

Pi Chain (or Necklace)

Recommended Age Group: 3rd-6th grade

Time commitment: 30 minutes

Supplies Needed for each group (4 people per group is recommended):

- Ten colors of construction paper, each of a different color (or ten colors of beads)
- Tape and Scissors (or plastic jewelry string)

Preparation:

- Attribute a number from 0 to 9 for each of the colors of construction paper that you have for the students. Delineate this on the board (0 – Blue, 1 – Red, 2 – Pink, etc.)

- Write pi to as many digits as you think you will need. This will vary depending on whether you are making one enormous chain for the entire class or a little chain for each student.

Background:

This activity is a great way for kids to visualize what randomness and irrational numbers mean. You also get some great Pi Day decorations out of it! This page explains how to do the activity with construction paper, however teachers have successfully done this with beads, so the kids have some fun jewelry to take home.

This activity is also a lot of fun as a competition between classes to see who can make the longest chain!

Presentation:

Explain to your students that Pi Day is a very special day in the world of mathematics. Just like people decorate and celebrate for Christmas, Easter, and Halloween, explain that today they will decorate and celebrate for the very famous number pi.

(Depending on your classroom, explain some simple things about pi, like the fact that it is found in every circle in the universe and that it goes on forever. Explain the reason that March 14th is Pi Day and, perhaps, a little bit about pi's rise to fame.)

Note: If you are planning on a big chain, I would recommend making sure to give the groups clear assignments as to which section of pi to do.

Explain to the students that the number on the board is the famous number that they are celebrating today. Instruct everyone look at the board and find the color that relates to "3". Explain that they start with three because that is the first digit in pi. Have them take the piece of construction paper and cut out hamburger-wise a strip of construction paper, roll it into a ring and tape it together.

Ask the class what the next color they need to look for is. The next color, indeed, is the color attributed to "1" since that is the next digit in pi. Have them repeat the process as the first time, making sure that this time they loop the second ring into the first before they tape it. They have just begun their first Pi Chain!

Repeat the process with them until they can self-pilot through the remaining digits of pi on the board. Once they are finished, decorate the room with them or have them decorate their own room at home!