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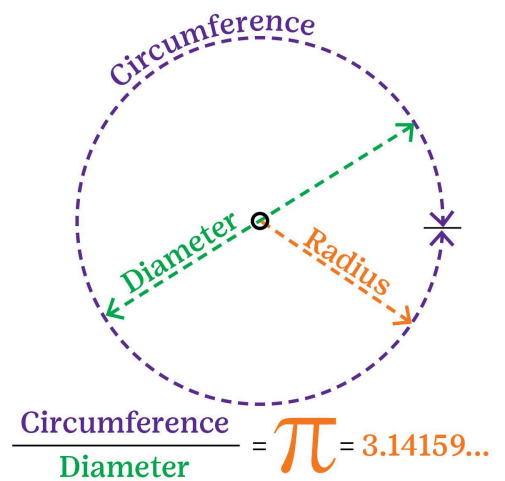
Why host a Pi Day event?

Having a Pi Day event is a super fun way to make math and math topics like pi more approachable for Girl Scouts and adults!

Do I need to be an expert on pi to host a Pi(e) Day event? No! The activity resources will help step you through how to explain the concept of pi to Girl Scouts and support you as they explore it. As you lead, girls may have questions that you can't answer—this is a *great* opportunity to show that you are learning too, and encourage them to do more research to expand their understanding.

What is pi?

Pi is what's known as a mathematical constant, which means it is a number that stays the same no matter what you are measuring. We use this number to measure the circumference of a circle from its diameter. Pi is the ratio of a circle's circumference (distance around) to its diameter (distance across). What this means is that no matter what size of circle you have, you can multiply the diameter by 3.14 to find the circle's circumference. In other words, 3.14 is the number of times the diameter of the circle will fit around the circumference of the circle! This ratio, pi (or 3.14), will always be the same for any circle, no matter what size.



How to use this resource.

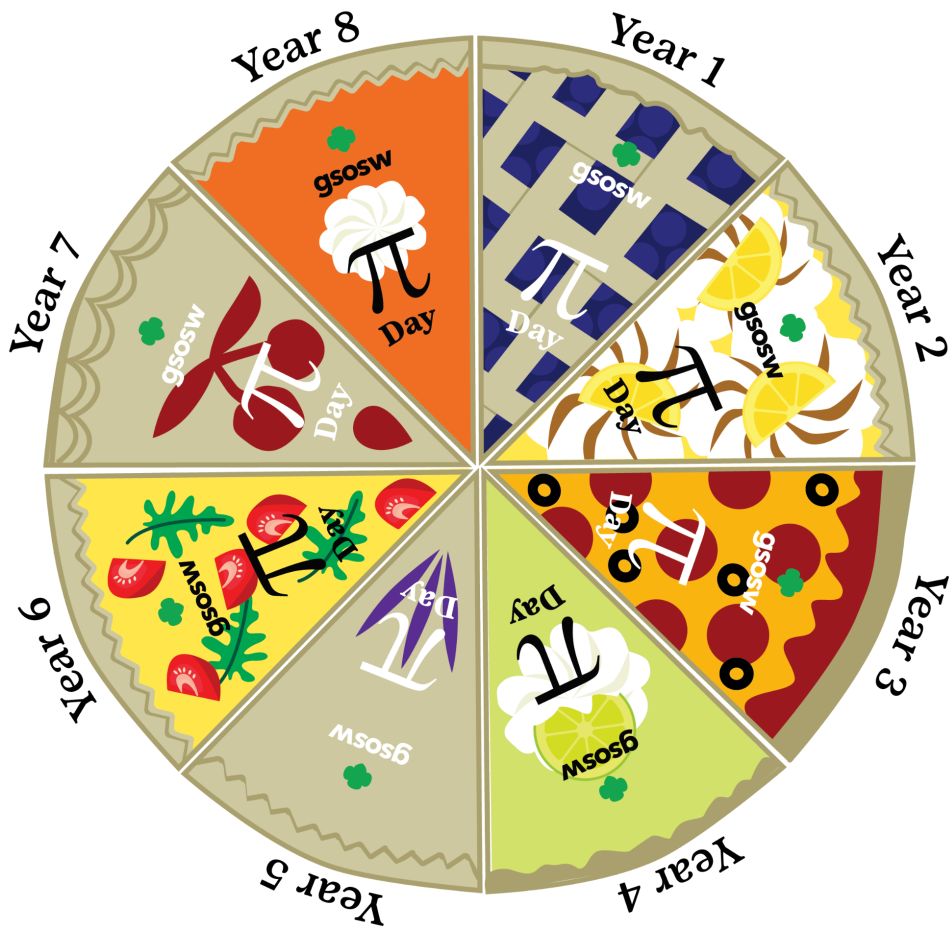
Review the following pages for an outline of how to run a Pi Day event to help Girl Scouts earn the new Pi(e) Day patch series. Use the table of contents to navigate through the document by clicking on the section you'd like to view. This event example consists of an introduction to pi with a short activity (reducing a recipe to figure out the needed amounts) and then making two miniature pies. This is just an example of what a Pi Day event could be—feel free to use these resources as you see fit and modify them to your needs.



