



# Monthly Make

July 2025: Photo Puzzle

The **Sublimation Printer** in The Workshop works like any other inkjet printer, except it uses special sublimation ink and paper. When heated, sublimation ink bonds to polymer-coated materials, sometimes called “sublimation blanks”. You can transfer a design from sublimation paper to make items like custom shirts, mugs, coasters, stickers, and puzzles. **This project will walk you through using the sublimation printer and heat press to create a puzzle of the image you provide.**



## Items Provided:



sublimation printer  
(with 11 x 17" paper)



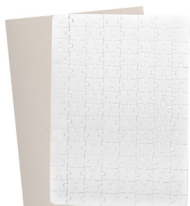
heat press



heat-resistant tape



USB flash drive



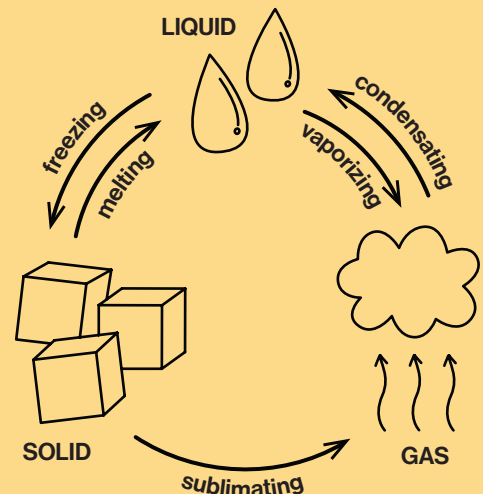
blank  
sublimation puzzle



butcher paper

## What is sublimation?

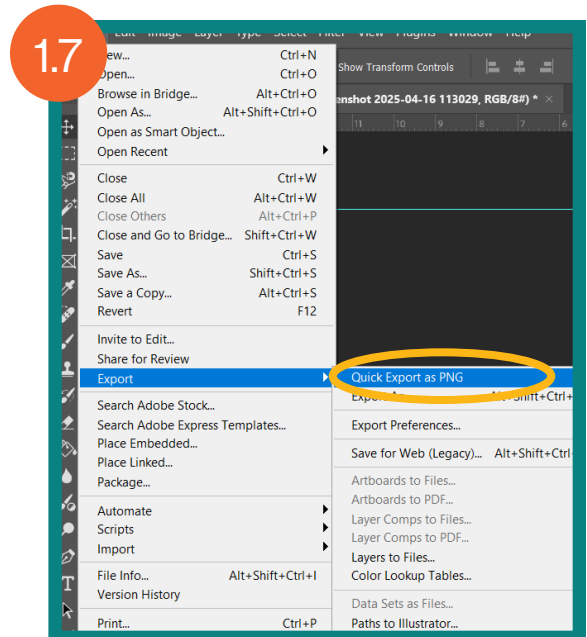
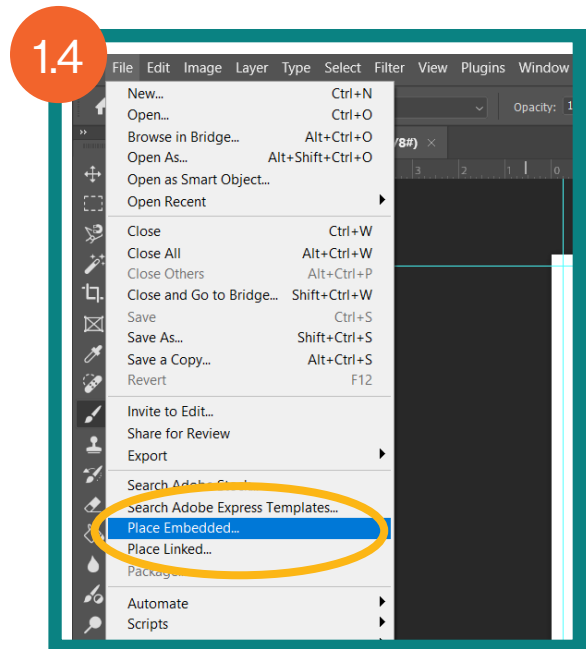
When you learned about the states of matter in school, you might not have covered sublimation! Sublimation is when a solid turns directly into a gas, without becoming a liquid in-between. A common example is dry ice. In sublimation printing, the dye particles in the printer ink *sublimate* into a gas, which can then bond with polyester and poly-coated materials.

