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Members of the Class of 2013, congratulations and welcome to the community of educated women and men. You are now officially credentialed as being smart. That's the good news. The bad news, as you will learn as you go forth, is that smart people are a dime a dozen and they don't really amount to much. What really matters is those who are creative, those who are imaginative, those like Steve Jobs, who can "think different." And, as Steven Jobs said, in — I think — one of the greatest of all commencement speeches, "I'm just going to tell you three stories." That's it. Just three stories. And they come from my most recent biography subjects: Einstein, Franklin, and Jobs.

These people were really smart. Especially Einstein — he was, like, real smart. But believe it or not, Einstein wasn't the smartest or most educated or considered the most brilliant physicist in 1905. There were many others; he was just a patent clerk in the Swiss patent office. But what Einstein had, unlike the others, was that ability to "think different," that ability to be creative. And that is true of all three of the people I studied. I realize that when you look through their lives, you can even take a Steve Jobs and say, "Hey, Bill Gates? He had more mental processing power. He might have even been smarter." But there was something imaginative, something creative, about Steve Jobs. So the three stories I'm going to tell you are simply three stories that talk about the need for imagination, that ability to "think different."

With Steve Jobs, it started when he was a young kid growing up not too far away in California. When he was six years old, he and his father built a fence around the backyard of their house. And his father told him, "We have to make the back of the fence just as wonderful as the front of the fence. Steve, baby, walk the neighborhood, touch the fence, go look at the back of the fence." And Steve said, "Why? Nobody will ever see it. Nobody will ever know." His father, who was an auto mechanic, a high school dropout, said, "Yes, Steve, but you will know. People who really care about making things great care about even the parts unseen."

So Steve Jobs started Apple with his friend from down the street, and they were making the original Apple II, and then the Mac. At one point before they finished making the Mac, which was this beautiful appliance, and Steve had created a wonderful case for it — he had found the Cuisinart at Macy's, and wanted a beautiful case you couldn't open up, a beautiful screen with a wonderful playroom-like design and a graphical user interface — before they shipped that product, Steve looked at the circuit board they were going to have inside. And he said to the other engineers on the team, "This circuit board stinks." He actually used a slightly stronger word than "stinks." They said, "What do you mean?" He said, "It's ugly. The chips aren't lined up right. They're not beautiful." The engineer said, "That's ridiculous. That's not what you do with a circuit board. Plus, we've got it in this enclosed case. Nobody can open it up. Nobody will ever see it. Nobody will ever know." And Steve said what his father had said to him: "Yes, but you'll know." So they held off shipping the original Macintosh for a couple of months so they could get the circuit board looking beautiful, even though nobody could open it up or see it. When they did, Steve had all 30 engineers on the Mac team sign a poster board with their names, (Steven P. Jobs all in lowercase), to engrave on the inside of the case next to the circuit board, where nobody will ever see it. Nobody could open it up. But he said, "Real artists sign their work." His point was that if you have a passion for a product, you really care about

connecting beauty to technology to commerce, you care about it with a passion, even for the parts unseen.

This helped him develop a “reality distortion field” — those of us who are Star Trek fans know where that comes from — in which he thought he could even bend the laws of physics and human nature to get his will. He would do it over and over again by being passionate — not about making a profit, because he said that if you’re passionate about making a profit, sometimes you’ll cut corners. He said that if you’re passionate about making a product or service, or are passionate about what you’re doing, eventually the profits will follow because you’re making things of value. So when they were making the original Macintosh, it took a long time to boot up (78 seconds) and he said to Larry Kenyon, “It’s almost as bad as a Microsoft machine. You’ve got to make it faster. And you’ve got to take 10 seconds off the boot-up time.” Kenyon said, “Well, look at the code. It’s hard. I can’t; it’s elegant code.” Steve said, “Don’t be afraid. You can do it.” Steve learned from his guru in India how to stare without blinking — it was a tactic he had — and Kenyon told me, “He just kept staring at me and saying, ‘Don’t be afraid. You can do it.’” (Wozniak told me the same story. When they were making this original game called Breakout, when they were working for Atari, he said, “I had to do it in four days. I said I couldn’t do it, but he just kept staring at me and saying, ‘Don’t be afraid. You can do it.’”) Anyway, Kenyon went back to his cubicle and said, “After a couple of weeks of working on it day and night, I shaved 28 seconds off the boot-up time.”