Pi Day Patch Details

The Pi(e) Day Patch Series

Below are the steps to earn the Pi(e) Day patch. Girl Scouts can celebrate each year and earn a new slice to complete their very own pie on their uniform.



For every year a Girl Scout participates in any sort of Pi Day celebration or activity, they can earn a Pi(e) Day patch from the series! Girl Scouts can earn the patch on their own, with their troop, at a service unit or council event or by completing the online [Pi Day celebration challenge](#).



First year: Blueberry Pie
Second year: Lemon Meringue Pie
Third year: Pizza Pie
Fourth year: Key Lime Pie
Fifth year: Marionberry Pie
Sixth year: Quiche
Seventh year: Cherry Pie
Eighth year: Pumpkin Pie

NOTE: 2024 was the first year of the Pi(e) Day patch series, so only the first year's patch was available. In 2025 the second year and the first year will be available. In 2026 the third, second, and first years will be available, and so on, until all patches are available for all eight years. Patches are available for purchase at GSOSW shops.



Supply List

General Supplies:

- Disposable individual muffin tins: 2 per person
- Measuring cup: 1 per table if available
- Pastry cutters: 1 per partner set (can be substituted with forks, but is much harder for kids to use)
- Mixing bowl: 1 per partner set (will be rinsed between pies)
- Silicone spatulas: 1 per partner set
- Tablecloths: 2 per table (one on table, one on floor)
- Calculators: 1 per pair or per table
- Plastic wrap or zip lock bags: 1 per person
- Paper plates: 1 per person
- Tin foil
- Masking tape
- Paper towels

Food:

- Can of soda, water, or sparkling water* (used as a rolling pin): 1 per person
- *Brands with tall, smooth-sided bottles work best
- Butter
- Flour
- Salt
- Ice
- Eggs
- Milk or cream
- Pepper
- Cheese
- Veggies (suggestion: tomatoes, peppers, mushrooms)
- Sugar
- Lemon juice
- Frozen or fresh berries

Food Alternatives to Consider:

- Butter alternative
- Milk alternative
- Gluten-free flour/flour alternative
- Cheese substitute
- Egg substitute



Ingredient Calculations (for Purchasing)

NOTE: To get the needed amounts of ingredients, you will need to do the calculations for the amount per person. The following information will help you to do that.

Crust:

Makes four mini crusts; partners will make 1 1/2 recipes.

1/2 cup unsalted butter diced and chilled

Per partners: 3/4 cups

$$3/4 \times (\# \text{ of participants}/2) =$$

Total needed: _____

1 1/4 cups all-purpose flour

Per partners: 1 7/8 cups

$$1 \ 7/8 \times (\# \text{ of participants}/2) =$$

Total needed: _____

1/2 teaspoon salt

Per partners: 3/4 teaspoon

$$3/4 \times (\# \text{ of participants}/2) =$$

Total needed: _____

2–4 tablespoons ice water

Per partners: 3–6 Tablespoons

$$6 \times (\# \text{ of participants}/2) =$$

Total needed: _____

Quiche:

375°F for about 40-60 min; longer depending on the number of mini pies in the oven.

Makes four mini quiches; partners will divide the recipe in half.

6 large eggs

Per partners: 3 eggs

$$3 \times (\# \text{ of participants}/2) =$$

Total needed: _____



3/4 cup milk

Per partners: 3/8 cup

$$3/8 \times (\# \text{ of participants}/2) =$$

Total needed: _____

3/4 teaspoon salt

Per partners: 3/8 teaspoon = dash

$$3/8 \times (\# \text{ of participants}/2) =$$

Total needed: _____

1/4 teaspoon black pepper

Per partners: 1/8 teaspoon = dash

$$1/8 \times (\# \text{ of participants}/2) =$$

Total needed: _____

1 cup veggies chopped

Per partners: 1/2 cup

$$1/2 \times (\# \text{ of participants}/2) =$$

Total needed: _____

1 cup shredded cheese

Per partners: 1/2 cup

$$1/2 \times (\# \text{ of participants}/2) =$$

Total needed: _____

Mixed Berry Pie:

375°F for 40–60 min; longer depending on the number of mini pies in the oven.