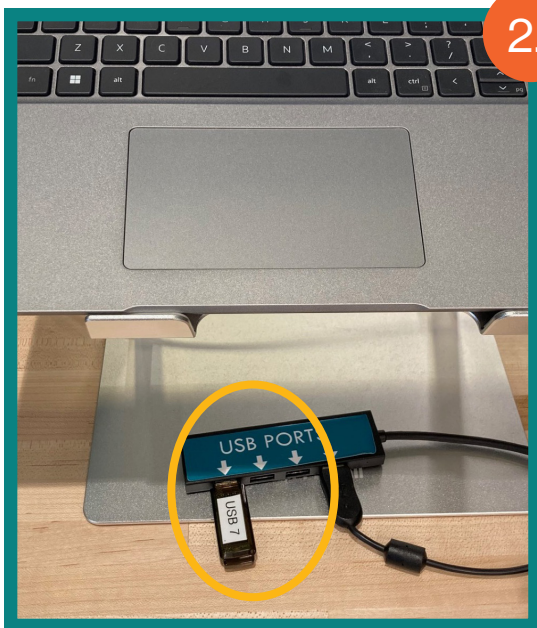


## PART 1: DESIGN

### Resize your image in Photoshop

1. **If you brought your image in on a USB flash drive:** Insert your USB drive into one of the ports on the laptop. **If your image is in your email:** Open a new internet browser window and log in to your email. Download the image to the laptop. Insert a USB flash drive from The Workshop into one of the ports on the laptop.
2. In the upper-right corner of the laptop, open the folder labeled **July Monthly Make: Puzzle Templates**.
3. Decide whether you would like your puzzle to be landscape format (horizontal) or portrait format (vertical). Double click to open the appropriate puzzle template.
4. Once the Photoshop file has opened, in the upper left corner of the screen, click **File**, then **Place Embedded....**
5. In the pop-up window, navigate to where your image is saved (either on your USB flash drive or in the Downloads folder) and select it. Click **Place**.
6. Your image will be dropped into the center of the template. Click and drag on the corners of the bounding box of your image to resize and reposition your image in the template. When you've finished, click **Done** or press the **Enter** key on the keyboard.
7. In the upper left corner, click **File**, then **Export > Quick Export as .PNG**. Navigate to the USB flash drive and click **Save**.
8. When the file has finished saving, eject the USB flash drive and take it to the computer by the printers.



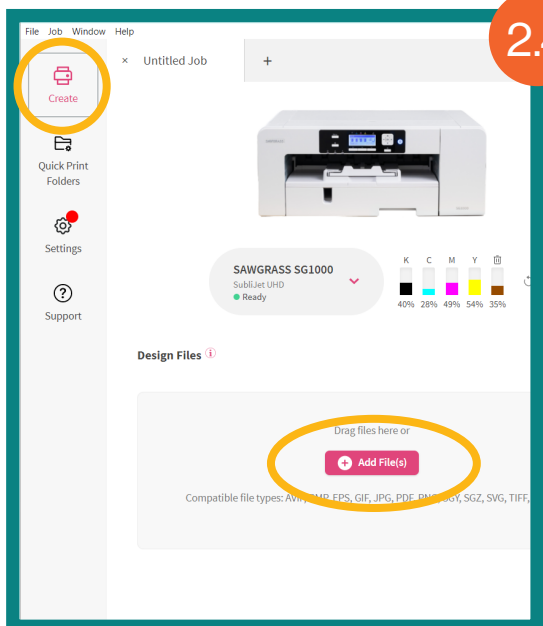


2.1

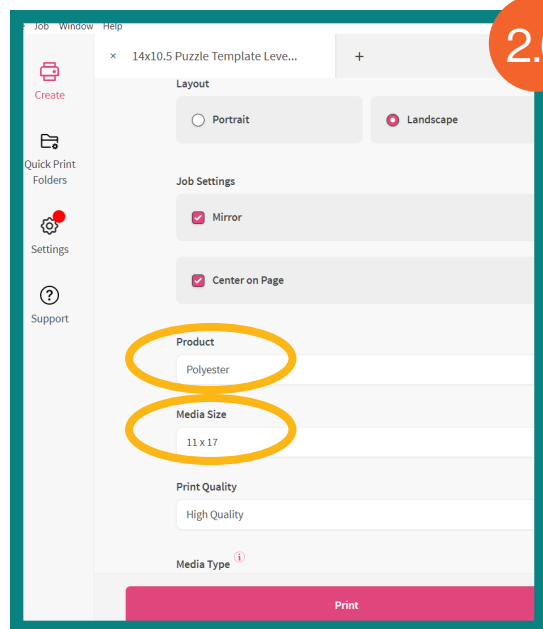
## PART 2: PRINT

### Print the image in Sawgrass Print Utility

1. Plug your USB flash drive into the laptop computer next to the printers.
2. Double click to open **Sawgrass Print Utility** (the rainbow colored icon) on the Task Bar at the bottom of the screen.
3. Once the program loads, click the pink **Create** printer icon in the upper-left corner.
4. Click the pink **Add Files** button in the middle of the screen.
5. In the pop-up window, navigate to the USB flash drive and select your .PNG file. Click **Open**.
6. Scroll down and change **Media Size** to **11x17**.
7. Change **Product** to **Polyester**.
8. Scroll up and set the **DPI** of the image to **300**.
9. The image should be mirrored by default; this is correct! Click the pink **Print** button at the bottom of the screen. When the image prints out, it will look faded and backwards; this is normal.



