



## Jambox Project

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Plato once wrote, “Music is the movement of sound to reach the soul for the education of its virtue.” Through music, we express who we are. It is an almost universal experience that connects us all. To explore how music can bring us together, students designed and constructed a MIDI (musical instrument digital interface) controlled Jambox. A Jambox is a social music creation device with which people of all musical abilities can come together, manipulate sound, and create music naturally. Our goal was to design an intuitive MIDI device that people of all musical abilities can use. Our essential questions were 1)How can a social music creation device encourage people with a range of musical abilities to create musical art?2)How can the engineering design process be used to coordinate the efforts of many individuals? Concepts and skills covered included Electricity and circuitry, computer-aided-design (CAD), Pugh chart analysis, and soldering/wiring.

### Teacher Reflection

Music is a passion of mine and it was great to be able to share that passion with my students through a music-based product. I planned this project to start with a lot of individual designs that came together to create a single product and it required a lot of structures to support collaboration. Once the building phase came, it was amazing to see students supporting each other and independently distributing work. This project most definitely allowed individual strengths to flourish. I also used digital fabrication in this project. This meant that the build phase was optimized and allowed for more time to be dedicated to the design phase, which I consider to be where the meat of this project lies.

### Student Reflection

Not only was I able to learn new skills like soldering and computer-aided design, but I was able to get into the user’s mind and determine what would be best for them. During exhibition, it was very obvious that the visitors were having a great time and enjoying their interaction with the Jambox. Overall, this was one of the most rewarding projects I have done at High Tech High.

—Austin

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