Makes eight mini pies; partners divide recipe by 4.

7 cups frozen berries

1 3/4 cup

$$1 \frac{3}{4} \times (\# \text{ of participants}/2) =$$

Total needed: _____

1 1/2 cup granulated sugar

3/8 cup

$$3/8 \times (\# \text{ of participants}/2) =$$

Total needed: _____



4 Tablespoon lemon juice

1 Tablespoon

$$1 \times (\# \text{ of participants}/2) =$$

Total needed: _____

1 cup flour

1/2 cup

$$1/2 \times (\# \text{ of participants}/2) =$$

Total needed: _____

1/4 tsp salt

1/16 tsp = dash

$$1/16 \times (\# \text{ of participants}/2) =$$

Total needed: _____



Event Advertising

Here are two pre-written blurbs you can use to advertise your event. Fill in the highlighted details and edit it to meet your events needs.

Social Media or Email Copy:

Celebrate Pi Day!

Explore the circular sensation that is pi on [date] with a Pi Day Celebration! Pi Day is all about the never-ending number 3.14159..., also known as pi! Hence why we celebrate around March 14 (3/14)! It's time to grab a spoon and dig into all the wonder that is pie—oops, we mean pi! You will not only uncover the mysteries of pi, but also create your own delicious pie to enjoy while earning this year's Pi(e) Day patch!

Event Details:

Date:

Time:

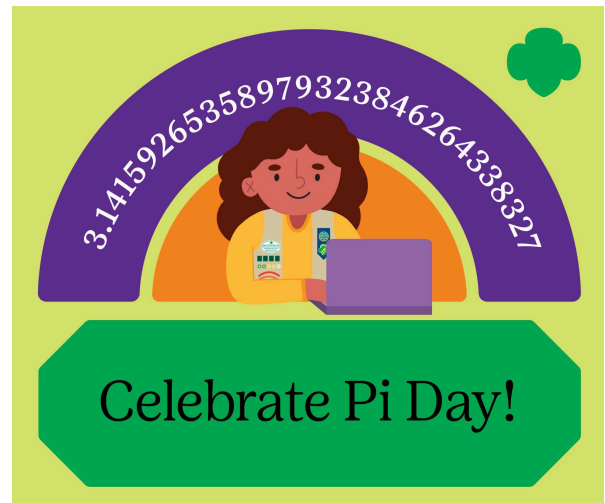
Location:

Link to Register:

Price:

Can't make it to this year's Pi Day event? Get in on the fun by participating in the virtual Pi Day Celebration Challenge! You will complete a series of short activities all relating to the amazing number pi. Activities can be found at girlscoutsofsw.org/stemday under "Pi Day"! Each activity is something you can do at home with supplies you most likely already have. Complete six of the seven activities in the Pi Day Celebration Challenge, then submit the online form to earn your Pi(e) Day patch!

[Download the social graphic with this link.](#)



Join us for a Pi Day Celebration!



Experience the circular sensation that is pi with Girl Scouts!

Pi Day is all about the never-ending number 3.14159..., also known as pi! Hence why we celebrate around March 14 (3/14)! It's time to grab a spoon and dig into all the wonder that is pie—oops, we mean pi! You will not only uncover the mysteries of pi, but also create your own delicious pie to enjoy while earning this year's Pi(e) Day patch!

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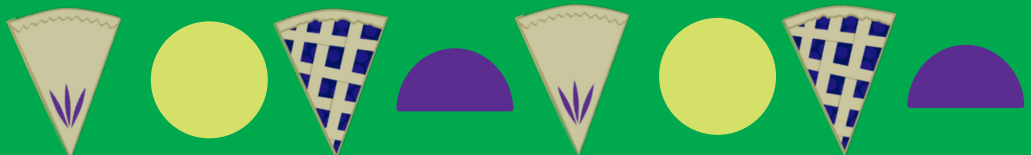
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girlscouts
of oregon
& sw washington



Event Set-Up Checklist

This is a suggested list of things to do the morning of the event before Girl Scouts arrive.