Steve even did that late in life, when he wanted to create the iPhone. He didn’t want it to have a junky piece of plastic on the cover. He wanted the iPhone to have a really smooth piece of glass: unbreakable, tough, smudge proof. The glass he got from the claves and from China didn’t meet his high standards. Somebody at one point said, “Why don’t you call Corning? They know how to make glass.” So Steve, being Steve, just picked up the phone and called the switchboard at Corning Glass in Upstate New York and said, “Let me speak to your CEO.” And the switchboard, being a switchboard, said, “Fine. We’ll take your name and number. We’ll have somebody call you back.” Steve said, “Typical East Coast. Whatever,” and slammed down the phone. When Wendell Weeks, who was the CEO of Corning, heard about it, he did a cool thing, because he’s a cool guy. He picked up the phone and called the switchboard at Apple in Cupertino. He said, “Let me speak to your CEO,” and they of course told him, “Put your request in writing and send it to us.” Steve heard about that and he said, “That’s my type of guy.”

He met with Wendell Weeks and said, “This is the type of glass we want for the thing,” and Weeks said, “Well, you know, years ago we created a way of making glass that was an ion transfer process, and it made really tough, smooth glass just like you’d want, but we never manufactured it.” Steve went through the process with him and said, “That’s it. I want this much by September and I’m shipping the phone by October.” Weeks said, “You didn’t hear me. I said, we’ve never manufactured it.” I actually went to Corning, New York because I wanted to hear this in person, since I’d heard this tale. And Weeks said, “It was amazing. Here was this guy who didn’t even know how to make glass just sat in front of me, staring at me without blinking, and said, ‘Don’t be afraid. You can do it.’” Weeks said that after the meeting he called up a plant manager that Corning had at one of their plants in Harrodsburg, Kentucky, just south of Lexington, and said to the plant manager, who was a friend of his, “I want you to switch over and start making Gorilla Glass.” The plant manager said, “Well, it’ll take awhile,” and Weeks said, “I want you to do it tomorrow.” The manager said, “But we don’t have the equipment!” and Weeks said, “I just kept telling him over the phone: ‘Don’t be afraid. You can

do it.'" The upshot is: that October when the iPhone first shipped, every piece of glass on every one of those iPhones was made in Harrodsburg, Kentucky by this plant of Corning, and ever since then, every piece of glass on every iPhone and iPad has been made in America by Corning because of Steve's reality distortion field.

With Einstein the story is a little bit different. Katherine spoke eloquently about one of the things we learn about from comic books: the importance of creation myths. For us biographers, we always try to find that rosebud, that creation myth, in childhood. And for Einstein, it was getting a compass when he was a kid. His father gave him a compass when he was six or seven years old, and he watched as the needle twitched and pointed north. And he became totally mesmerized by this. Nothing was touching the needle. Why is a physical object moving like that when nothing physical is touching it? What is a force field? He spent years, his whole life, wondering: "Why does that work? How does electromagnetism and gravity interact with particles?" You and I probably remember getting a compass when we were six or seven years old and we go, "Oh wow, look, it points north!" And about 90 seconds later we're on to something else. On his deathbed he was still writing equations, trying to figure out the connection between electromagnetism, gravity, particles, why that needle points north. When he was seventeen years old, he finally studied Maxwell's' equations. And when you look at Maxwell's equations — well, if you're Einstein and you look at Maxwell's equations — or if you've taken Physics 72 and you've been in the Millikan building, you know that Maxwell's equations say that an electromagnetic wave, like a light wave, always travels at a constant speed relative to you. No matter which way you're traveling — you're traveling really fast toward the source of the light or really fast away from the light — the light still travels, relative to you, at 186,000 miles/second or so, the constant speed of light. And everybody was trying to figure out why. Why does that happen? Couldn't you catch up? At age 17, Einstein was trying to say, "Well, what if I caught up with the light beam? What if I rode alongside it? Would the wave look stationary to me?" But Maxwell's equations don't allow for that. He said, "I've walked around in the woods for days on end, my palms sweating, this caused me such anxiety." Now I don't know about you, but I know what was causing my palms to sweat at age 17 when I was growing up in New Orleans, and it wasn't Maxwell's equations. But this guy, from that day his dad gave him that compass, had a passionate curiosity to figure out why. And like I said, he was not considered the smartest tack in the box. He couldn't get his doctoral dissertation accepted at the Zurich Polytech, couldn't get a job teaching there, couldn't get a job teaching in high school.

So he was a third-class examiner in the Swiss patent office but he was still wondering: "What if I caught up with that thing?" And he was looking at patent applications to synchronize clocks, because, a little bit like Rabbi Litwin said, you want to go forth. You want find something special that you can do. So he was looking at synchronizing clocks and it was confusing to him because to synchronize two distant clocks, you have to send a signal between the two clocks. And the signal travels at the speed of light. So if you're trying to synchronize a clock in Zurich with one in Berlin, you have to send a light signal, radio signal, electrical signal. And he was thinking, "Well, what if I caught up with that signal? What if I caught up with the light wave? Wouldn't it be stationary?" But Maxwell's equations don't allow for that. And then he realizes — just a leap of the imagination, not a leap of mental processing power but a willingness to "think different" and challenge the conventional wisdom. Because every other physicist of that time knew what Newton had told them at the very beginning of the Principia: that time marches along second by second, irrespective of how we observe it. And then we've got this patent clerk saying, "How do we know that? How do we know he's right? How would we test that?

