbons.

**Something to think about**

How did your ruffles look? It takes practice to make the ruffles even.

What size bow would you say is the largest you think should be made with the tip you used?
Can I Decorate a Cake Without Using Tips and a Piping Bag?

YES! By using coloured icing, edible or nonedible decorations or cutting the cake into a shape, you can create unique cakes. For instance, a round cake can turn into a fish when you use your spatula to shape coloured icing into scales and add candies to be fins and an eye. Flip flops can be cut out of rectangular cakes decorated with fruit leather or licorice straps.

Rice Krispies treats shaped into balls, ice cream cones for triangular pillars or tree forms can be covered with icing. Carefully placed marshmallows on a rectangular cake can be the base for your red building block cake.

Dollar store or kids’ meal toys, licorice, gummy candies cut into shapes, chocolate chips, lifesavers, cookies you buy or make (cut out) and sprinkles can be added to the cake.

Other Ways to Decorate a Cake

This project focuses on decorating using icing, but cakes can look gorgeous without any icing. A layer cake with strawberries and whipped cream showing between the layers can look delicious. Icing sugar and berries or toasted nuts sprinkled on top looks special, as would some edible flowers plopped in the centre of a tube cake. Cheesecakes do not have icing and they can look good. How else might you decorate a cake to make it showy?

Edible and nonedible decorations

Edible means you can eat it, such as peppermints, sticks of gum, strawberries, nuts or chocolate shavings, fresh or canned fruit such as berries and peaches, pieces of nuts, chocolate chips, shaved chocolate, sprinkles, candies, licorice, fruit leather—and cookies. At Achievement Day, you can use edible additions to your cake or cupcakes if you would like to. You do not have to.
Nonedible decorations mean you can’t eat them. You also cannot use them in your cake designs at Achievement Day, but it will be fun to experiment with them for the next cakes and cupcakes you make.
Activity 21: Brainstorm and Record as a Group: Edible and Nonedible Decorations

25 minutes

**Supplies**

- Marker
- Large pieces of paper, bristle board or flip chart
- Paper
- Pens

**Instructions**

1. As a group, brainstorm ideas for decorations that are not made of icing that can be added to a cake or cupcake. Be creative and write them all down, edible on one side and nonedible on the other. Do not criticize any ideas, but stick to the topics.

2. Give the group time to copy the list down for themselves to put with their images and ideas.
Edible Decorations

**Stencils** are reusable plastic sheets with cutout patterns. They can be used on cupcakes, cookies or cakes as accents or borders. You can find them to make animal prints, checkerboards, scrollwork, snowflakes, seasonal designs, etc.

To use a stencil, press it against a cake with buttercream icing that is dry to the touch. You can use a spatula to spread another colour of icing evenly over the stencil, and scrape off the excess. Carefully lift the stencil and the coloured design will stay where the stencil holes were. Replace the stencil if you are repeating the design or making a border. You can also use an airbrush or spray colouring with stencils.

**Edible, purchased borders, stickers and sugar sheets or sugar decorations.** You can purchase ready-made additions for cakes. It is expensive if you need a lot, but can be effective for themes, eyes for creatures or dozens of icing roses in special colours.

**Coloured sugars and sprinkles.** Your local grocery store probably has a basic selection, but you can find a great variety of colours and small shapes at stores which sell cake decorating supplies. You will find things like edible gemstones, pearls or glitter.

You can make sprinkles in colours for which you have food colouring, by mixing the colour first and then stirring it into a bowl of sugar. Stir it well to spread the colour evenly.

**Rice paper** Bakeries use sheets of rice paper and edible ink to copy photographs to place on cakes. Imagine your soccer picture on a cake at the end of the season or grandparents’ wedding photo on their anniversary cake, and you’ll start to understand the impact. You can also buy sheets of the wafer paper and use edible markers to add designs or cut things out to add shapes for your cake.
Activity 22:  
Creative Ideas, Baking and Finding Decorations

60 to 75 minutes at home

Instructions

1. Find cake ideas on the internet, in books or magazines that can be decorated without tips. Search images of simple cakes, or pick a theme to look at. You can pick a theme such as birthday cakes, children’s cakes, cakes for men, Halloween cakes... You may also find some at http://www.wilton.com/ideas/

2. Sketch or copy and print at least eight pictures of cakes you like which can be made without using any tips, and list what could be used to create a similar effect.

