

Thomas Alva Edison

Electrician. Inventor. Failure.



Little "Al" Edison was born in 1847 in Ohio, the last of seven children. He did not learn to talk until he was almost four years old and had poor hearing due to an early illness of scarlet fever. At age seven, he started school in a one room school house with 38 other students of 11 different ages. His persistent questions and self-centered attitude wore on his teacher's nerves. He was hyperactive and required too much attention. He had a wide forehead and a large head. His teacher said he thought his brains were scrambled. He struggled with speech, grammar, thinking, and understanding. (He probably had ADHD and other learning disabilities).

His mother pulled him out of school after three months and homeschooled him. She was the only one in his life who believed that his behavior and appearance were signs of superior intelligence. Because of his lack of formal schooling, he had to teach himself math, physics, and engineering.



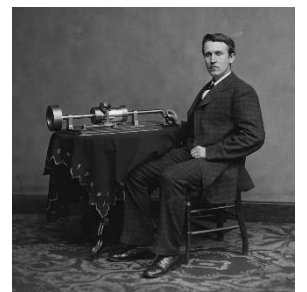
At 12, he got a job selling snacks at the railroad. At 14 he started printing his own newspaper and sold it on the trains. He saved up all his money, bought chemicals, and stored them on the train. One day the train went over a bump, knocking a stick of phosphorus onto the ground. It ignited and caught the baggage car on fire. The conductor beat him on the head and threw him off the train. He lost all hearing in one ear and 80% in the other.



At age 21, he returned home penniless and ragged and found his mother going insane, his father out of work, and the bank about to take their home. Edison got a free train ticket and went to New England to find work at Western Union as a telegraph operator. He worked 12 hours a day, six days a week, and worked on his own inventions at night. His first invention – an electric voting machine – was a disaster. Politicians hated it and said it would ruin the voting process. (It was ahead of its time.) Desperate for money he continued trying to invent which caused him to fall deep into debt. Eventually, Western Union fired him for not concentration on his job. He was again penniless and starving. He took a boat to New York, begged for food and drink, and secretly slept in the basement of a financial office.

One day, after begging for a cup of tea, he noticed the manager at the financial office was in a panic. His stock-ticker had just broken down and he could not conduct business. Edison stepped up and fixed the machine! The manager was so ecstatic that he offered Edison a job on-the-spot at \$300 a month! That was twice what the top electrician in New York City was making.

Thomas Edison holds 2,332 patents for inventions and improvements such as: phonograph, sound recorders, telephone, movie projectors, type-writer, lamp, light bulb, autographic printer, carbon microphone, telegraph apparatus, early tattoo machines, motor breaks, ways to preserve fruit, railway signals, batteries and chargers, plate glass, fluorescent lights.



Henry Ford

Machinist. Perfectionist. Failure



At age 23, Henry Ford was just a machinist's apprentice. A few years later, he was known as an intelligent, yet failed engineer, who just couldn't produce products. He worked on all kinds of machines, but none that were as exciting as his idea for a gas powered automotive that made its own power. He worked in a shed in his backyard using scrap metal from anywhere he could find it. Competition in those early years was ruthless with companies going under every day. He was fighting an uphill battle.

Failure number 1: The Ford Quadricycle (1896). After two years of work he built and sold three quadricycles for \$200 each. It looked nice, but was small and incomplete. The parts were expensive and too heavy. Although it was too difficult to be mass produced and sold easily, it got the attention of financial backers and he was given the money to start his first company: The Detroit Automotive Company. He worked and tinkered and revised, but a year later he was still unable to fine tune the quadricycle enough to be successful. His financial backers stopped giving him money and his company closed. His need to be a perfectionist in everything he did led to delayed inventions, late deliveries, and angry customers. This tarnished his early reputation and set him up for failure.



Getting a second chance was almost unheard of in the early 1900's but he was able to talk the banks into trying again. He came up with new ideas and solutions. It worked! He found money! The bankers insisted that Ford have a supervisor so as not to waste time and money and make the same mistakes as before. Ford felt this was unacceptable and insulting and he decided to give up the project.



Failure number 2: The Model A (1903). With a tarnished reputation and no money, Ford was forced to look for a new money man to work with who would not interfere like before. This was difficult because everyone knew that he already blew two chances to make a car, and no one wanted to risk their money. Finally, he found Alexander Malcomson. With Malcomson's money, and the lessons he learned from his previous disasters, he began creating the automobile he always envisioned - the Model A. To help with the production and distribution problems he had encountered before, he hired James Couzens to be the Vice President of the Ford Motor Company.

