

# Math Club Gold Level Project Write Up

**Title:** **The Pi Day Pirates**

**Who:** Shirland Math Team

**What:** We will write and illustrate a book about Pi and publish it. After we receive our copies, we will have a Pi-day event for the school with the following activities.

- We will read our book "*Pi Day Pirates*" to elementary students (kindergarten through fifth grade) during their math classes while being dressed as Pirates.
- We will mimic the book through problem solving activities with those students to help teach them about circles and the importance of Pi. The math activities will include:
  - Defining Pi as the ratio between the circumference and the diameter of a circle
  - Knowing the definition of Radius and Diameter
    - Really young grade will focus on drawing circles
  - Defining Circumference and calculating it
  - Calculating area of a circle
  - Dressing up as a Pi-rate
- We will donate one of our books to the school's library, each classroom and one book per family in the district. Which will promote literacy and STEM learning.
- Parents and community members will be able to purchase our book with all proceeds going to St. Jude's Research Hospital.

**When:** Friday March 14th, 2025

**Why:** There are two purposes to our project. The first is to increase excitement for math and literacy in our school. The second is to raise funds for St. Jude's Research Hospital.

## **Planning Sheet**

<b>Grade</b>	<b>Activities</b>	<b>Math Team Members</b>
Kindergarten 8:45-9:15	<ul style="list-style-type: none"><li>• Read the "Pi Day Pirates"</li><li>• Teach how to draw a circle like a Pirate</li><li>• Decorate Pirate hats with Pi-Day Stickers</li><li>• Teach Different Parts of a Circle (Simon Says with Radius, Diameter, Circumference)</li></ul>	Maddie
1st and 2nd Grade 10:45 - 11:25	<ul style="list-style-type: none"><li>• Read the "Pi Day Pirates"</li><li>• Teach Different Parts of a Circle (Simon Says with Radius, Diameter, Circumference)</li><li>• Worksheet on different parts of a circle</li><li>• Decorate Pirate hats with Pi-Day Stickers</li></ul>	Gus Billy Mackenzie Jordan P.
3rd and 4th grade 10:45-11:30	<ul style="list-style-type: none"><li>• Read the "Pi Day Pirates"</li><li>• Defining Circumference and calculating it like a Pirate</li><li>• Decorate Pirate hats with Pi-Day Stickers</li></ul>	Anna Etta Alia Evie
5th Grade 10:45-11:25	<ul style="list-style-type: none"><li>• Read the "Pi Day Pirates"</li><li>• Using Pi to Find Circumference</li><li>• Decorate Pirate hats with Pi-Day Stickers</li></ul>	Mrs. Pals (due to time restraints)
All Grades	A copy of the book will be handed out to the youngest or the only child of each family.	

Split multi-age groups into grade level groups and rotate.