3. What would you substitute or use? How could you get a similar effect without using a tip? Use the cakes you see as inspiration and improvise using your creativity.

4. Select one of the designs and find or purchase the items you will need to decorate it at the next meeting.

5. Sketch the cake design or make notes beside the picture you have printed. Note the colours you will use, the tips for each technique and the icing consistency you will need.

6. Make a cake at home from a recipe you like or would like to try, but make sure it is the shape you will need. Freeze it, refrigerate it or make it the day before your next meeting.

7. Bring to the next meeting the cake, ingredients to make and tint icing and everything you will need to decorate it.
Activity 23:
Share Creative Designs and Decorate Your Cake

60 to 75 minutes

Supplies

- Cake
- Ideas from the internet and books
- Cake design sketch or picture of inspiration
- All ingredients and decorations you need to make your cake
- Ingredients to make icing
- Food colouring
- Small bowls
- Toothpicks
- Scraper
- Spatula

Instructions

1. With the group, share the ideas you found on the internet and in books or magazines. Discuss them and what others have brought for inspiration.
   - Which ones surprised you?
   - Which ones did you think were too hard to do? How could you change them?
   - What surprised you?
2. Show the group what ingredients you brought and indicate which ones you can share with others.

3. Are there any changes you think you would like to make before you begin your cake?

4. Make your icing.

5. Be sure you know what order you should decorate your cake.

6. Ask for help if there are techniques you are not sure how to do.

7. Use your practice board to practice techniques before you use them on your cake.

8. Share icing, candies, etc.

9. Decorate your cake.

**Something to think about**

How did the cake turn out? What worked well?

What would you do differently if you were to make this cake again?

Take a picture of your cake. Fill in the cake journal and include notes about what tips and techniques you used.
Activity 24: Theme Cupcakes

75 minutes at home

Instructions

1. This time when you decorate cupcakes, keep in mind that they need to follow some obvious theme, whether that is a colour that repeats, the cupcakes make a larger, overall design such as a family tree, or have another design element or decoration that makes them seem like they belong together such as they are all flowers or monsters. The cupcakes do not have to be identical, but it should be obvious that they go together as a group.

2. At Achievement Day the cupcakes you present will need to be all one theme, though it should be different than the ones you make next.

3. Consider for whom or what occasion you can make cupcakes. Will you be giving them away as your community involvement or volunteer project?

4. Search for cupcake ideas on the internet, in books or at bakeries based on the theme or ideas you would like to incorporate in the design of your next batch of decorated cupcakes. Maybe this time the cupcakes will make one overall design such as a dinosaur or be wheels on an 18 wheeler cake. Try to be creative in your use of icing, colours and edible and nonedible decorations that will help you with your plan.

5. Print ideas you like even if you are not going to use them for this activity.

6. Sketch or use a printed picture of your thematic cupcakes.
Shaped Pans for Character Cakes

Using Shaped Pans – Famous Character or Other Shapes

Want to make a famous cartoon character or recent animated movie character? You can, with the right pans and a bit of practice. Cake pans come in shapes of dinosaurs, butterflies, baseball gloves, graduation caps and animated characters.

Character cakes use a shaped pan of aluminum and include a picture of the finished character, a recipe and instructions for you to follow.

Here are some pointers to help you get started:

• If you buy or rent a pan, be sure to get a copy of the instructions which will tell you how much batter to use in the pan and can give you recipe suggestions. If you buy the pan at garage sale or borrow it and it does not come with directions, see if you can find them online through one of the cake supply companies.

• Most of the shaped pans will tell you how many cups of batter you need to fill them properly so that they will rise to fill the pan. Some recipes rise more than others, but this will give you a starting point. Double or triple the cake batch if you need to.

• If your cake batter does not fill the pan properly, you may have a very flat cake and it will be difficult to see the character as easily. Sometimes you will bake a cake and then decide you need to do it over, with more batter. It is best to check pan capacity or use the recipe that comes with the pan to be sure it will fill the pan well. If your cake pan did not come with that information, see if you can find

Tip:
Shaped pans made of aluminum can dent. Handle them carefully.
who the manufacturer is and go to its website to find more information and directions. Wilton makes lots of character pans and has this information available online.

