

CWSF 2014 - Windsor, Ontario



Brianna Bouius

A Fractal World

Challenge: Discovery

Category: Junior

Region: Bluewater

City: Hanover, ON

School: Hanover Heights Community School

Abstract: This project examined the application of fractal mathematics in medical science, technology, and the environment. The British Coastline was investigated to demonstrate the infinite fractal properties that occur in nature. The Von Koch curve was utilized to find this perimeter. Extrapolating the coastline proved that fractals are self-similar and thus can be useful in scientific research in areas such as forestry, erosion, and medical science.

Biography

My name is Brianna Bouius and I am in grade 8, French Immersion. I have four brothers of which three are younger than me. I am in grade 8 piano and achieved many awards and scholarships. I play the flute and trumpet in the school band. I also love sports and play on many teams such as basketball, volleyball, soccer and track and field. I have won many awards in swimming and have competed in "kids of steel" triathlons. I enjoy attending church and volunteering as a helper for the toddler and nursery classes and occasionally playing the piano. I enjoy math, science and art which is what brought me to love fractals since it includes all three. Walking into the world of fractals opens up many doors and many possibilities. I love that there are still many discoveries to be made with fractals and to know that I have only scratched the surface. I look forward to doing more research on fractals and possibly discovering something new that could advance us in medical science or other technologies.

Awards

Value

Excellence Award - Junior - Bronze Medal Sponsor: Nuclear Waste Management Organization	\$100
Western University Scholarship Bronze Medallist - \$1000 Entrance Scholarship Sponsor: Western University	\$1 000
Total	\$1 100