Suggestions for Curriculum Development

This is an introductory course to Makeblock **LaserBox**, and it is applicable to **LaserBox** only. We recommend that you consider the following aspects before you work on the lesson plans.

Scenarios:

We recommend small classes. The amount of available equipment is a factor that should be taken into consideration when you conduct workshops or classes. It determines how many projects can be processed at the same time, and has an influence on classroom efficiency. If you are to hold big classes, we recommend that you spend more time motivating students to explore the working principles and applications of laser cutters through interest-oriented activities. If students need more time to grasp what they are learning, you can consider extending the class period.

Class Periods

There are 11 lessons and 15 class periods in total. Each lesson takes one class period, except Lesson 9 and 10 taking two class periods, and Lesson 11 taking three class periods.

Session length:

- Amount of equipment. It is recommended to manage the number of projects processed in class according to the student-equipment ratio. If the processing session takes too much time, it may make the classroom teaching less effective.

- Size and complexity of designs. If you are looking to process students' projects in class, please take account of the fact that large-sized and complex designs requires a long processing time. An overly long processing time might impact the teaching

performance and leave you little time to give feedback and assessment on students' projects.

- Class size. Considering the learning outcome, students would like to have their projects processed in class and receive feedback from their teachers. In a small class, you may have enough time to process every student's project, while in a big class, it takes more time to process all the projects and you have to cut the time of other activities to finish the processing session.

Course Content

This is an introductory course designed to help students learn to use **LaserBox** and transform their bright ideas into tangible realities. It revolves around the **Bring Sketch to Life** feature of **LaserBox**, and the **Marquee** and drawing tools of the companion software**.**

Open-ended sample projects are provided for the case study sessions according to the lesson contents. You can further develop the projects to help students learn about the structures and joints commonly used in laser cutting projects.

Note: The lessons involving the Bring Sketch to Life feature do NOT include any sample projects. As for the lesson about chess, the focus is designing and making pieces, and making a chessboard is not a part of this laser cutting course.

Materials

3mm basswood sheets and 3.5mm cardboard sheets are the two main materials used in the course. We recommend that you use the official companion materials in your class/workshop.