**Fibonacci Sequence: The Math and Nature Connection**

Nature and math collide when we take a closer look at the unique symmetry provided to

us by natures beauty. The explanation of this connection was originally discovered by

Leonardo Pisano Bigollo, nicknamed Fibonacci, a very talented mathematician of the middle

ages. His discovery of the Fibonacci sequence can be applied to so many things and is the perfect

example that nature actually has a code. It is easy to find the mathematical order that takes place

in nature by observing simple leaf arrangements, the scale of a pineapple, the pattern on a

pinecone or even the petals on a flower.

 Fibonacci discovered the famous number sequence while trying to model and predict a

rabbit population. He wanted to answer the question of how many rabbits could be produced

from a single pair in one year. Although his question was unrealistic and filled with assumptions

he was able to see a pattern taking place. Starting from a single pair, male and female rabbit, a

second pair was produced, ideally, another male and female. This new pair began producing

pairs, as well as the original pair, and so on. Starting from 2, each number in the sequence is the

sum of the two preceding numbers. Here is the beginning of the sequence, 1, 1 , 2, 3, 5, 8, 13,

21, 34, 55….. With as unrealistic as the rabbit question was, the sequence still applies to any

form of growth. This is why the Fibonacci sequence is so connected to nature.

 Fibonacci’s number sequence will apply to just about any growing pattern in art and

nature. A tree branch will display the sequence by starting with one branch, breaking off in to

two branches from the original, continuing this pattern. For the tree this pattern is the most

efficient way for the leaves and the branch to get the sun that it needs, while always displaying

the growth pattern of Fibonacci’s sequence. A rose, as well as many other flowers will display a

Fibonacci number. Another great example is the cross section of many fruits such as the apple or

banana that will reveal a pattern connecting it to the sequence. The apple shows a 5 seed

chamber and the banana reveals a 3 seed chamber, all Fibonacci numbers.

It’s fascinating to see how within what most of us would consider complete randomness,

the order of math exists. The curiosity of one talented mathematician has helped to explain the

unique patterns and symmetry that appear in nature. By taking the sum of the two preceding

numbers, giving us a sequence that can rise to infinity has helped the universal language of math

translate in to so many different things.