- It is extremely important that you prepare the pans properly for your cake to come out of the pans without sticking. Grease the inside of the pan using a pastry brush and solid vegetable shortening (do not use butter, margarine or liquid vegetable oil). Make sure you have covered all the indentations before you sprinkle a couple tablespoons of flour in the pan. Any shiny spots need a touch-up with shortening and flour.
- You will need a cookie sheet under the pans to keep any overflow from making a horrible mess in your oven. It may be a bit tricky to get the pan to sit level on the baking sheet.
- Follow the pan directions for the temperature and approximate cooking time. Use a toothpick or skewer to test for doneness.
- When a shaped cake is done, set it on a cooling rack, as you would with any other cake.

**Icing a Shaped Cake**

*Leveling an oddly shaped cake is trickier, and should be done with the flat side down on the surface, so you are cutting almost at the bottom of the cake.*

You may not be able to see all the details or molded shapes you need if you crumb coat the cake. You may find you only crumb coat parts of it such as the sides that are usually not part of the design.

Use thin consistency icing to crumb coat the part the directions tell you to. Note that if you do not crumb coat the cake, any stars or piping has to be touching so that no part of the plain cake shows through.

Based on your character or cake design, decide which colours of icing you will need and the icing consistency you should make.
The directions assume you will use a star tip to cover the entire cake. Even though you think a larger tip will be faster, anything larger than a #18 star will make it difficult to get details to show up when the cake is iced. You can use a combination of round and star tips, spatula spreading and edible and nonedible decorations to decorate the character.

What order you will need to use to ice the cake? Will it look better if you outline sections with a round tip before filling in areas of colour? Would it be better to outline the eyes again later to help them stand out?

Here are some general directions:

1. Start by icing the sides and background areas smooth, based on the shaped pan instructions.

2. Using a round tip, pipe in small details and outline the main shape using a round tip, as described in the cake pan instructions.

3. Cover the details with additional stars, stripes, zigzags, etc. as you like.

4. Cover the remaining areas with stars or decorations based on the instructions or picture that you have. If there is no crumb coat, be extra careful to be sure that all parts of the cake are covered with your stars or other decorations.

5. Remember to add a star, shell or bead border around the base of the cake.

6. The finishing touches are whatever message, other decorations or candles you may want to add.
Activity 25: Select, Bake and Decorate a Shaped Cake and Calculate the Cost to Make It

120 minutes

If you have not yet made a cake or cupcakes as a community service, consider contacting a person or organization you can give this cake to. This may also help you decide what shape of pan or character would be appropriate. Seniors may not be as thrilled about a Disney princess as the children’s section of a hospital.

If the cake pan is not one you will use very often, consider borrowing or renting one instead of buying it.

A character cake looks professional and this will be a good cake for comparing how much it would cost to buy the cake compared to what it cost you for the supplies to make it. Keep track of all your expenses.

Supplies

- Shaped cake pan with directions and picture
- Water and measuring cup to determine pan capacity (if pan directions do not indicate amount of cake batter required)
- Ingredients to make cake
- Cake board large enough for character pan
- Ingredients to make icing
- Food Colouring
- Other edible or nonedible decorations
- Icing tips, couplers and bags
- Small bowls
- Toothpicks
- Spatula
- Spoons
- Calculator
- Pencil
- Paper

**Instructions**

1. Find, borrow, rent or buy a character cake pan you want to use and if it does not come with directions or pictures, see if you can find them at the manufacturer’s website. For instance, Wilton makes many character pans and you can get directions from their website.

2. Compare the pan capacity with the amount of batter your recipe makes and double, triple, etc. the recipe accordingly. Prepare the pan carefully and bake your cake.

3. Character cakes are often wider or larger than many cakes you have made and you will need to be very careful when you turn it out of the cake pan. Let the cake cool before you level it. Remember to level it by slicing off the flat side or bottom of the cake.

4. Crumb coat the cake and then decorate according to the directions or how you have improvised them to suit your own skills.

5. Covering an entire cake with stars will make your hand ache. That is why some people buy the triple star tip. (You may want to buy it if you like to do character cakes.)