What if we caught up with the light wave?" And he realized that if you're traveling really fast toward one of those clocks, what looks simultaneous to you, what looks synchronized between the two clocks to you, is different than from somebody traveling really fast toward the other clock. So he came up with the idea — this leap of the imagination— that the speed of light is always constant, but time is relative depending on your state of motion. That's all the basic creativity involved in the theory of special relativity, but it upended 20th century science. All because he "thought different." He had that leap of the imagination.

And as for Ben Franklin, he too was a runaway when he was young. This is why I'm not often asked to speak at college graduations: all three of my people run away at age 17 for awhile. But Benjamin Franklin had that passionate curiosity, but he also had a sense of tolerance. To me, that was a lesson learned in childhood. He grew up in Boston, a Puritan-dominated place. His brother wouldn't let him write for the newspaper, so he slipped pieces under the door using a pseudonym: Silence Dogood. He ran away from Boston when he wasn't allowed to go to Harvard, and he did something much better: he became a newspaper journalist. What he did when he got to Philadelphia was create a club. A club called the Leather Apron Club, which was for the shopkeepers and artisans of Philadelphia. There were clubs for the wealthy gentry of Philadelphia and even working men's clubs, but he said, "We're going to try to create a new type of nation based on we, the middling people. We, the middle-class people who own shops on Market Street and wear leather aprons." And in that club, they listed the virtues and values that you ought to have to be a great citizen of your community. And if you've read the autobiography of Benjamin Franklin, you'll know the twelve of them, and they're industry, honesty, frugality… Being a geek, he marked them on a chart and marked every week how well he did on each of those virtues, until he could master them. And then he showed it around to the people in his Leather Apron Club, that he had mastered all twelve of those virtues. One of the members of his club said to him: "Franklin, you've forgotten a virtue you might want to practice." Franklin said, "What's that?" And the friend said, "Humility. You might try that one for a change."

Franklin's great insight? He said: "I was never very good at the virtue of humility. I never mastered it. But I was very good at the pretense of humility. I could fake it very well." Now here's his insight. He said, "Now, I learned that the pretense of humility was just as useful as the reality of humility." It made you listen to that person next to you, it made you try to find that common ground, and that was the essence of the middle-class democracy that we were trying to found.

So, for the rest of his life, he was the person, amongst the Founders and everybody else, that helped bring people together. When Congress created a committee to declare why we were fighting a war of independence — it's probably the last time Congress created a good committee — it had Ben Franklin, John Adams, Thomas Jefferson on it. He's the one who helped edit that wonderful second sentence. Jefferson began by saying, "We hold these truths to be sacred," in Franklin's black printer's pen. "Self-evident," he wrote, because he wanted to make the point that our rights come not from the dictates of religion but from rationality and reason and consent of the governed. The sentence goes on: "and they're endowed with certain unalienable rights" — in John Adams's handwriting — "endowed by the Creator with certain unalienable rights." What you see even in this collaborative wikified process of writing a declaration of independence is the ability to balance, something we've lost in Washington now. Balanced notions, like the role of divine providence with the role of rationality and reason in securing our rights.

This notion of coming together and using things to bring us together, that was Franklin's great strength. Even at the Constitutional Convention, when he came back from France, pretty old at 82, they were tearing themselves apart between the big-state-little-state issue and he's the one who said, "I'm the oldest person in this room, but the older I get, something amazing happens to me: I learn that I'm wrong at times. I'm fallible. And it's going to happen to you. So look at the person next to you" — just like he'd said in the Leather Apron Club back when he was 17 — "and think that maybe they have something to offer. That maybe the diversity of our opinions will lead to a common ground that's stronger than any one of our opinions." His point was that compromises may not make great heroes, but they do make great democracies. He said, "When we were young tradesmen and we had a joint of wood here in Philadelphia that didn't hold together, we'd shave from one side and take a little from another until we had a joint length that would hold together for centuries. And so too we here at this Convention must part with some of our demands." He was the one who made a motion to have a House and a Senate, that creative compromise that brought the big-state-little-state issue together.

But, in conclusion, let me say that they all had something more than these three little tales, these three little traits. They all had one trait that they shared: they all realized that they were a part of something larger than themselves. When I graduated from college, on this type of day, when I was standing there, the reverend of the church at our college gave us a sermon that morning. The title of the sermon was "What We Forgot to Tell You." The reverend said that at one point a student had come up to him and Reverend Peter Gomes asked him, "What do you want to do when you leave college?" And the student said, "I want to be powerful. I want to be important. I want to be President of the United States, maybe." And Peter Gomes said to him, "You should aim higher." He said, "This College has produced a lot of successful people. It's even produced a few presidents. But the more important thing it does is that it produces a few people who are good. So aim not just to be successful, aim to be good. Aim higher. Aim for doing good in this world."