Station 1: Decorate Hats and Read the Book

Station 2: Simon Says and math activity

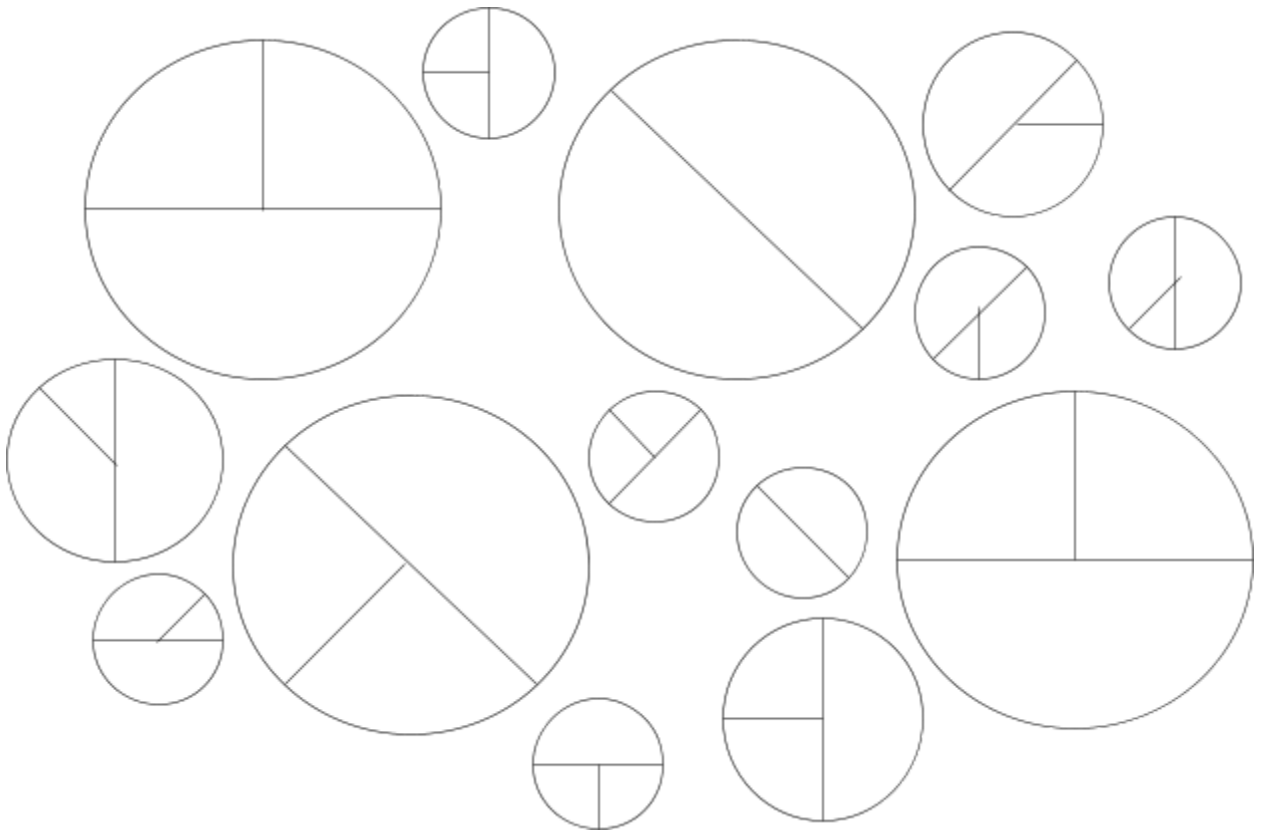
## Parts of a Circle Coloring Page

Color the different parts of each circle. Make sure to fill in your key.

Circumference will be highlighted in \_\_\_\_\_

Radius will be highlighted in \_\_\_\_\_

Diameter will be highlighted in \_\_\_\_\_.



# Defining Pi Mathematically

Look around the room, find circular objects. Measure the circumference of each circle and the diameter. Then use a calculator to divide the circumference by the diameter to see what you get. Please round to the nearest tenth. Record your answers in the table below, just like Rad and Dia.

Object	Circumference	Diameter	Circumference/Diameter =

# Defining Pi Mathematically

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# Using Pi to Find Circumference

Look around the room, find circular objects. Measure the circumference of each circle and the diameter. Then use a calculator to divide the circumference by the diameter to see what you get. Please round to the nearest tenth. Record your answers in the table below, just like Rad and Dia.

Object	Diameter (nearest cm)	Diameter X 3.14	Circumference

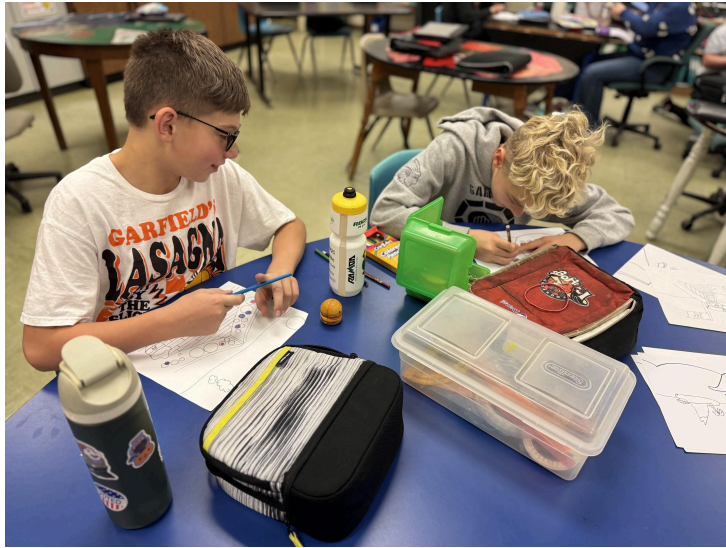
### **Other Documentation:**

Link to Purchase Our Book:

