



An Interview with Bill Bechtel

For BotBrain co-founder and co-partner, Bill Bechtel, the field of robotics is both a vocation and an avocation. Bill teaches middle-school science and incorporates robotics into his lesson plans whenever possible. Additionally, Bill plans and leads summer camps for robotics and serves as a counselor for the Boy Scouts of America merit badge. Bill's a true expert in field of teaching robotics.

Was it your professional teaching experience of your love of robotics that led you to co-found BotBrain?

I got started in robotics with fighting robots. I then started a robot club at school which was very well received by the kids. I decided that because to the excitement from the kids, I wanted to expand robotics to my classroom for all my students. But, I wanted to do autonomous robots, not fighting ones. I thought that would be more educationally sound. I wrote for a grant, and got the money. Joe then built the first BotBrain sets for me for my classroom. They were a huge hit. My students would skip social time to come to my classroom to work on their robots. That's when I suggested to Joe that we could make a business out of this.

BotBrain provides complete curriculum for teachers. Is this a true time-saver for teachers while benefitting students and their study of STEM topics?

Absolutely. When I first started teaching robotics, I had no idea what I was doing. The prospect of getting up in front of 25 eighth graders to teach what I was just learning for my self was scary. Having lesson plans that have been written by a teacher and tested in classes and camps should benefit both the teachers and students.

Is there a minimum understanding of robotics teachers or instructors must know before starting to incorporate robotics into their classroom instruction?

The most important thing is not so much to have a knowledge of robotics when you start, but be willing to take a risk for what will prove to be a very rich learning experience for your students. The BotBrain Curriculum is written with the novice in mind. We think that if you follow our lesson plans you should be able to get through it, even with little or no prior experience. It helps to be technologically savvy, and a bit adventurous however. Things can and do go wrong; that's the nature of robotics. But, we're here to help when it does.

How have you witnessed students benefit from using robotics in the classroom?

I once had a student, Colton, who in 7th grade struggled with his classes. He had a learning disability in math, and was not all that interested in school. He signed up for

my robotics club and really took an interest. He came to a BotBrain Summer Camp between his 7th and 8th grade years and proved to be very adept at building the robots. In 8th grade he excelled in my class, not just in the robot unit, but in the whole class. His interest in school in general improved. He went through high school and made the honor roll or distinguished honor roll every marking period. He had an internship at the US Army War College in Robotics. He is now a mechanical engineering student at Messiah College. Not all the benefits are that dramatic, sometimes it is simply that a kid learned how to use a screwdriver and wrench, but the benefits are many.

What do you consider BotBrain's greatest benefit for teachers seeking educational robotics sets?

I think the greatest benefit is the high level of interest. Students who are difficult to motivate in other settings can really get into building a robot. Kids almost forget that they are learning lots of great things like logic, problem solving, cooperation, Science, Technology, Engineering and Math.

Why would you consider yourself an expert on robotics?

I am an expert in the teaching of robotics. I have been teaching robotics as a club and in my classes for about 8 years. This experience allows me to help others avoid the difficulties that I have experienced first hand in my own classroom. I have written the curriculum that comes with the BotBrain Sets, I have written much of the sample code to run the robots, and I have personally made the majority of BotBrain Boards we have produced. I know this product as well as anyone could.

Bill offers training and consultation via Skype, so there's no need to feel at a loss if you have questions about incorporating robotics into your classrooms, camps or other activities. BotBrain.com is your one-stop site for sets, training and information. Don't hesitate. Contact BotBrain today for all your robotics sets needs.