6. If your icing becomes too warm from your hand and the stars do not look crisp any longer, place the icing bag in the fridge for a few minutes and give your hand a break.

7. If your hand hurts from squeezing so many stars, take a break and continue later.

8. Take a picture of your cake.

9. Photocopy or scan the picture that came with your cake pan to include with your cake journal.
Something to think about
How did it go? Does your character look like the famous one? Are you happy with your first character cake?

What did you learn or do differently with this cake?

Complete your cake journal and note which tips you used, recommendations for next time, the amount of batter it took to fill the pan (how many batches) and if that was a good amount.

Character Cake Cost Calculations
1. Copy out your recipe ingredients in a column and beside each item include an estimate of what it cost. Ask your mom or dad for help to estimate how many cups of flour are in the bag it came from, what it cost per cup, the cost per egg from your dozen, etc. Even if you think
the amount of vanilla you used was only worth a few pennies, include the amount in your calculations.

2. Do the same for the icing and any other edible or nonedible decorations you used.

3. If you rented or bought a cake pan, include it too.

4. If you had to make a new cake board, include that.

5. Total what it cost you to make this cake.

6. Then find what it would cost to buy a cake decorated similar to yours. You may need to phone a bakery to ask them or can find this information by searching online.

7. Compare the costs.

**Something to think about**

What did you learn? Was that a surprise to you?
Activity 26: 
Cake and Cupcake Designs for Achievement Day

30 minutes

Go back to the page that talks about your Achievement Day requirements. You will see that you have to bake and decorate one cake and also six cupcakes that have a theme. The cake and cupcakes do not have to go together as one theme, just the six cupcakes. You must use buttercream icing.

For your single layer cake you must plan a design that will use at least two different icing tips and at least four different decorating techniques. For instance, you could use a star tip to make a shell border or rosettes, and a round tip to print something, make vines or dots. You can use other edible decorations too if you want to.

The cake will be evaluated on smoothness of icing, quality and cleanliness of workmanship, overall design (use of colour, balance, spacing) and skill with decorating tips and techniques used. The judges are looking at your decorating skill, and even though they may enjoy your creativity, it is not necessarily what the judges are looking for.

Your six cupcakes must be related in theme, but not identical, and use at least two different tips, though this may not necessarily be on an individual cupcake. You have more leeway with the cupcake decorating and planning because you only need to use two different tips and it does not say how many techniques you use. So if you were making monster or animal cupcakes using the fur tip, you could use the round tip to make eyes, or use a star tip to make a different kind of fur. If you plan to use purple as your theme colour instead, how would you do that? Cupcake designs can also include other edible decorations.

Cupcakes will be evaluated on quality and cleanliness of workmanship, overall design (use of colour, balance, spacing) and skill with decorating tips.
**Instructions**

1. Plan your Achievement Day cake and cupcakes. Start with the recipe(s) you would like to use and think about the size and shape of cake you want to bake and decorate.

2. Sketch the cake and cupcakes, noting the tips you will use, their sizes, the different techniques, if there are any other edible decorations you will use and how.

3. Share your cake and cupcake plans with your group and ask for feedback about your ideas. Make changes if you think they will improve the design or help you better meet the Achievement Day requirements.
Activity 27: Optional Practice Cake and Cupcakes for Achievement Day

90 minutes

You may want to practice your cake and cupcakes before Achievement Day. You do not have to, but if you are not sure of the design, cake recipe or need extra practice with any of the techniques you plan to use, take this opportunity to make these before your final cake and cupcakes for Achievement Day.

Supplies

- Refer to your cake sketches and notes (Activity 24)

Instructions

1. Photograph your cake and cupcakes and prepare cake journals for them.

2. Ask family or friends for feedback about the designs and themes.

3. Look for ways you can improve before Achievement Day. Use your practice board to perfect the techniques you plan to use.
Achievement Day Tips

- Remember your Record Book needs to be complete. That means all your cake journals must have photographs printed and included, and your notes should be filled out and detailed. Cake sketches can be in pencil but you should use pen in the rest of your Record Book.

- Include a page about your community involvement cake or cupcakes. In your binder that has your record book, include recipes, websites and images that you have collected over the project.

