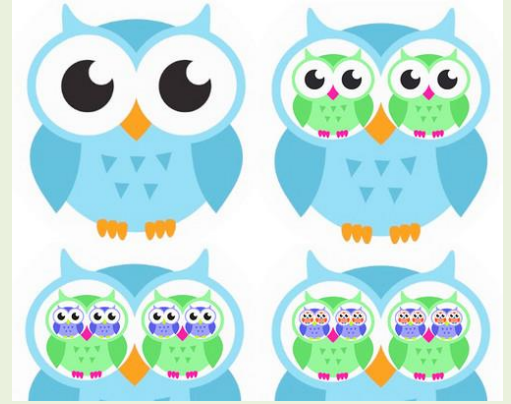


Substitution Fractals

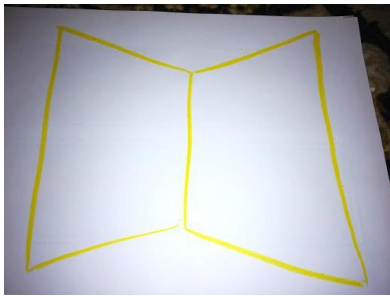
Why Explore multiples/fractions, positive/negative powers, multiplication/division – within a single unifying pattern.

How Replace each part with a miniature copy of the whole shape. Repeat several times.

What Create your own substitution fractal.

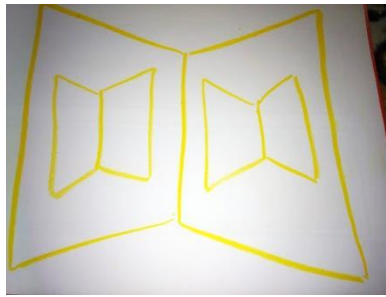


1



Find a picture you like, with prominent parts inside its outline.

2



Replace each part with a miniature copy of the whole shape.

3



Repeat several times. You just drew several levels of a substitution fractal!

Explorations

Make fractal cookies out of real or play dough.

Take this activity outside where you can draw truly big fractals with chalk.

Seek substitution fractals and nested pictures in art, nature, and technology. Use software to make picture or word fractals.

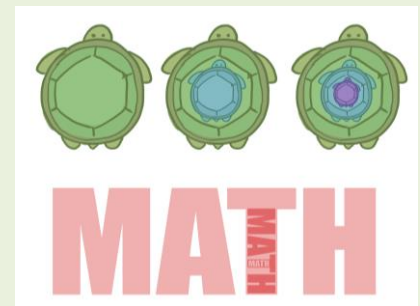
Picked only one part to substitute? That's called "Droste Effect" and makes for a great image search.

How about words within words? Make letter parts spell the word that the letters are spelling.

Your Own Math

Make Up Your Very Own Substitution Fractal Model

Email your ideas and pictures to reach.out@naturalmath.com



Draw what you like; try paper collage, sculpture, or another medium.