Fractals

Mathematical process that can model nature and look like art.
Fractals

A multicultural look
“The messages encoded in the designs (geometric designs) are like prayers.”

Elizabeth Woody

- Prayerful symbols woven into Navajo rugs
- Geometric porcupine quill design of my medicine bag
- My daughter stuffing the doll she crocheted for me with prayers before she closed the stitching
- Kia is an artist and a software engineer:
- She introduced me to fractals.

http://www.bairsindiantradingco.com/Navajo-rug-weaving-styles.htm
Fractal Geometry

A geometric shape that can be split into parts, each of which is a reduced-sized copy of the whole.

(Wikipedia)
Fractals can model the way animals or plants grow.
Fractals

College-level mathematics that can be appreciated in middle school.
Fractals

- Scale: iterations of the design are a different scale from the original.
- Relate to Math 7.2.D “Make scale drawings and solve problems.”
http://www.enchgallery.com/fractals/fractalpages/bubble%20machine.htm
Fractals

Are recursive: they repeat based on what was there before.
African Corn Row Braids Are Fractals

http://www.ccd.rpi.edu/Eglash/csd/african/CORNROW_CURVES/culture/african.origins.2.htm
“Slaves who worked inside the plantation...often wore tight braids, plaits, and cornrows (made by sectioning the hair and braiding it flat to the scalp). (Byrd and Tharps 2001 pp.13-14).”

Frances Harper
1892

http://www.ccd.rpi.edu/Eglash/csd/african/CORNROW_CURVES/culture/middle.passage.1.htm
Artist-modified fractals

http://www.fractaldementia.com/199909/vaguely.html
Work Cited

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