

Making a Keychain

Designing your keychain in CorelDRAW

SOFTWARE	OUTPUT	NAME	HOUR
CorelDRAW	.cdr saved to thumb drive	_____	_____

PROJECT OVERVIEW

1. What you're making

A small wood keychain you can clip to a backpack, lanyard, or actual key ring. You'll design it in CorelDRAW — a rounded rectangle body with a loop end and a hole for the keyring, plus your name and a picture engraved on it. Once your design is approved, you'll save it to a thumb drive and move on to the Epilog Laser directions.



HOW THIS LESSON WORKS

Each numbered section ends with a checklist. Work through them in order. Two teacher sign-offs along the way — Mr. Semler has to look at your screen before you can move on.

CORELDRAW

2. Create the document

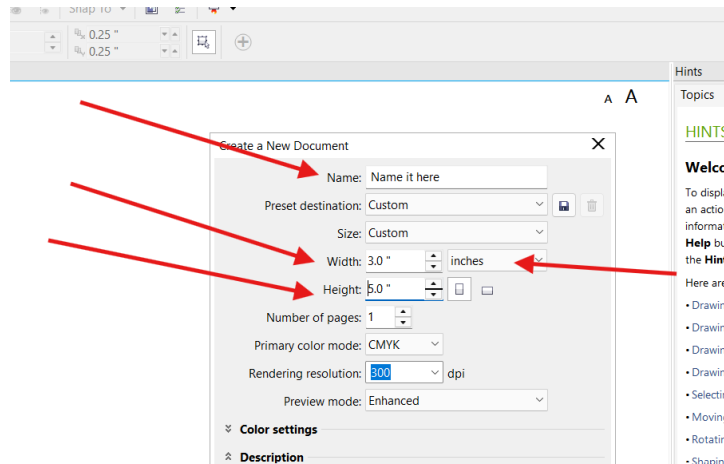
2.1 Open CorelDRAW

Open CorelDRAW on the shop computer. You do **not** need a username and password.

2.2 Make a new file

Go to **File** → **New** to create a new document.

- Name the document (your first name works)
- Make sure **units** are set to **inches**
- Set **width** to **3"**
- Set **height** to **2"**

