

PI DAY ACTIVITIES

1. Exploring Shapes

Students search for shapes in the environment including circles of different sizes. Do tally, frequency table, bar graph of shapes found.

2. Calculating Pi

Resources: circles of varying sizes, string, pencils, paper, scissors

Activity: Students compare the measurement of diameter and circumference to determine ratio which is pi. Students use a variety of circles including those found in the environment.

3. Pi Day recipes

Recipes for “circular foods” such as pizza, pies, pancakes, cookies

Activity: Students find recipes for “circular foods”.

4. Pi Day paper chain

Resources: construction paper, glue, stapler

Different colored paper strips are paired with numbers (e.g. blue for 2, red for 4). The strips are then linked in the order of the digits of π (3.1415...). The chain can be as long or as short as time and interest allow.

Activity: Decide on colors to represent each digit.

Create your paper chain by taking a strip of paper in the color you have chosen to represent the digit 3 and making it into a loop. Close the loop with a stapler or piece of tape.

Take a strip that represents the digit 1 and thread it through your loop. Close the loop.

Repeat with the strips that match the numbers in π so that you have a visual representation of π . How long can you make it?

5. Pi Day bracelets

Resources: beads of varying colours, string,

Like the paper chain in activity, you will choose a color of bead to represent each digit from 0 to 9. Thread the corresponding bead in the order of π to make a bracelet (on pipe cleaner) or a necklace.

6. Graphing Pi (or Skyline Art activity)

Students represent digits as bar graph. Create city skyline and colour or decorate.

Extend activity to graphing number of times digits (selected digits or all digits) are repeated in first 50, 100, 200 digits of pi.

7. Calculate your age in Pi years

<http://pidays.jtey.com/>

8. Read about Pi

Read about π in these books:

- A History of Pi by Petr Beckman
- The Joy of Pi by David Blatner
- Sir Cumference and the Dragon of Pi by Cindy Neuschwander
- Life of Pi by Yann Martel
- Contact by Carl Sagan
- Pi: A Biography of the World's Most Mysterious Number by Alfred Posamentier
- Not A Wake: A Dream Embodying (Pi)'s Digits Fully for 10000 Decimals by Michael & Diana Keith

9. **Watch movies or TV shows that feature π and/or other aspects of Mathematics:**

- "Donald in Mathmagic Land" (Disney cartoon, 1959)
- "Schoolhouse Rock: Multiplication Classroom Edition" (interactive DVD, 2007)
- October Sky (1999, rated PG)
- Stand and Deliver (1988, rated PG)
- "Numb3rs" (CBS crime drama, 2005-2010)
- <https://people.math.harvard.edu/~knill/mathmovies/>

10. **Singing Pi**

Celebrate Pi Day with a special song! Sing the song below to the tune of O, Christmas Tree.

Oh Number Pi

by LaVern Christianson

"Oh, number Pi Oh, number Pi Your digits are unending, Oh, number Pi Oh, number Pi No pattern are you sending. You're three point one four one five nine, And even more if we had time, Oh, number Pi Oh, number Pi For circle lengths unbending. Oh, number Pi Oh, number Pi You are a number very sweet, Oh, number Pi Oh, number Pi Your uses are so very neat. There's 2 Pi r and Pi r squared, A half a circle and you're there, Oh, number Pi Oh, number Pi We know that Pi's a tasty treat."

Extend the idea to have students writing their own Pi day jingles.

11. **Pi Day Greeting cards**

Create cards to send to friends and family celebrating Pi Day or Einstein's Birthday.

You may use any of the following ideas for things to write on the cards, or come up with some of your own:

"Happy PIE Day !

You are sweeter than 3.14159265358979323846264338327950288419716939937510

When the moon hits your eye like a big pizza π that's 3.1415..."

"Circles... they're as easy as 3.1415926535897932384626"

Download poster to decorate: <http://unihedron.com/projects/pi/downloads/pi.pdf>

12. Pi day competitions

- Memorization of pi digits
- Bake off - pizza, pie
- Jingles, poems
- Pi craft, greeting cards etc

13. Pi day Scavenger Hunt (online)

Find the following: (list can be extended)

- three circles or circular objects of different sizes (pictures)
- three geometric solids with circular cross sections (pictures)
- names of three persons (famous or not) born on March 14th
- recipes for circular foods
- candy that comes in circular pieces
- songs, movie titles with reference to something circular e.g moon, sun
- sports or games which use a circle or a sphere in their play (name each game)
- objects with rotational symmetry
- 5 formulae which include π (give the formulae in symbols and tell what each formula represents)

14. More ideas for Pi day 2022 including history and facts.

<https://nationaltoday.com/national-pi-day/>

[http://www.chiff.com/home life/holiday/pi-day.htm](http://www.chiff.com/home_life/holiday/pi-day.htm)

<https://www.piday.org/>