

Learning & Teaching

Mathematics Teacher: Learning and Teaching PK-12, is NCTM's newest journal that reflects the current practices of mathematics education, as well as maintains a knowledge base of practice and policy in looking at the future of the field. Content is aimed at preschool to 12th grade with peer-reviewed and invited articles. *MTLT* is published monthly.

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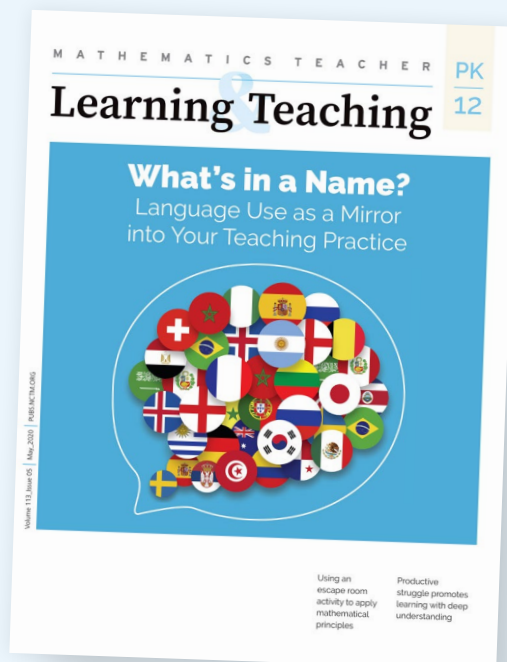
The National Council of Teachers of Mathematics advocates for high-quality mathematics teaching and learning for each and every student.

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NATIONAL COUNCIL OF
TEACHERS OF MATHEMATICS



Code of the Rings

A beloved red oak fell, leading down a road of investigation, contemplation, and reflection. Mathematics and code were used to express the tree's rings. This expression led to generative art that uses Lissajous curves to create a hypnotic visualization named Code of the Rings.

For the Love of Mathematics, driven by reader suggestions and submissions, offers visual, engaging, and inspiring material for you, the teacher.

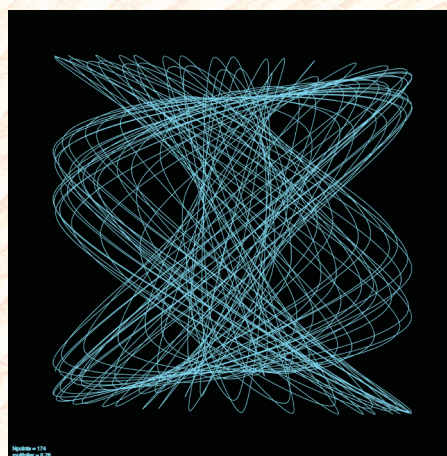
Sophia Wood



A red oak that I loved dearly fell. A glorious beast of an oak tree that hugged the sky blew down in a storm. After this happened, I pondered the rings of this old friend and their mathematical entanglement in my own life. What would our rings look like as individuals? What makes us strong? With sickness, drought, or chaotic conditions that test us, do we become stronger? Do we grow faster when tested, and slower when we are not challenged or stimulated?

These thoughts led to coding some simple generative art, with each click conjuring up a new cross-section of rings.

This code brought me down “what-if” rabbit holes, morphing into something wonderfully different. With a few changes, similar parametric equations generate an infinite variety of rotating beauty.



Mathematics is a verb that we do when we walk, when we play, and when we think. Through mathematics, we can better know ourselves and the world around us.

Sophia Wood, sophia@fractalkitty.com, Twitter: @fractalkitty, is a mathematics specialist at Silvie's River Charter School in Salem, Oregon. With many years of experience as an engineer and artist, she is passionate about hands-on mathematics.

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