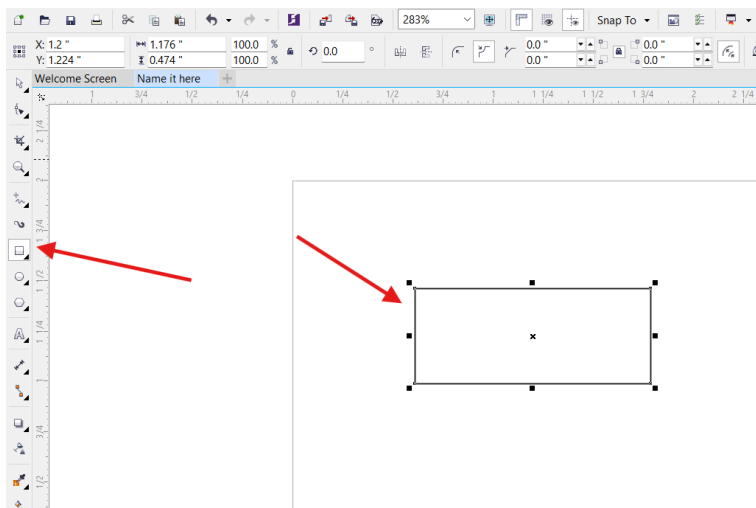


CORELDRAW

3. Draw the body of the keychain

3.1 Pick the rectangle tool and drag

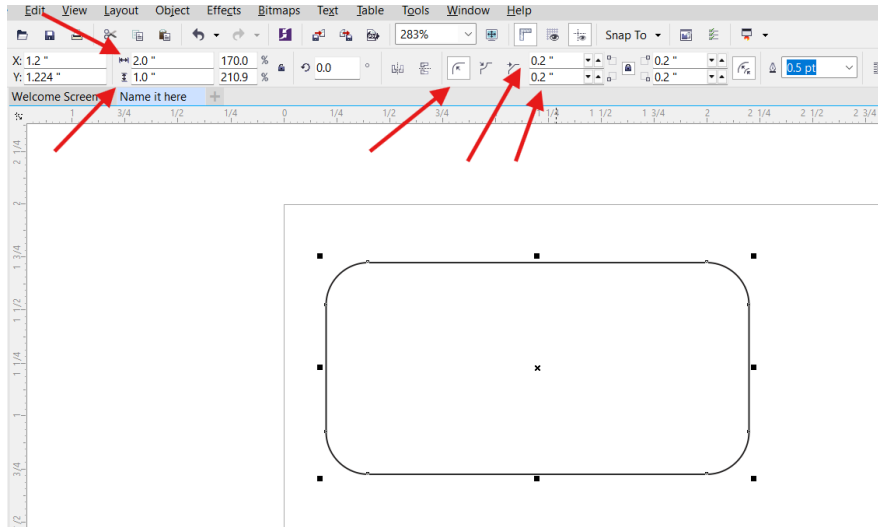
Click the **rectangle tool** on the left toolbar, then click and drag on the page to make a rectangle. Don't worry about the exact size — you'll fix it next.



3.2 Set the size and round the corners

With the rectangle selected, look at the **Properties Bar at the top of the screen**. Use the boxes there to set:

- Width to 2"**
- Height to 1"**
- Click the **rounded corner** option (the corner-style button)
- Change the **corner radius to .2**



CORELDRAW

4. Make the loop end

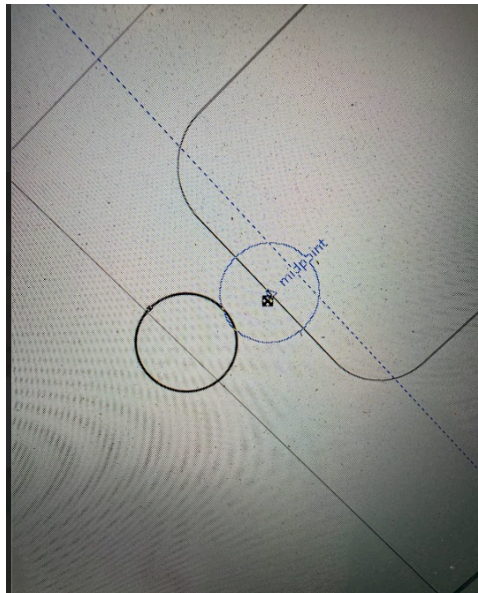
4.1 Draw a circle

Pick the **ellipse (circle) tool** on the left toolbar and drag out a circle. Use the Properties Bar to set:

- Width: .3**
- Height: .3**

4.2 Position the circle at the midpoint

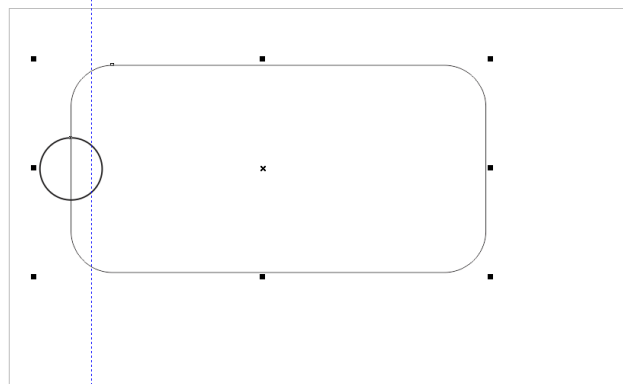
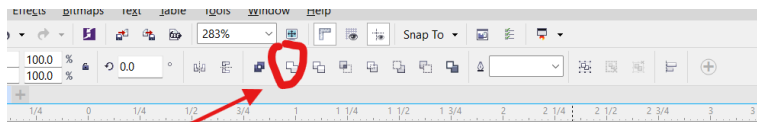
Click and drag the circle to one end of the rectangle. As you drag, the word **"midpoint"** will pop up when you hit the middle of that edge. **Drop it there.** That centers the circle on the end of the rectangle.