The first batch of Model A's were a disaster. They ended up having to send mechanics all over the country to fix all the defective cars they sold. The mechanics returned with ideas of how to improve the car. Ford used their ideas and first-hand knowledge to continually improve the design. He knew what didn't work in the past and revised his thinking and design. He created the first assembly line to mass produce a quality product. It took more than 5 years and hundreds of failed attempts before they would create the world's best automobile - the Model T.

<http://blog.uncollege.org/overcoming-failure-the-perseverance-of-henry-ford>

James Dyson

Industrial Designer. Entrepreneur. Failure.



James Dyson is a British entrepreneur who had a big idea. In school, he was an excellent long distance runner – not because he was physically good, but because he had more determination than the other runners. He attended college and studied furniture and interior design before moving into engineering.

His first invention was a wheelbarrow with a ball instead of a wheel. Then he worked on a trolleyball which would launch boats, followed by a wheelboat that would run in water or on land. All of these inventions worked using a ball to help things move (which his brother thought of).

In the late 1970's he had a Hoover vacuum cleaner that didn't work very well. The bag kept getting clogged with loads of dust then lost its suction power. He had seen sawmills cleaning up saw dust with a cyclone suctioning apparatus and he had an idea. Why not create a vacuum using cyclone technology that would use a fast spinning motor to suck up dirt, without the use of a bag, and spin the dirt so that it could not settle and clog the machine? He began a long and slow process to create the cyclone technology that would fit in a vacuum. After five years, he had built the G-Force cleaner. It took him 15 years and 5,127 tries to create the perfect vacuum. By the 15th prototype, his third child was born, by the 2,627 he was running out of money, and at 3,727 his wife had to get a job to support the family. But eventually, after much persistence, the bagless cyclone vacuum was perfected.



There was one problem - no manufacturers would build it because it would upset the vacuum industry and change the market for vacuum bags. It was rejected and he was forced to create his own manufacturing and research center, Dyson Ltd.

Since then, Dyson has had other successes and failures. The CR01 Washing Machine, though it took much design and engineering, was discontinued because it was too expensive to make. The Airblade Hand Dryer can be found in many public restrooms today. The bladeless fan is on sale now. And, the Airblade Tap which can wash and dry your hands in the sink will be found in hotels and restaurants.



Steve Jobs

Computer Engineer. Hippie. Failure.



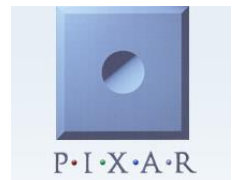
Steve Jobs was born in 1955 in San Francisco to unwed parents. After his birth he was put up for adoption and quickly adopted by Mr. and Mrs. Jobs (a lower-middle-class couple). He grew up tinkering with electronics and met a best friend Steve Wozniak. Jobs wanted to enroll in the very expensive Reed College in Oregon and, although poor, his parents found a way to pay the astronomical tuition. He lasted one semester and then dropped out. He was more interested in eastern philosophy, diets of fruit, and taking LSD than college. He left and moved to a hippie commune where he grew apples. Eventually, he returned and got a job with ATARI. He saved up his money and took a trip to India “seeking enlightenment”. He returned a little disillusioned.

Returning from India, he looked up his old friend Wozniak who a member of “homebrew computer clubs” where people would gather, make early computers from kits, and write programs. Jobs realized not all people could build their own computers from a kit, but *they* could build and sell them already assembled. The two created a company – Apple Computers. It was 1976. The Apple I and Apple II were huge successes, but the Apple III flopped big time and the company lost a lot of money.



Jobs began another project he called the Lisa computer. (His on again-off again girlfriend had a baby. He denied she was his child and refused to give her any money. The baby’s name was Lisa.) Because of his hot temper and his refusal to negotiate/collaborate on the Lisa computer, he was thrown off the project. As revenge he took over another project, named Macintosh after a colleague’s favorite apple. He hired John Sculley in 1983 to train him as the new CEO. The two of them worked for three years to perfect the Mac, then Sculley organized a campaign against Jobs. The company’s executives fired Jobs from the company that he started. It was 1986.

When Jobs bought Pixar from George Lucas it was a computer imaging/graphics hardware company. (Jobs allowed a couple employees to work on short animations on the side.) He tried over five years, using his personal money, to force Pixar into success, but it was failing and losing money. Jobs tried over and over to sell it. No one was interested in a failing company. (Eventually, the employees got better and better at animation and started making movies. It sold to Disney in 2006 for 7.4 billion.)



Eventually, Jobs was invited back to Apple. His creations include the iMac, iPod (2002), iTunes (2003), iPad, iPhone, etc.