- Chop all veggies into small, bite-size pieces and put into bowls.
- Set up room layout.
 - Suggestion: Four-person activity stations (two partner groups); ideally they can all see the demonstration table/area.
 - Two tables (back-to-back)
 - Tablecloth on every table
 - Tablecloths taped to floor to stand on/catch mess (only if not on hard floor)
 - Two mixing bowls
 - Two spatulas
 - Two pastry cutters
 - Eight mini pie tins
 - Four cans of soda
 - Cup of ice water
 - One measuring cup (the liquid 2-cup kind that has all the measurements)
 - One tablespoon
 - One 1/4 tablespoon
 - Four plastic forks
 - Four plastic knives
 - Two calculators
 - Four pencils
 - Four Pi Day pie making instruction sheets
 - 4–8 chairs
 - Paper plate/bowl
- Supplies for circumference activity at each activity stations
 - Four scissors
 - Four pieces of string (each about two feet long)
 - One permanent marker



- Paper towels at sinks
- Set up ingredient stations, or however you plan to pass out your ingredients; multiple stations around the room are recommended, with adults to distribute ingredients
 - Tablecloth on every table
 - Berry pie supplies
 - One ingredient amount cheat sheet
 - Berries (in bowls)
 - Sugar
 - Flour
 - Lemon juice
 - Salt
 - Quiche supplies
 - Eggs
 - Veggies (in bowls - pre chopped)
 - Salt
 - Pepper
 - Milk
 - Empty bowl for egg shells
 - Crust supplies
 - Flour
 - Butter (pre-sliced and portioned in 3/4 cup groupings)
- Set up demonstration/teaching station
 - One table
 - Tablecloth
 - Mixing bowl
 - Spatula
 - Measuring cup
 - Teaspoon
 - 1/4 tablespoon
 - Two pie tins
 - Pastry cutter
 - All ingredients to make each recipe in somewhat separate paper bowls (except salt and pepper; add those into their corresponding ingredient bowls); this way you won't have to demonstrate measuring, just add, add, add, and mix, etc.



- String
- Scissors
- Permanent marker
- Draw on whiteboard or whatever you have at the front of the room:
 - Circle with diameter and circumference labeled
 - On the side of the white board write out the fraction conversion chart
- Make sure oven is preheating at 375°F
- Ensure all Girl Scouts and adults volunteering at the event know their role for the day and understand the flow of the day, outcomes, objectives, and timeline



Event Outline

3.5 hour event; depending on group size & age of Girl Scouts this may take more or less time.

Time	Activity
8 a.m.	Staff arrive
8–9:50 a.m.	Prep/set up
10–10:05 a.m.	Welcome and games *Do until everyone arrives: Down by the Banks
10:05–10:10 a.m.	Icebreaker
10:10–10:30 a.m.	What is pi and Circumference Activity (page 22)
	Start oven
10:30–10:50 a.m.	Introduction and Pie Measurement Activity/Math (page 25) *Do as group: Share answers (page 23)
10:50–11:05 a.m.	Wash hands and back to seats
11:05–11:10 a.m.	Begin demo and intro to crust making
11:10–11:25 a.m.	Gather ingredients and begin
11:25–11:40 a.m.	Everyone makes crust *No more than two minute demo to show the crumble state and various crust stages
11:40–11:45 a.m.	Demo rolling out crust and making our shells and pinching edge
11:45 p.m.–12:05 p.m.	Finish making crust
12:05–12:10 p.m.	Demo making quiche (filling and finish)



12:10–12:30 p.m.	Gather ingredients and finish quiche
12:30–12:35 p.m.	Quiche goes in oven, bakes for 40 min
12:30–12:35 p.m.	Intro and demo to sweet pie
12:35–1 p.m.	Gather ingredients and make pie
1–1:05 p.m.	Pinch edge of pie together & demo *As they are finishing, go around with plastic wrap and permanent marker to pack up
1:10–1:15 p.m.	Quiche out of oven
1:15–1:30 p.m.	After area clean, get quiche and snack/take home if still too hot
1:30–1:40 p.m.	Girl Scouts go home
1:40–2 p.m.	Event leaders finish cleaning up space as needed and go home



Detailed Event Outline & Script

The below information is a detailed outline and script of the above agenda. It is written in a way that you could take it and run the whole Pi Day event by simply referencing and reading it. You do not need to use this if the details of the rest of this document are enough for you!

3.5 hour event

Welcome and Introduction:

5 minutes: As Girl Scouts are arriving, have them go to the other side of the room (not where the stations are) and take a seat in a circle. Play games until everyone arrives.

- Name games or icebreakers: Down by the Banks

5 minutes: Once everyone has arrived or (like 5-10 after), hold an official icebreaker/get to know you game:

Example Activity: Find someone in the room that ...

... has the same type of pet as you (or no pet)

... has the same favorite color as you

... doesn't like the same kind of food as you

... has a similar hobby as you (plays piano or plays soccer, or likes to sew, or is in Girl Scouts!)

... has the same favorite vegetable as you

After they have gotten to know each other for a moment, have them break into partners and take a seat at a table. Make sure any Girl Scouts with dietary restrictions are partnered together, since they will share ingredients.

20 minutes: Introduction to the day, to pi, and to the Circumference activity:

- Now ... who knows what we are celebrating today?

