MATH IN NATURE
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Remember the Fibonacci Sequence?
0, 1, 1, 2, 3, 5, 8, 13, 21, 34, 55, 89, 144, ...

It shows up in the most interesting places!
In a paper by Luke Hutchison titled “Growing the Family Tree: The Power of DNA in Reconstructing Family Relationships,” it was shown that the number of ancestors on the X chromosome line follows the Fibonacci Sequence.
MATH IN NATURE – GOLDEN RATIO & HUMAN ARM

• The ratio between the forearm and the hand is the Golden Ratio. Not sure how? Ask for a ruler and measure your hand and forearm.
The bones of your finger (including the bone from your knuckle to your wrist) follow the Fibonacci sequence.
MATH IN NATURE - FIBONACCI SEQUENCE & FINGERS

- We have 8 fingers in total, 5 digits on each hand, 3 bones in each finger, 2 bones in 1 thumb, and 1 thumb on each hand.
Many flowers also exhibit the Fibonacci sequence.
Leaves will form in such a way to maximize sunlight exposure. Notice how, given this fact, plants seem to exhibit Fibonacci properties.
The human ear forms a Golden spiral.

A **Fibonacci spiral** approximates the golden spiral using quarter-circle arcs inscribed in squares of integer Fibonacci-number side, shown for square sizes 1, 1, 2, 3, 5, 8, 13, 21, and 34.
MATH IN NATURE: EXPONENTS & RABBIT BREEDING
MATH IN NATURE: ROTATIONAL AND LINE SYMMETRY AND SNOWFLAKES
MATH IN NATURE: LINE SYMMETRY AND THE HUMAN FACE
MATH IN NATURE: SYMMETRY AND STARFISH
MATH IN NATURE: SYMMETRY AND PEACOCK
MATH IN NATURE: SYMMETRY AND SPIDER WEBS
MATH IN NATURE: FIBONACCI SEQUENCE AND SUNFLOWERS
MATH IN NATURE: HONEYCOMBS AND HEXAGONS
MATH IN NATURE – FIBONACCI AND FRUITS

• If you cut a fruit or vegetable, you will often find that the number of sections is a Fibonacci number.
The image under the green and red spirals is a pinecone. Notice that the spirals follow the shape of the pinecone. Count the green and red spirals. Notice anything?