2.4



2.6

## PART 3: PRESS

### Tape the image to the puzzle

1. Place the printed image on a flat surface with the ink side up.
2. Flip the puzzle on top of the printed image, glossy white side down. Make sure that you can see the edges of the image around the edges of the puzzle.

3. Using heat tape, tape each of the four sides of the puzzle onto the printed image to secure it in place. Make sure you are taping the puzzle itself, not the cardboard sheet.
4. When you've finished taping, place the cardboard sheet on top of the puzzle and flip it around so that the printed paper is on top.

## Check the heat press settings

5. Check that the heat press is set to

Time: **45 seconds**

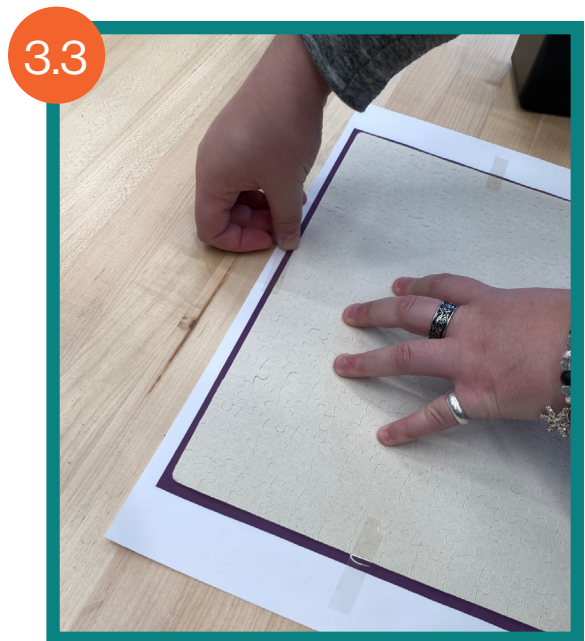
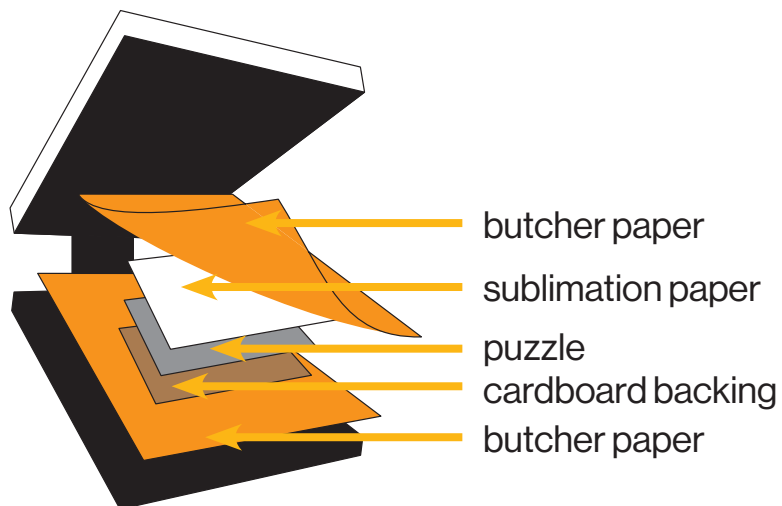
Temperature: **385° F**

Pressure: **25**

If not, ask staff to help you adjust the settings.

## Press the puzzle

6. "Sandwich" the taped puzzle and cardboard sheet between two layers of butcher paper.
7. Place the "puzzle sandwich" on the heat press. The printed image should be on top. **Safety note:** The top of the press will be very hot; use oven mits while working with the heat press to avoid getting burned.





3.11

8. Swiftly pull down the main handle of the heat press. Press the handle down until it clicks into place; this may require some force. Ask staff for assistance if needed.
9. The heat press timer will automatically start counting down from the set time (45 seconds). Step back from the heat press; it will automatically pop open when it reaches 0 seconds.
10. The puzzle will be hot, so use the oven mits to remove the “puzzle sandwich” from the heat press. Place it on a flat surface.



3.12

11. Once the puzzle is comfortable to touch, peel the paper off of the puzzle. It's okay if the paper rips. Remove any of the tape that is still stuck to the puzzle.
12. Let the puzzle cool fully before carefully breaking the pieces apart for the first time.

## Show off what you've made!

Send a picture of your project to [makerspace@gepl.org](mailto:makerspace@gepl.org).