

FIBONACCI SEQUENCE

There are some amazing things about Fibonacci Sequences. In fact, you can find Fibonacci Sequences all over the natural world.

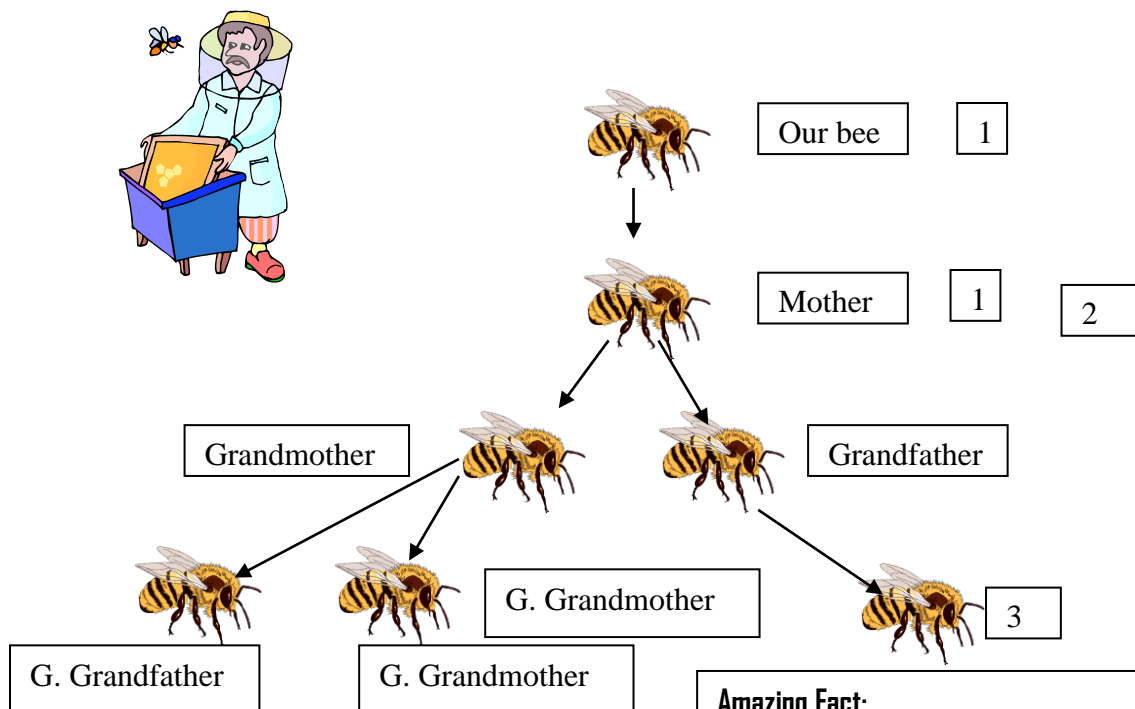
Let's look at just one animal – the bee. We can look at a bee's family tree and see the sequence for ourselves.

Facts: Every hive has a lot of bees. It is made up of:

- One female, who is the queen of the hive
- Lots of other female workers, who do lots of work but don't lay eggs
- A few males, called drones. They are the result of *unfertilized* eggs.

So let's take one male bee.

- He has just one parent, as he was born from an unfertilized egg. He has no father.
- The parent who laid that egg was a female. So she had two parents.
- Therefore, we know that our bee has 2 grandparents (his mother's parents)
- Of the grandparents, the female had two parents, but the male only had one.
- So, our male bee had three great-grandparents.



Now continue the sequence and see what happens to the numbers.

Amazing Fact:
Phi: In a honeybee community the female bees always outnumber the male bees. In any beehive in the world, if you divide the number of female bees by the male bees you always get 1.618... Phi.