4.3 Weld the circle to the rectangle

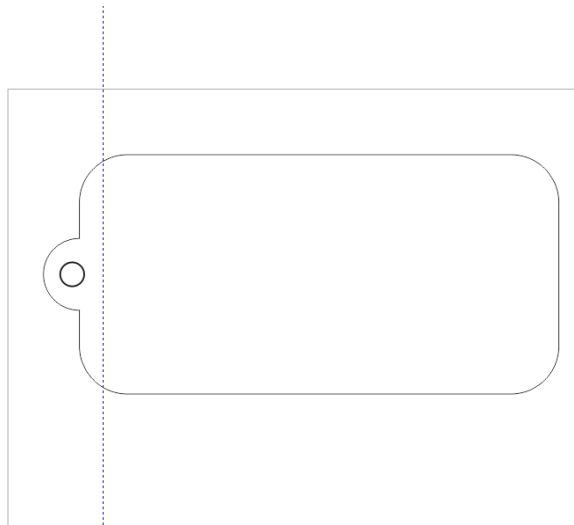
Highlight both the circle and the rectangle. Hold **Shift** and click each one. Then click the **Weld** button in the Properties Bar.

- Hover over a button to see what it does — that's how you learn the icons
- After welding, the two shapes become a single outline



4.4 Check your work

Your keychain outline should now look like the picture below: a rounded rectangle with a small bump on one end.



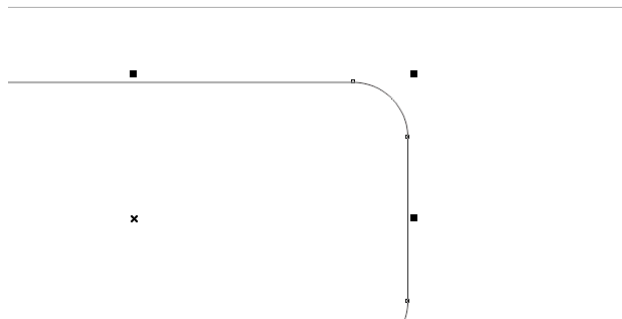
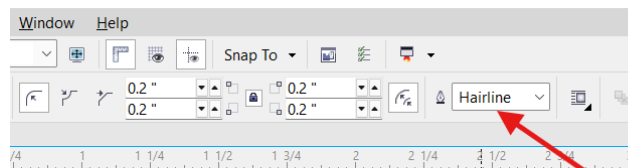
CORELDRAW

5. Hairline setting

This is how you tell the laser to CUT a line instead of engraving it. Any object set to Hairline gets cut. Anything thicker (or filled in) gets engraved.

5.1 Set the keychain outline to Hairline

Select your welded keychain outline. In the Properties Bar at the top, find the **outline width** dropdown and change it to **Hairline**.



WHY HAIRLINE MATTERS

The Epilog laser reads the outline thickness. Hairline = cut all the way through. Anything thicker = engrave. If you forget to set Hairline, your keychain outline will be engraved instead of cut, and your piece will never come out of the wood.

CORELDRAW

6. Make a hole for the keyring

6.1 Draw a small circle

Use the circle tool again. Draw a circle and set its size in the Properties Bar.

