



5 Ways to Amp Up STEAM Learning in the Classroom

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From Audio File: 140-transcript-Aaron-Maurer

Friday, September 2, 2017

Vicki: Here we are with my good friend, Aaron Maurer @coffeechugbooks talking about five ways to amp up STEAM in our classroom. Now, he has a nonprofit 212 STEAM labs, but he also works with his whole district to help everyone be amazing in STEAM and with technology. So, Aaron, what is our first way?

Aaron: Yes. The very first way, I think it's one that we hear time and time again, but I also know that it's one that we tend to overlook, because we have so much on our plate especially as teachers.

And number one, is to **teach with passion**. And what I mean by that is, what is it that gets you excited to get out of bed, to go teach in the morning? I think sometimes we lose sight of that -- because there's standards, and there's new initiatives, and there's new acronyms, and there's new WHATEVER the thing might be for the year.

And it gets muddied waters so one thing I always work with teachers is, "Get it back to ground zero. What is it that just jacks you up that makes you want to come to school and be with kids and do this work that we started for, when we first got into the classroom?"

And start with THAT to send out the energy not just from you, but then it just starts to absorb within your kids and your classroom. Things can just take off from there.

Vicki: Yeah, you know, teacher engagement comes before student engagement, doesn't it?

Aaron: Yes, yes, absolutely. If you're not pumped to be there, the kids feel that, and the classroom can fall apart very, very quickly.

Vicki: Yeah. What's our second?

Aaron: Number two is this: You know if we look at the latest craze everyone is tired of talking about -- fidget spinners -- but if I take that topic there, it's to also that as you're building relationships with kids, **find out what they love**.

And if you were to take something like fidget spinners – and we did this a lot in my spaces – we started looking at it. As opposed to looking at it as something being annoying, this is something that they were FASCINATED with. All kids were just fascinated by trying to get one, and so we started to figure out – OK, so let’s make our own. What goes into that? And the next thing you know, we’ve got kids doing like precise measurements and doing CAD drawings and figuring out different weight distributions. Now we’re talking about speed and momentum. And we’re doing all these things.

And so I know that fidget spinners—something that everyone is sick and tired of talking about, but it brings to light something that’s really important – the idea that student choice is important, but student voice is even more important. And are we truly listening? And can we take these opportunities of their excitement and find ways to bring it into our classroom?

Vicki: Yeah, so you know, whether it’s a bottle flipper or a fidget spinner... And I remember when I was growing up in the eighties – I’m going to show my age – it was those little paper footballs, and I remember one time I had a math teacher who used those paper footballs to actually teach some geometry, and it was awesome because we loved those. So, whatever it is, just pull it in. OK, what’s our third?

Aaron: Number three is, I think sometimes we feel too much stress and anxiety as we try to find these cutting edge ideas, like we think we always have to be super creative. Obviously that’s always a goal of ours, but I think something that often gets overlooked is that with all the tools and technologies and resources people have, **look at real world problems**. Some of the best ideas are things that you don’t have to create yourself. I think this is another piece that often gets overlooked.

Pay attention to the news, read the magazines or the blogs or the social media. Pay attention to things that people are talking about, and look for ways to say, “OK, can we bring this into the classroom?” Now we’ve got an authentic audience. We’ve got kids invested in actually trying to create positive change in the world. Moving forward, as opposed to always thinking you have to create things on your own, the world is giving us many, many problems that need solving. And kids are amazing at it, because most kids haven’t developed the filter or the mindset that they can’t do it. So, tap into the real world as opposed to creating all this stress on yourself trying to come up with something innovative.

Vicki: Yeah. Why do we have to make problems? We’ve got enough problems without making up more, right? (laughs) OK, what’s our fourth?

Aaron: Right? (laughs) This one is going to sound a little “out there,” and it’s something that I’ve been working a lot on with teachers lately. I keep telling them, “**Hold on to your crayons.**” And what I mean by that is what happens is that we lose the spirit of being a kid... and getting back to the essence of how exciting learning can be. I look at my six-year-old as she continues to make “slime” and we’ve got more slime messes in our house than I care to admit, but she’s constantly trying to reiterate new processes. And she doesn’t get upset if it doesn’t work. Or I looked at my son who’s in middle school, and he’s taking apart old toys and trying to merge them and make them happen. And he’s not sitting there thinking, “This is science, and this is writing, and this is math.” They’re just learning, and they’re just exploring. And I think that sometimes as adults, especially when we start talking about STEM or STEAM or whatever buzzword it is that your school uses, we muddy the learning. We think we have to have data points on every single thing. We think we have to have spreadsheets and forms and all this. And I always tell people, “Just hold onto your crayons.” Learning should be exciting, and it should be engaging. In real world learning, we don’t stop to think about what subject it is. We just DO. Our curiosity and our intrigue and our love and our passion for learning just take us places. And so, I think sometimes, we overcomplicate the learning, because every time we put in a checkpoint, the learning stops momentarily.

So, sometimes as educators we are the biggest obstacle. We just have to get out of the way and let the kids move and let their questions drive what it is that we're trying to achieve.

Vicki: I love that. "Hold onto your crayons." You've really given me something to think about. And I'm going to be quoting you on that, Aaron, even in some keynotes and speeches. I love it. OK, what's our fifth?

Aaron: I was just on a skype call with an amazing educator from High Tech High named Mike Strong, so I want to make sure that he gets credit for it. And he was talking about how as much as we celebrate, and there's a lot of push and talking about student choice and voice. We still have to have some parameters. If things are just so wide open, there's this like paralyzing effect on us where we don't know where to begin. He was talking with myself and some educators, was "**Create your classroom with a box, but the top is open,**" meaning that you can build parameters.

It's OK to have confines to what it is that you're trying to teach and have kids learn, but leave the top open so the possibilities are truly endless in terms of where kids can take it. And I just love that visual, because I think that sometimes we have this pressure, or we get this idea that when we talk about student voice and choice, it should just be whatever... You know, like the Genius Hours, or Passion Projects, which are great, but the reality is, we've got standards, we have assessments, we have things that we have to be able to hold ourselves accountable. And so I think it's OK to build parameters. It's OK to have confines. But make sure you leave the top open, so kids can climb out of that box and just blow our socks off with the idea that they can come up with.

Vicki: I cannot stress how important this is, Aaron, because when I do Passion Projects or Genius Projects, I have to have some parameters. I mean I have some objectives, whether it's presentation skills or whatever, to give the students, because you're right. If you just say, "Create..." they're like, "Ummm... What???" (laughs)

Aaron: (laughs) Yeah! Yeah! But you know, we're the same way as adults, too. If we were to go to some workshop or PD, and it was just completely wide open, most of us would sit in a state of panic saying, "OK, someone please give me some direction." It's just human nature.

Vicki: Well, Aaron Mauer is someone you should definitely follow. He has lots of exciting ideas. He's a fantastic speaker. If you get to see him in his bowtie in the front of your classroom, he really does a tremendous job. And I hope that you really take these five ways to amp up STEAM to heart. And really, it can amp up everything from technology but really any kind of teaching. These are a lot of truths that we need to bring in.

Aaron: Absolutely. And I think that's one thing we've got to keep in mind when we're talking STEAM or STEM or whatever acronym. At the end, we're just trying to get back to the basics of just good quality teaching.

Vicki: And good quality teaching is remarkable, isn't it?

Aaron: It is. It is. (laughs)