- If you are making your cake or cupcakes ahead of time, freeze them so they do not spoil before Achievement Day.

- Be sure you have the correct size cake boards and cover them. Be sure the cake board is clean and tidy.

- Use your practice board before you start something on the cake or cupcakes.

- For your cupcakes, make a dozen or more and decorate them all using your theme. Select the six cupcakes you would think are best if you were the judge. Use those.

- Keep your tips and tinted icing in case you need to do any touchups after the cake and cupcakes are transported to Achievement Day.

- Carefully transport your cupcakes and cakes to Achievement Day. Check to see if there were any accidents that need touch ups.
### Common Baking and Cake Decorating Conversions – Imperial to Metric

#### Oven Temperatures

<table>
<thead>
<tr>
<th>Fahrenheit</th>
<th>Celsius</th>
<th>Fahrenheit</th>
<th>Celsius</th>
</tr>
</thead>
<tbody>
<tr>
<td>250</td>
<td>120</td>
<td>350</td>
<td>180</td>
</tr>
<tr>
<td>275</td>
<td>140</td>
<td>375</td>
<td>190</td>
</tr>
<tr>
<td>300</td>
<td>150</td>
<td>400</td>
<td>200</td>
</tr>
<tr>
<td>325</td>
<td>160</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

#### Length measurement conversions

<table>
<thead>
<tr>
<th>Measurement</th>
<th>Metric</th>
<th>Measurement</th>
<th>Metric</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/8 inch</td>
<td>3 mm</td>
<td>1 teaspoon (tsp)</td>
<td>5 ml</td>
</tr>
<tr>
<td>1/4 inch</td>
<td>6 mm</td>
<td>1 tablespoon (T)</td>
<td>15 ml</td>
</tr>
<tr>
<td>1/2 inch</td>
<td>12 mm</td>
<td>1/2 cup (4 fl oz)</td>
<td>125 ml</td>
</tr>
<tr>
<td>1 inch</td>
<td>2.5 cm</td>
<td>1 cup liquid (16 oz)</td>
<td>250 ml</td>
</tr>
<tr>
<td>2 inches</td>
<td>5 cm</td>
<td>4 cups of liquid</td>
<td>1 litre</td>
</tr>
<tr>
<td>8 inches</td>
<td>20 cm</td>
<td>1 pint (2 cups)</td>
<td>500 ml</td>
</tr>
<tr>
<td>9 inches</td>
<td>23 cm</td>
<td>1 fluid ounce (oz)</td>
<td>30 ml</td>
</tr>
<tr>
<td>10 inches</td>
<td>25 cm</td>
<td>1 ounce</td>
<td>28 g</td>
</tr>
<tr>
<td>12 inches</td>
<td>30 cm</td>
<td>1 gallon</td>
<td>3.8 litres</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1 pound (lb) (16 oz)</td>
<td>.454 kg</td>
</tr>
</tbody>
</table>

#### Measure conversions

<table>
<thead>
<tr>
<th>Regular Flour cups to grams</th>
<th>Icing Sugar cups to grams</th>
</tr>
</thead>
<tbody>
<tr>
<td>3 cups</td>
<td>450 g</td>
</tr>
<tr>
<td>2 1/2 cups</td>
<td>375 g</td>
</tr>
<tr>
<td>2 cups</td>
<td>300 g</td>
</tr>
<tr>
<td>1 2/3 cups</td>
<td>250 g</td>
</tr>
<tr>
<td>1 1/2 cups</td>
<td>225 g</td>
</tr>
<tr>
<td>1 cup</td>
<td>150 g</td>
</tr>
<tr>
<td>3/4 cup</td>
<td>110 g</td>
</tr>
<tr>
<td>2/3 cup</td>
<td>100 g</td>
</tr>
<tr>
<td>1/2 cup</td>
<td>75 g</td>
</tr>
<tr>
<td>1/3 cup</td>
<td>50 g</td>
</tr>
<tr>
<td>1/4 cup</td>
<td>35 g</td>
</tr>
</tbody>
</table>


For additional conversions or for specific ingredient measurement conversions, search online. Note that United States measures can differ from UK measures so check your recipe to verify where it is published.