All over the country right now, there's probably people of my generation, the Baby Boomer generation, are giving graduation speeches. And I predict that most of them are saying the same thing, which is to "follow your passion wherever it leads you." I'm going to tell you something different, though. It ain't about your passion. It's about being part of something larger than yourself. It's about *connecting* your passion to what's engraved on those gates, that you will go forth and give benefit to mankind. That you will go forth and be good.

Because at the end of your days, when you look back, when you come back for your 50th reunion it's not just about seeing how successful you were, how many toys or trinkets or power you accumulated. It's about what created and what you did to make the world a slightly better place because you were here.

During his lifetime, Ben Franklin donated to the building fund of each and every church that was built in Philadelphia. At one point they were building a new hall in Philadelphia for itinerate preachers, who were coming through because of the Great Awakening — traveling preachers that they had to offer a pulpit to — and it's still to the left of Independence Hall, still called New Hall. He wrote the fundraising document. He said, "Even if the Mufti of Constantinople were to send someone to preach Islam to us and to teach us about Muhammad, we should offer a pulpit. We should listen, for we might learn something." On his deathbed, he was the largest contributor to the Mickve Israel synagogue, the first synagogue built in Philadelphia. When he died, instead of his minister accompanying his casket to the grave, all 35 ministers, preachers,

and priests of Philadelphia linked arms with the rabbi of the Jews and marched with him to the grave. It was that notion, that notion of good-natured tolerance and a belief in listening to everybody else, whatever their background. It was a great contribution that our Founders made and Ben Franklin in particular made to the creation of our country. It's what we were fighting for back then and what we're still fighting for in the world today.

As for Einstein, even on his deathbed in 1955, he knew he wasn't going to live. He declined an operation. He was in Princeton hospital. He asked that his papers that were on his desk be brought to him. On that last day, he wrote line after line of mathematical equations. Between people visiting him, he kept writing. Nine full pages — you can go not too far from here to the Einstein papers at Cal Tech, and there they are, and you can see them. Line after line of equations that still wonder, "How would you create a unified field theory that would connect gravity and electromagnetic particles?" In other words, "Why does that needle keep twitching and pointing north?" At the very end, you can see when the pain becomes too great. He wrote just one last line of equations that dribbles off that page, that he thought would get him and the rest of us just one step closer to what he called "the spirit manifest in the laws of the universe."

And as for Steve Jobs, it was about two years ago when I think he realized he might not outrun the cancer. I was with him in Paolo Alto and I asked him, "What do you see as your legacy? What do you see as the meaning?" And he said, "Part of it is my Zen Buddhist training and part of it is what I've watched in life. It's that life is sort of like the flow of a river, it's like history in how it flows". And we get to take really, really cool things out of that flow. We get to take things people have invented, educational theories they've come up with, theories of relativity, how to make a transistor, even great products that people have invented, buildings that people have built. That we get to take from the flow of history. But your legacy is not how much you accumulate and take out of that flow. Your legacy is what you put back *into* that flow. Maybe afterwards, there'll be a few people who say, "Oh yeah, that was cool. I get to use that thing that Steve Jobs, or any of us, put back in the flow of history."

So when you leave here, read the gate and make sure that you too both follow your passion and connect that passion to something greater than yourselves.

Thank you all very much.

About Walter Isaacson

Walter Isaacson is president and CEO of the Aspen Institute, a nonpartisan educational and policy studies institute. He is a former chairman and CEO of CNN and former editor of TIME. In 2012, he was selected as one of the Time 100, the magazine's list of the most influential people in the world. Isaacson is the author of Steve Jobs (2011), Einstein: His Life and Universe (2007), Benjamin Franklin: An American Life (2003) and Kissinger: A Biography (1992), and co-author of The Six Wise Men: Six Friends and the World They Made (1986). He began his career at The Sunday Times of London and then moved to the New Orleans Times-Picayune/States-Item. He joined TIME in 1978 and served as a political correspondent, national editor and editor of new media before becoming editor in 1996. He was named chairman of CNN in 2001, and then president and CEO of the Aspen Institute in 2003. He is the chairman of the board for Teach for America; vice chair of Partners for a New Beginning, a

public-private group tasked with forging ties between the United States and the Muslim World; and from 2009-2012, served as chairman of the Broadcasting Board of Governors, which oversees Voice of America, Radio Free Europe and other international broadcasts of the U.S. From 2005-2007, he was vice chair of the Louisiana Recovery Authority. He is a graduate of Harvard University and of Pembroke College of Oxford University, where he was a Rhodes Scholar.