

Leonardo da Vinci Assembly



Do you recognise this face? It is a self-portrait, which partially explains that direct, knowing look. But it doesn't fully explain it; that look comes straight from the searching intellect of one of the world's greatest thinkers. You are looking into the eyes of Leonardo da Vinci. And if you want to find out more about the mind of Leonardo, the good news is you can. He left 7,200 pages of notebooks. They are an intimate, daily record of his thoughts, hopes, insights and despair. We can look at his mind, taking in the world, day by day.

Leonardo is important because he is extraordinary. He is extraordinary because he could, seemingly, do everything. Steve Jobs, a sort of modern Leonardo, said, "Creativity happens at the intersection of the arts and technology." Arguably, Leonardo is the ultimate expression of that. Leonardo had the ability not just to connect art and science but to make no distinction between the beauty of art and science.

Let me give you an example. As a boy, Leonardo left his village of Vinci to go to Florence and was immersed in a variety of disciplines. Leonardo, at the age of 12, soldered a copper ball and invented the engineering to put it on top of Brunelleschi's brilliant dome, which crowns the cathedral in Florence. As a 12-year-old Leonardo had a serious engineering challenge.



That copper ball is still there.

And if you find that early achievement rather intimidating, brace yourself for further disappointment. In addition to being a creative genius, Leonardo already had very striking looks. This is a statue of David, carved by Verrocchio. Leonardo at the age of 12 posed for it.



This is what he looked like.

But for all his early achievements, Leonardo had his struggles. He embodied many things that were frowned upon. Leonardo was illegitimate. He was homosexual. He was left-handed. He was vegetarian. He was heretical in his religious beliefs. But despite all that, he was beloved in the town of Florence. They accepted him, partly because they all shared a common assumption: that you could learn everything you wanted about anything you wanted. Nowadays, perhaps we specialize too much. Perhaps we should just stay curious about everything.

Every day, in his notebooks, Leonardo made a list of what he wanted to learn. We still have his questions to himself: "Why is the sky blue?" "Why do fish swim faster in water than birds fly in air, when water is heavier?" Here is my favourite: "Describe the tongue of the woodpecker." He does not ask these things because he needs the answers to help his studies. It is not because he needs answers to paint a painting. He needs answers because he is Leonardo, and he just wants to know everything he can possibly know about everything that could be known.

Leonardo was curious about anything he saw. He was a whirlwind of ideas. He studied flying machines. Then he studied the flights of birds. He started his anatomical drawings because he wanted to paint "Saint Jerome in the Wilderness," and he couldn't quite get the neck muscles right.



But after a while, Leonardo was not just dissecting neck muscles: he records dissections of the heart, the liver and the rest of the body.

Yet despite what we now see as his sublime genius, Leonardo was frustrated during much of this experience. From his notebooks we can see, above all, that he's human. He made mistakes in his maths, he left things unfinished. He came up with crossbows that could never fire or tanks that could never roll. Even Leonardo is flawed. And he occasionally felt despair. Later in life, he wrote over and over in his notebook, "Tell me, tell me, did I ever accomplish anything? Tell me, tell me, did I ever get anything done?"

He also found he could not let things go, before they were perfect. Look again at this painting "Saint Jerome in the Wilderness." Notice the word 'unfinished'. Leonardo refused to send the painting to the man who had commissioned it. He was waiting until he felt he had finished it. 25 years after the commission, Leonardo was still practising with anatomy drawings and trying to perfect the neck. Then consider what many think to be the greatest painting of all time —the Mona Lisa, who was the wife of a cloth merchant in Florence. The cloth merchant commissioned the picture, but he never got to own the picture of his wife. Why? Because Leonardo kept it for 16 years, adding 200 or 300 tiny glazed brushstrokes to get the lips right.



I described Leonardo as a genius, and he was. He is also extraordinary in the range of ways in which he expresses his genius. The word to describe a person who shows their talent in a number of different areas is 'polymath'. That is a characteristic we wish to foster at this school. Of course, we can't all aspire to be exactly like Leonardo da Vinci. We don't have to master every subject, but I think we should work to appreciate the beauty of as many as we can.

To revisit the earlier quotation from Steve Jobs, "Creativity happens at the intersection of the arts and technology." In education, schools have been encouraged to make science, technology, engineering and mathematics their focus. This combination of subjects has acquired the acronym STEM. But the message of Leonardo is that we need to add an additional letter to the acronym. We need to turn STEM into STEAM. The extra A stands for 'the Arts'.

In conclusion, can I return to the challenge that I mentioned earlier in this assembly, one asked by Leonardo of himself about 500 years ago: 'Describe the tongue of the woodpecker.' I will tell you. The tongue of the woodpecker is *three times* longer than the beak. When it pecks the bark of a tree, the woodpecker's beak hits the wood at 10 times the force that would kill a human. How could it survive the impact? At that moment, the tongue wraps around the woodpecker's brain and cushions it, so the woodpecker can carry on pecking wood.

There's absolutely no reason why you need to know that. It is essentially useless information, just as it was useless to Leonardo. But just like Leonardo, every now and then, it is good for us to just know something for pure curiosity's sake.