

P2-Lesson 7

Lesson 7 Pocket Hug

Ages: 8 and up

Duration: 45 minutes

Objectives:

By the end of class, students will be able to:

- Integrate most of the laser skills from previous lessons
- Design laser work all by themselves
- Talk about differences between their laser work and classmates'

Overview

In the last 6 lessons, students already know many techniques of P2 and XCS. But in every lesson, we only make a small piece of laser artwork to explore and master these skills. In this lesson, we will set students free to do anything they want, by using a cartoon character. Integrating laser skills they get in previous lessons like a big review, set fundamental for making complicated laser projects in the coming lessons.

Pre-lesson Checklist

For the students:

- Computer with XCS (xTool Creative Space) installed
- Felt
- Various acrylic colors
- Basswood: walnut, cherry, maple
- Any material left over from previous courses

Section 1 - Introduction

In this lesson, students will design 3 pocket hugs. Each pocket hug will be different and should be designed for a friend, a family member, and a teacher. First of all, let's review the

laser techniques they learned from previous lessons. Teacher could ask them questions like 'How can we insert texts and basic shapes? How to switch close-view camera and distance-view camera? Why do we need to switch them? How many different types of materials did we use in previous lessons? Which one is your favourite? Any skills we can use in editing and batch engraving of basic shapes in arrays?'

Section 2 - Explore

In this part, students will explore the new laser material-clear iridescent acrylic. Analyze and compare this material to others they used before.

Step 1: Observe and describe this material. Compare it to the acrylic which has been used before.

Step 2: Turn on XCS and test the laser process parameters, including laser cut and laser engrave.

Step 3: Discuss and say something about the characteristics of this material.

Section 3 - Design and make

Design their pocket hug and use a variety of materials to complete this laserwork. The following steps are just a sample to show the basic routine when we want to do a laser project. Students need to do this project all by themselves, with images they like.



Step 1: Think about who you would like to make a pocket hug for. You will make one for a friend, a teacher, and a family member.

Step 2: Browse the images available in XTool Creative Space to get ideas for your pocket hugs.

Step 3: Select materials for your laser project (acrylic colors, wood types).

Step 4: Design your sketches.

Step 5: Create your pocket hug in XTool Creative Space.

Step 6: Save your files to your Google Drive.

Step 7: Assemble pocket hugs.

Section 4 - Website & Reflection

Answer the following reflection questions. Make sure your website page is

completed.

1. 'How did you determine a perfect size ?
2. What's the difference between basswood and black walnut?
3. During the making process, what problems did you have and how did you solve them?

Section 5 - Evaluate

Answer the following questions. You can use screenshots as your answers.

1. What are the differences between clear iridescent acrylic and other acrylics we used before.
2. Do you think this 'Design and make' routine is helpful?
3. Can you customize a 'Design and make' process?
4. Any other skills you need in your making process? For example, extracting an outline for an image?