



Kites in the Classroom

The Chaos Game

Children are naturally curious about how the world works. Foster their curiosity and sense of playfulness in this easy activity. Use it to introduce a unit on geometry, patterns, or just as a Fun Friday activity.

Materials for each pair of students:

- Paper, pencil, 1 dice


Introduction

If your students are up for it, start with a philosophical question:

Do the rules of mathematics exist in the world and we just need to discover them, or do we impose the rules of math onto the world to fit the way we see it? Or, for a more laid back approach just tell them you want to show them something super cool!

Demonstration:

- Show how to draw a large triangle on their paper: with the paper in portrait position draw one dot in the center at the top, one dot on each corner of the bottom. Draw lines to connect them. They don't have to be ruler straight, but many kids will find it easier to use a ruler.
- Now label the top of the triangle 1, 4, and each of the bottom corners 2,5 and 3,6.
- Draw a dot anywhere inside the circle.
- Roll the dice.
- Now look at where your dot is, and draw *an imaginary* line to the corner with the number you rolled.
- Estimate where would be about halfway between your dot and the corner and draw a dot there.
- Repeat the same thing again - roll the dice, draw an imaginary line between your dot and the corner you rolled, estimate where about half way would be and put a new dot there.
- Do this five or six times.



Kites in the Classroom

Discussion

What is going to happen if I keep repeating these steps? Do you think a pattern will appear, or will it continue to be random?

Exploration

- Give the students time to work in pairs and repeat the same steps.
- This may take a while, but after some time a pattern will start to emerge!

Notes

It can take a pretty long time before the pattern starts to emerge, so one way to do this activity is to work on it over time. Another way would be to have a whole class triangle somewhere where the students can just go and do the pattern whenever they have time.

There are some cool drawing and folding activities you can do with this too! Look up Sirpinski's Triangle for more!