That's right! Pi Day! So today, in honor of Pi Day we are going to make and enjoy some pies! But Pi Day isn't actually all about the kind of pie you eat, right? It's about the magical mystical, super magnificent *number* pi! Does anyone know what that number



is? 3.14! Yes, that's why we celebrate Pi Day on March 14—the third month, March, and the 14th day—and why this is a *pre*-Pi Day celebration. What is this mystical number you ask, well ... pi is what's known as a mathematical constant, this means it is a number that stays the same no matter what you are measuring. We use this number to measure the circumference of a circle from its diameter. Pi is the ratio of a circle's circumference (distance around) to its diameter (distance across). What this means is that no matter what size of circle you have the ratio, pi or 3.14 will always be the same. This ratio is the number of times the diameter of the circle will fit around the circumference of the circle! In other words, it will take 3.14 diameters to make the circumference. Let's test this out to really see what I'm saying ...

***During this time, have an adult start the oven set to 375°F !**

Before we go any further, each person needs to take two pie tins from their table and write their name on the bottom. Please do this now. Be sure you have scissors and string at your table.

- Begin by wrapping the string once around the edge of one of your pie tins. You can use either side of the tin, just be sure to continue using that side for the rest of the activity.
- Next, cut the string to that length, this will give you the circumference, or the distance around your circle.
- Now, take your cut circumference string and stretch it across the pie tin, be sure to have one end of the string at the edge and on the same side you took the circumference from.
- Cut off the remainder of the string—this stretched piece laying across your tin will give you your diameter.
- Using the remainder of your string, cut as many diameter lengths of string as you can.
- How many pieces of string did you end up with? 3 and a little bit, right?! So, No matter what size your circle is, you should always be able to cut three full diameters from your circumference and have a little bit leftover. That ratio, the number of diameters in one circumference, is pi, 3.14 and what we are celebrating today!
- *Optional:* Now, feel free to do this same thing with another circle or the other side of your pie tin. You can test to see if you still get 3.14 diameters on a circle of a different size.
- We are going to come around and collect the string, scissors and markers now.



2 minute transition:

So, let's go over the rest of the plan for the day. With your partner and the help of the adults you brought with you today, you are going to make two mini pies! We are going to start by figuring out how much of each ingredient we will need to make a mini pie based off of the full pie recipe. After we have done that we will all make our crusts. Once your crusts are made, we will make our savory pies, get them cooking, and then make our sweet pies which you will take home to bake. Once we are done, we will clean up our space and our dishes and eat our savory pie. So, let's get started!

Beginning Pi Activity:

20 min to do math: Let's take a look at our instructions! Who here has ever done addition and subtraction before? Excellent. Who here has ever done multiplication before? Okay, and who here has done division before? Okay! Now, let's begin by taking a look at your recipe instructions, let's start by reading them out loud together [*someone reads them*]. Now, together we are going to figure out how much of the ingredients you will need for each activity and write it down on our recipe sheet. Alright, so let's get started! [*Do the calculations together; this ensures that everyone's calculations are correct. If you have an advanced group of older Girl Scouts, have them do it on their own and encourage them to help each other. You can either check the calculations, or let them make mistakes — this is a safe place to fail!*]

15 min to get everyone's hands washed: As you are getting done, we need to wash our hands, so please, with your partner, go to the sink and wash your hands so we can make our crust.

5 min demo: Now that you have that figured out, let's go over a few rules and make our crust. First, as you look around the room there are ingredient stations. You and your partner will take your bowl and your measuring cups up and gather your ingredients, I want no more than three partner sets at an ingredient station at a time. We will gather ingredients one partner set per table at a time. We will always be walking with two hands on the bowl when we are carrying it. You and your partner will need to take on who does what for each of our activities. We will do a quick demo, so I have all my ingredients in the needed amounts up here. I will begin by:

- Adding my flour and salt to the mixing bowl and mix together,



- I will then cut up my cold butter and add it to the bowl, then using the pastry cutter, I will begin to mix this together until I have a crumbly consistency. It will take a moment, so we are going to pause here!

15 min to get crust ingredients and begin: Look around the room, you can see we have several ingredient stations! You and your partner will go and retrieve the needed amount of ingredients from any station, checking with the person at the station to make sure your math is correct. Once back at your table you will make your crust!

- **2 minute demo:** Continue mixing to get to crumbly consistency. [*Pause the group to SHOW.*]
- Once I have reached this crumbly consistency, I will add in my cold water, one tablespoon at a time to turn it into a dough texture. Once I am close to that, I will use my hands to press it into a ball.

15 minutes: Continue on with yours and I'll get mine into that stage and then show you, while you get yours here as well.