- Width: .1**
- Height: .1**
- Drop it somewhere random inside the keychain for now — you'll move it next

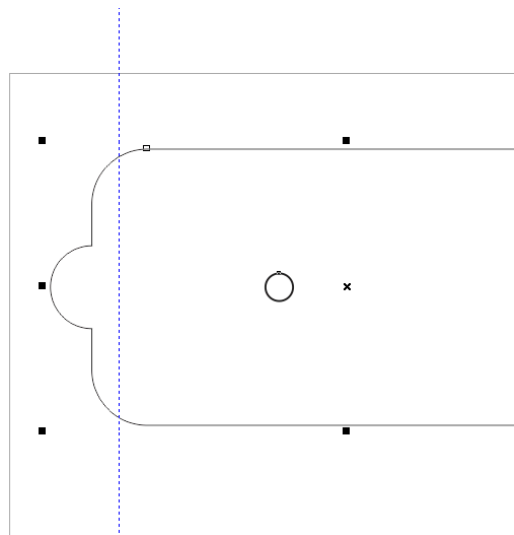
6.2 Align it to the keychain

Select the small circle, then hold **Shift** and select the welded keychain so both are selected. On the menu bar at the top, click **Object** → **Align and Distribute** → **Align Centers Horizontally**.

- Your small circle should now be **vertically centered** in the keychain (lined up top-to-bottom)

GET FAMILIAR WITH THIS MENU

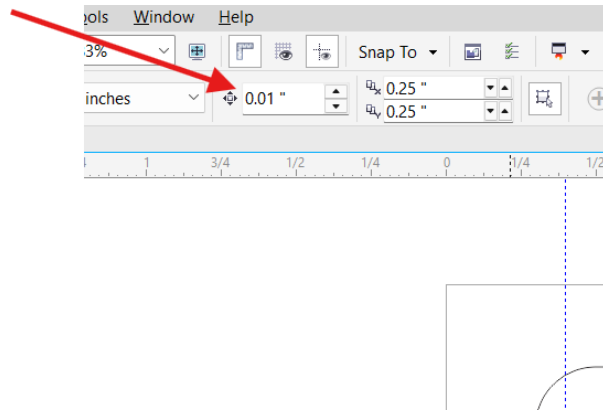
Look at **all** the align options in that menu — you can center to the page, to other objects, distribute evenly, and more. Get familiar with it; it'll save you a ton of time on future projects.



6.3 Set the nudge distance

The **nudge distance** is how far an object moves each time you press an arrow key on the keyboard. Find the nudge box on the toolbar at the top.

- Set nudge distance to **.01**

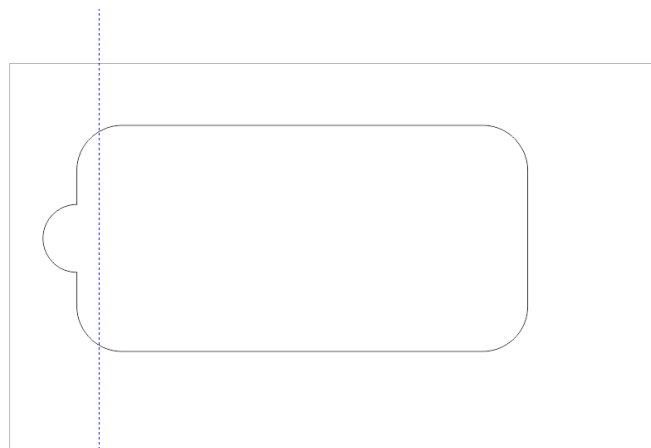


6.4 Nudge the hole to the loop end

With the small circle selected, press the **left arrow key** on the keyboard to nudge it over toward the loop end. Keep pressing until the hole looks centered inside the rounded bump.

6.5 Set the hole to Hairline

Same as before — with the small circle selected, change its **outline width to Hairline** in the Properties Bar. Otherwise the laser will engrave the circle instead of cutting it out.



7. Find a picture and trace it

THIS STEP IS EASY TO MESS UP — TAKE YOUR TIME

Black-and-white images work the best. Photos and color gradients do not engrave well. If your picture has lots of fine detail, the trace will look messy.

7.1 Search for an image

Open a browser tab and go to images.google.com. Search using these keywords: **[your subject] BLACK WHITE VECTOR**. Examples: *bass black white vector*, *deer black white vector*, *guitar black white vector*.