[https://www.amazon.com/dp/B0DZXSGVSS/ref=sr\\_1\\_4?crid=297N2I7G6C02Y&dib=eyJ2IjojMSJ9.Wz8xiMvQs0quv3arKMocZx0W\\_0ixa8cxYssYyTu2-CGPO4ImBErhPEQARAPS\\_vpQozrZLnbgDs5OJ6fpPLEh1uypKLX-t9M3fID5YwFD7SbaZ9Y83hAcwLOHMqLfVLLhgwNQVjcEVMKpfp0iki3v5rj6\\_07DG8gWlxYTCs7IDeuUIRuxrYbKoADb-5eYcQsbD7HPeEU2TgzuTdJ5Mme\\_uugpVBK1xekJYDrP6VhOuEc.XvF6rDs7qs4NI8OuViRREXTTAY2cQrlbqgSqQTUVYsU&dib\\_tag=se&keywords=the+pi+day+pirates+book&qid=1741636010&srefix=the+pi+day+pirates+boo%2Caps%2C112&sr=8-4](https://www.amazon.com/dp/B0DZXSGVSS/ref=sr_1_4?crid=297N2I7G6C02Y&dib=eyJ2IjojMSJ9.Wz8xiMvQs0quv3arKMocZx0W_0ixa8cxYssYyTu2-CGPO4ImBErhPEQARAPS_vpQozrZLnbgDs5OJ6fpPLEh1uypKLX-t9M3fID5YwFD7SbaZ9Y83hAcwLOHMqLfVLLhgwNQVjcEVMKpfp0iki3v5rj6_07DG8gWlxYTCs7IDeuUIRuxrYbKoADb-5eYcQsbD7HPeEU2TgzuTdJ5Mme_uugpVBK1xekJYDrP6VhOuEc.XvF6rDs7qs4NI8OuViRREXTTAY2cQrlbqgSqQTUVYsU&dib_tag=se&keywords=the+pi+day+pirates+book&qid=1741636010&srefix=the+pi+day+pirates+boo%2Caps%2C112&sr=8-4)

**Promotion Night at IceHogs Planning [Sheet](#)**

**Photos:**  
Illustrating our book!



Making a promotional proposal to our local pro-hockey team to help market our book:



**Photos of our Pi Day Activities:**









**Reflection:**

"Wow, that is incredible!" is now the normal response we get from people who hear about our project. This year, we, the Shirland Math Team, started out by brainstorming improvements on last year's project, which was just running a small Pi-Day event to get students excited about math. We joked around that it would be cool to have a pirate Pi day book to read to the younger grades, because of the pi-rate jokes and our awesome team shirts. After researching, we decided to write our own book. After we started to create a storyboard and write it, Mrs. Pals asked us how far we would like to take our project as in - how big were our dreams on this as we were pretty excited about it. We stated it would be cool to publish our book and again, after researching as a team, we found that it was possible.

Throughout this process we have learned that it is hard to write and publish a book, but fun at the same time. We learned about Pi and circles and the horrible pirate math puns that can go with that subject. Deadlines and revisions are a real thing too! We have incorporated many ideas from math, art, and technology to create our book. Then Mrs. Pals did have to step in to help, to act as an in-between, for us and the publishers. We also are learning how to market our book through first hand experience. We have asked many businesses and local news media to help promote our book, we even asked our local pro-hockey team to help us! They let us come to a game and promote our book because three team members took a big bold risk to make a pitch to the VP of Marketing. Lastly, we decided that all proceeds from the book should be donated to St. Jude Research Hospital.

Though we don't know if we would pick this project again, we did learn a lot through the process of it. It is also very cool that we are able to call ourselves published authors and illustrators. At the very end of the project, we did get to share our book with our entire school in an epic Pi-Day Celebration! I think we achieved our goal in getting the school hyped about math and literacy through this project. We have had a ton of community support throughout this entire project and we think they are just as excited as we are.