5 minute demo: [*SHOW and press into a ball.*] Now that you have the ball, you're going to divide it into two! One for each of you.

- Using a pinch of extra flour, lightly dust your table and using your soda can, roll your dough out flat. Once it's flat you can use your mini pie tin as a size estimate to cut three crusts out. You will want to cut about one inch further out from your pie tin edge to be the right size.
- You will then line your two tins with a crust, make sure there is enough crust to go over the edge of your tin. If there is not, take your crust out and roll it a little flatter. Set your tins and the third crust aside! It will then be time to make our filling.

20 minutes: Let Girl Scouts catch up to this point.

5 minute demo: Now it's time to make our filling! We are all going to begin by making our savory pie—a quiche! Has anyone ever had a quiche before? *Egg-cellent!* A quiche, often thought of as a french dish, was actually first made in Germany in the middle ages. So this is a really old and really traditional type of pie! It started as just eggs, cream, and bacon, but with



time came to include veggies and cheese and other goodies. Today we will be making a veggie quiche. I have gathered my quiche supplies already, so let's do a quick demo!

- I'm going to start by adding my eggs and milk to the mixing bowl and using my pastry cutter, I'm going to whisk these together. If you are having trouble using the pastry cutter, you can come grab a metal fork from up front.
- I'm then going to add a dash of salt and a dash of pepper, 1/2 a cup of my selected chopped veggies, and cheese and mix that all together.
- Now, we are going to take that little bit of excess crust dough that we made sure was hanging over the edge and fold it back in on itself just a little and pinch it, so that we can make a decorative crust edge. [*Walk around to show more closely.*]
- That's our whole recipe! We will now pour this into one of our lined pie tins—half in yours, half in your partner's.

20 minutes to get quiche ingredients and make filling: Now it's your turn! With your partner and your recipe, gather your supplies from the supply tables and make your quiche! Once you are done, please have an adult bring your quiche over here and set them on the baking tray so we can get them cooking.

Line the pan with tinfoil and write in permanent marker each kid's name next to their pie.

Give them time to do this.

Need to get quiche baking no later than 1.5 hours before the end of the event!

SET TIMERS - Designate one person to keep track of this.

Now, our quiches are going to bake for about 40 minutes at 375 degrees!

As kids bring quiches up, write their name on the foil on the pan to help ID them after they are cooked.

5 minute demo: While they are doing that, let's make our sweet pie! We are just going to use our same dishes, if you have a lot of excess egg or cheese, you can use a paper towel to give your bowl a quick wipe down. Don't worry too much about this though.

So, let's make our sweet pie, I have my ingredients already up here and ready for a quick demo!



- First I'm going to mix my berries and flour together. This will help absorb the berry juices as they melt and bake.
- Next, I'm going to add in my sugar, salt, and lemon juice and mix it all together.
- That's all I need to do for my filling! So I'm now going to pour half the mixture into my lined pie tin and the other half into my partner's.
- Now, our quiche didn't have a top, but our berry pie will, so we are going to use that third crust we made to make a lid for our pie! Set it atop your filled pie, again making sure it is large enough that it overlaps the edge of your pie tin just a bit. Similar to how we folded and pinched the edge of our quiche, we are going to do the same here, but we are going to fold and pinch the two crusts together, sealing our filling inside.
- Finally, we need to make some vent holes for all the steam and juices from our berries to escape, so we are going to use our fork or our knife and poke a few holes in the top. If you want to be creative you can make a fun design or the pi symbol!
- This pie we are not going to bake here, since we will run out of time, but you can take it home and bake it there! 40-50 minutes at 375°F. After we are done, we will wrap it up and make it nice and secure for you to bring home.

So, now it's your turn, go ahead and make your pie!

25 minutes to get ingredients and make berry pie: Give time to make pie.

5 min demo: As necessary for final steps/pinching pie crust together, etc.

Need to start cleaning up no later than 30 min till the end of the event!

Now that that is done it's time to start cleaning up! An adult is going to come around and wrap your sweet pie for you, give you the instructions to bake it at home, and then table by table we are going to go into the kitchen to wash our dishes and get everything cleaned up!

Dismiss Girl Scouts to go to the kitchen to do dishes, have towels for them to dry dishes as well. Walk around with permanent markers, plates and tin foil/plastic wrap, write on plate "375 for 40-50 min."

Bring the pan of quiches out.

Once your table and area is cleaned up and your dishes are done you can come up here and get your quiche to either eat or take home!



