

Shinzen, the Mindful Math Geek

00:00:00 You have often called yourself a geek.

00:00:09 I don't want to call you a geek unless you've already done it.

00:00:15 Have you always been a math science person?

00:00:19 No, actually I did extraordinarily poorly in math and science in school.

00:00:28 I hated it and it was a source of huge consternation in my family when I would come back with D's

00:00:36 and F's in junior high and high school.

00:00:43 My dad was good at math and he liked it.

00:00:47 They expected me to perform well in school, but I did poorly in general in school and

00:00:53 particularly poorly in the area of the math and science classes.

00:00:58 So when I would get home, there'd be a shitstorm around my report cards.

00:01:09 So actually, initially I hated it, like I guess a lot of people do, and I did poorly

00:01:17 in it.

00:01:18 Very poorly in it, actually.

00:01:20 And I had a lot of emotional scarrings around that in my life.

00:01:25 What do you mean?

00:01:27 Well I had a lot of self-doubt and anger and fear and sadness, emotions around my inability

00:01:40 to be able to understand these subjects.

00:01:45 And how did you go from that to delight at scribbling mathematical formulas on a piece

00:01:51 of paper as you do now?

00:01:53 Well, first there was a motivation.

00:01:57 I had a conjecture way back in the early 70s that something stunningly important could

00:02:06 come about if the best of the East and the best of the West were to mate and cross-fertilize.

00:02:16 The best of the East is the internal science of meditation, especially in my opinion, mindfulness,

00:02:26 which in many ways shares the methodology of science.

00:02:30 You divide and conquer, you break things into their elements, you see how they interact.

00:02:35 It's very quantifiable, actually.

00:02:38 So it occurred to me, having reached the peak of Asia, the pinnacle of that culture, which

00:02:47 is the internal science of meditation, what peak remains?

00:02:51 Well, if we look at the landscape of all of human culture, the only comparably impressive

00:02:59 peak is Western science.

00:03:02 So I wanted to study Western science when I came back from the monastery because I knew

00:03:08 that I would meditate my whole life.

00:03:10 And I felt that sometime in the future, the dialogue between Western science and Eastern

00:03:16 practice would become important in human history.

00:03:20 And I wanted to be able to participate in that, not merely as an expositor of meditation,

00:03:26 but as somebody who knew something about Western science.

00:03:31 So when I got back, providentially, I met someone who was very good at math and science.

00:03:41 And he gave me one really good piece of advice.

00:03:45 He said, if you want to master the sciences, do the math first.

00:03:50 If you ace that, you can do any class.

00:03:53 You can do physics, you can do chemistry, you can do biochemistry, you can do neuroscience,

00:03:59 but you have to be able to do calculus and topology and other branches of mathematics.

00:04:05 So I got this good piece of advice, which is really master math, and then you'll be

00:04:11 able to ace your science courses.

00:04:14 The only better piece of advice I would give somebody is learn to meditate because that

00:04:21 will allow you to undo all the previous conditionings you had around math and science and be good

00:04:29 at it.

00:04:30 And I'm living proof that that can happen.

00:04:32 I used my meditation, since I had a motivation now, okay, I'm going to apply my meditation

00:04:40 practice to doing something I am absolutely convinced I'm incapable of doing and have

00:04:46 a lot of emotional baggage around.

00:04:50 So I'm absolutely convinced I can't do this and I've got the high school and junior high

00:04:55 records to prove it, okay, and I've got all these emotions from my family around it.

00:05:02 So how am I going to use the meditation to overcome this?

00:05:06 Three things.

00:05:08 Meditation gives you concentration power.

00:05:10 When I was a kid, I'd read the math book, I'd read a paragraph, I didn't understand

00:05:17 it.

00:05:18 I tried to read it again, I didn't understand it.

00:05:21 I read it again, I didn't understand it, I gave up.

00:05:24 I didn't have concentration power.

00:05:27 So now as a meditator, I have concentration power.

00:05:30 So I kept coming back and coming back.

00:05:33 I had staying power.

00:05:35 That made a huge difference.

00:05:37 I didn't give up on the third time.

00:05:40 That's 100% through concentration.

00:05:42 So I had improved concentration, that helped.

00:05:46 Then, well, I had the conviction I can't do it.

00:05:50 But where does that come up?

00:05:52 That comes up in mental image, internal talk, and emotional type body sensations.

00:05:58 Every time that would come up, I'd break it up into manageable pieces and just observe

00:06:02 it over and over and over again, it came up.

00:06:05 Well, who are you kidding?

00:06:06 You'll never be able to do this shit.

00:06:08 You've never been able to do this shit.

00:06:10 Every time it comes up, divide and conquer, you quantumize, love it to death.

00:06:17 I loved that conviction and the emotions to death.

00:06:22 Meaning I so affirmed them that they no longer needed to happen.

00:06:28 Then another little meditative skill is the ability to merge with another person.

00:06:34 So I started to merge with mathematicians and incorporate within myself the waveform

00:06:42 called math geek.

00:06:45 There is an activity called math geek, a kind of wave.

00:06:49 I internalized that into my personality wave so that I had a mathematician inside of me.

00:06:59 Actually a lot of them.

00:07:00 I did that intentionally.

00:07:03 Now the cool thing about math is, oh well, let me just say, what I've just talked about,

00:07:08 okay the claim, well you had better concentration so you're going to be able to learn this stuff.

00:07:14 You had these emotional deconstruction skills so you could free yourself from the influence
00:07:18 of the past.
00:07:19 And the very weird claim that you can merge with another person and internalize an actual
00:07:26 ability from that person.
00:07:29 I can make these claims, okay, but when I sit down to solve a problem, when I sit down
00:07:39 to solve a differential equation, I will either be able to do that or not.
00:07:45 If I've been bullshitting myself, it's going to show.
00:07:49 On the other hand, if I can solve a system of differential equations, okay, without looking
00:07:57 at the answers, then I know I actually did this.
00:08:01 So there's no BS involved here.
00:08:04 And your enjoyment of it has shifted.
00:08:07 Well yes, and it worked.
00:08:08 You enjoy differential equations.
00:08:10 Yeah, it worked.
00:08:12 I started to actually be able to get the answers.
00:08:15 I had to start with elementary that you would learn in grade school.
00:08:23 I had to start with multiplication and addition tables.
00:08:26 I knew nothing.
00:08:29 And now I do topology and category theory and homological algebra and stuff that you
00:08:39 would do in graduate school, math courses.
00:08:44 That is 100% self-taught and applying the meditation.
00:08:52 And you know it's not BS because you can do it.
00:08:54 And yes, that becomes this huge source of joy.