Circumference Activity Instructions

Intro:

Pi is what's known as a mathematical constant, which means it is a number that stays the same no matter what you are measuring. We use this number to measure the circumference of a circle from its diameter. Pi is the ratio of a circle's circumference (distance around) to its diameter (distance across). What this means is that no matter what size of circle you have, you can multiply the diameter by 3.14 to find the circle's circumference. In other words, 3.14 is the number of times the diameter of the circle will fit around the circumference of the circle! This ratio, pi (or 3.14), will always be the same for any circle, no matter what size.

For this activity you are going to need:

- Two circular objects of different sizes
- String (long enough to fit around your two circular objects with extra room)
- Scissors

Instructions:

1. Begin by wrapping the string once around one of your circular objects.
2. Next, cut the string to that length. This will give you the circumference.
3. Now, take your cut circumference string and stretch it straight across the object, be sure to have one end of the string at the edge of the object.
4. Cut off the remainder of the string. This stretched piece laying across your object will give you your diameter.
5. Using the remainder of your string, cut as many diameter lengths of string as you can.
6. Repeat this with a new string on your other circular object.

No matter what size your circle is, you should always be able to cut three full diameters from your circumference and have a little bit leftover. That ratio, the number of diameters in one circumference, is pi, 3.14.



Pi Day Pie Measurement Activity

On the following pages are the recipe and instructions that you will hand out to every participant. They include the pie measurement activity so they know how much of each ingredient they will use and it includes the recipes for each pie they are making. Below are the answers to the measurement activity for your reference.

Answers - Pi Day Pie Measurement Activity

Crust Recipe

The original recipe makes four mini crusts. Each person will need three mini crusts for today's activities. In your team, you will have to make 1 1/2 recipes worth.

3/4 cup unsalted butter diced and chilled

1 7/8 cups all-purpose flour

3/4 teaspoon salt

3-6 tablespoons ice water

Quiche Recipe

The original recipe makes enough filling for four mini quiches. Each person will need enough ingredients for one mini quiche for today's activities. In your team you will have to divide the recipe in half.

3 large eggs

3/8 cup milk

3/8 teaspoon salt = a pinch

1/8 teaspoon black pepper = a small pinch

1/2 cup veggies chopped

1/2 cup shredded cheese



Mixed Berry Recipe

The original recipe makes enough filling for eight mini berry pies. Each person will need enough ingredients for one mini berry pie for today's activities. In your team you will have to divide the recipe by 4.

1 ¾ cups frozen berries

¾ cup granulated sugar

1 Tablespoon lemon juice

¼ cup flour

1/16 teaspoon salt = a TINY pinch

Print the following instruction sheets, one per participant.





Pi Day Pie Instructions

Supplies

- Large bowl
- Pastry cutter
- Mixing spatula
- Measuring utensils (will be shared)
- 4 mini pie tins
- Fork and knife
- Calculator
- Can of soda/sparkling water, or rolling pin

Crust Recipe

The original recipe makes four mini crusts. Each person will need three mini crusts for today's activities—that's six crusts total. In your team, you will have to make $1 \frac{1}{2}$ recipes worth. Using the original recipe, a calculator, and your math skills, find the right amount of ingredients you and your partner will need for your pies. Don't forget to use the fraction conversions to turn your number into a fraction for easy measuring!

Ingredients:

$\frac{1}{2}$ cup unsalted butter diced and chilled

($\frac{1}{2} = .5$, $\frac{1}{4} = .25$)

$$\frac{1}{2} + \frac{1}{4} = \underline{\hspace{2cm}} \text{ cup}$$

$1 \frac{1}{4}$ cups all-purpose flour

($1 \frac{1}{4} = 1.25$, $\frac{5}{8} = .63$)

$$1 \frac{1}{4} + \frac{5}{8} = \underline{\hspace{2cm}} \text{ cup}$$

$\frac{1}{2}$ teaspoon salt

($\frac{1}{2} = .5$, $\frac{1}{4} = .25$)

$$\frac{1}{2} + \frac{1}{4} = \underline{\hspace{2cm}} \text{ teaspoon}$$

2-4 tablespoons ice water

$$2 + 1 = \underline{\hspace{2cm}} \text{ teaspoon}$$

$$4 + 2 = \underline{\hspace{2cm}} \text{ teaspoon}$$



Instructions:

To do as a team:

1. Add your flour and salt to the mixing bowl.
2. Mix together.
3. Cut up your cold butter and add it to your bowl.
4. Using your pastry cutter, begin to mix the butter into the flour mixture.
5. Continue using the pastry cutter to mix your dough until you get a crumbly consistency.
6. Add in your cold water one tablespoon at a time to combine your crumbly mixture into a dough.
7. Then, using your hands, press the dough into a ball.
8. Divide your ball into two (one for each of you).

To do on your own:

9. Using a pinch of extra flour, lightly dust your table.
10. Using your soda can, roll your dough out flat. Don't shake your soda though or roll it too aggressively.
11. Once your dough is rolled out, use your mini pie tin as a size estimate to cut three crusts out. You will want to cut about one inch further out from your pie tin edge.
12. Line your two tins with a crust, make sure there is enough crust to go over the edge of your tin. If there is not, take your crust out and roll it a little flatter.
13. Select one of your lined tins (this will be used for the quiche because the quiche won't have a top crust). Fold and pinch, or use a fork, to crimp along the entire edge of your crust to make a nice finish.
14. Set all of these aside. We will use them once we have made our filling.



Quiche Recipe

The original recipe makes enough filling for four mini quiches. Each person will need enough ingredients for one mini quiche for today's activities. In your team you will have to divide the recipe in half. Using the original recipe, a calculator, and your math skills, find the right amount of ingredients you and your partner will need for your pies. Don't forget to use the fraction conversions to turn your number into a fraction for easy measuring!

Ingredients:

6 large eggs

$$6 \div 2 = \underline{\hspace{2cm}} \text{ eggs}$$

3/4 cup milk

$$(3/4 = .75)$$

$$3/4 \div 2 = \underline{\hspace{2cm}} \text{ cup}$$

3/4 teaspoon salt

$$(3/4 = .75)$$

$$3/4 \div 2 = \underline{\hspace{2cm}} \text{ teaspoon}$$

1/4 teaspoon black pepper

$$(1/4 = .25)$$

$$1/4 \div 2 = \underline{\hspace{2cm}} \text{ teaspoon}$$

1 cup veggies chopped

$$1 \div 2 = \underline{\hspace{2cm}} \text{ cup}$$

1 cup shredded cheese

$$1 \div 2 = \underline{\hspace{2cm}} \text{ cup}$$

Instructions (to do as a team):

1. Add your eggs and milk to the mixing bowl. Using your pastry cutter, whisk your eggs and milk together.
2. Add your salt, pepper, veggies, and cheese to your egg mixture. Since we don't have a small enough measuring spoon for the salt and pepper, just add a pinch of each.
3. Stir together.
4. Pour half the mixture into one of your lined pie tins and the other half into your partners.
5. Set this aside, it is ready to bake.



Mixed Berry Recipe

The original recipe makes enough filling for eight mini pies. Each person will need enough ingredients for one mini berry pie for today's activities. In your team you will have to divide the recipe by four.

Using the original recipe, a calculator, and your math skills, find the right amount of ingredients you and your partner will need for your pies. Don't forget to use the fraction conversions to turn your number into a fraction for easy measuring!

Ingredients:

7 cups frozen berries

$$7 \div 4 = \underline{\hspace{2cm}} \text{ cup}$$

1 1/2 cup granulated sugar

(1 1/2 = 1.5)

$$1 \frac{1}{2} \div 4 = \underline{\hspace{2cm}} \text{ cup}$$

4 Tablespoon lemon juice

$$4 \div 4 = \underline{\hspace{2cm}} \text{ tablespoon}$$

1 cup flour

$$1 \div 4 = \underline{\hspace{2cm}} \text{ cup}$$

1/4 teaspoon salt

(1/4 = .25)

$$\frac{1}{4} \div 4 = \underline{\hspace{2cm}} \text{ teaspoon}$$

Instructions:

To do with your partner:

1. Place your berries into your mixing bowl and add your flour.
2. Mix berries and flour together until the berries are coated.
3. Add in your sugar, salt, and lemon juice. Combine into your berry mixture. Since we don't have a small enough measuring spoon for the salt, just add a pinch.
4. Pour half the mixture into one of your lined pie tins and the other half into your partners.



To do on your own:

5. Using your remaining pie crust, set it atop your filled pie. Make sure it is large enough that it overlaps the edge of your pie tin.
6. Using your fingers, pinch together the edge of the top and bottom layers of crust. Go all the way around your pie ensuring your berry mixture is now sealed inside your layers of crust.
7. Using your plastic fork or knife poke small air holes into the top crust of your pie. If you are feeling creative you can make a design. Don't put too many holes or too large of holes into your crust though.
8. Set this aside, it is ready to bake!

Baking your pies:

Both pies will be baked at 375°F.

You will bake the quiche for about 40 minutes.

You will bake the berry pie for about 40-55 minutes.

Fraction conversions:

.12 cup = 1/8 cup

.25 cup = 1/4 of a cup

.375 cups = 3/8 cup

.5 cup = 1/2 cup

1.88 cup = 1 7/8 cup

.75 teaspoon = 3/4 teaspoon

.375 teaspoon = a pinch!

.125 teaspoon = a small pinch!

.0625 teaspoon = a tiny pinch!