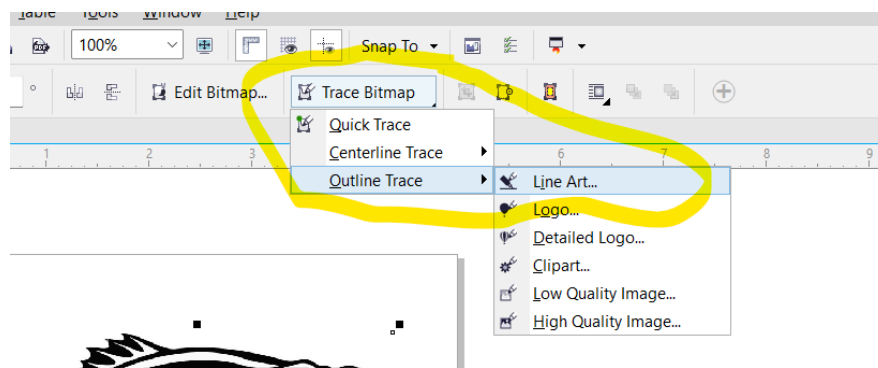
7.2 Copy and paste

When you find an image you like:

- Right-click** → **Copy** the image in your browser
- Switch to CorelDRAW
- Right-click** → **Paste** (or press **Ctrl+V**) to drop it on your page
- Size it to fit inside your keychain rectangle
- Don't put the picture close to the edges** — leave a small border around it

7.3 Trace Bitmap → Outline Trace → Line Art

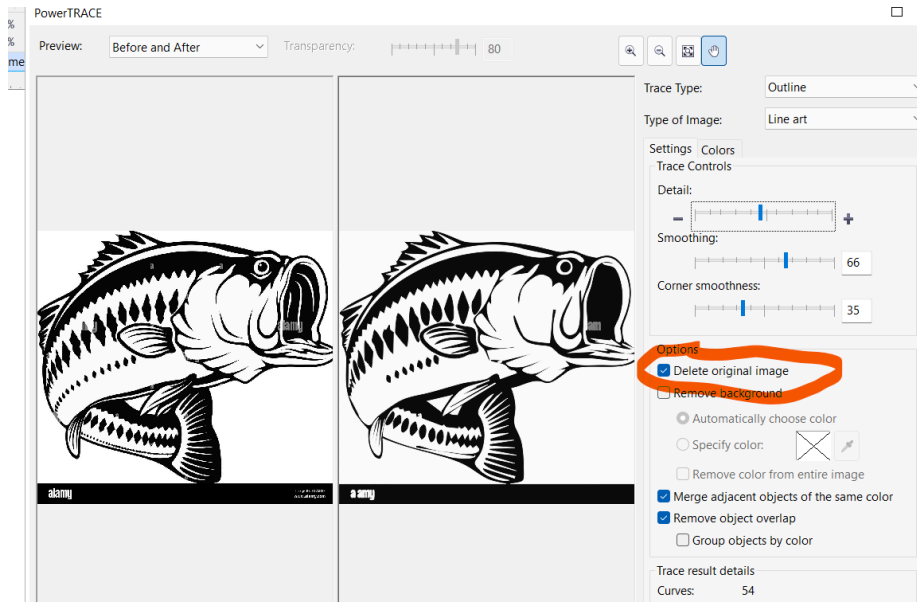
SELECT YOUR PICTURE — DO NOT SKIP THIS STEP. Then click **Trace Bitmap** in the toolbar at the top, then **Outline Trace**, then **Line Art**.



7.4 Check 'Delete original image'

The PowerTRACE dialog opens with a before/after preview. **Check the box that says 'Delete original image'** so you don't end up with two copies stacked on top of each other.

- Drag the **Detail** slider — more detail = more curves captured
- Drag the **Smoothing** slider — smooths jagged edges
- Adjust until the right-side preview looks how you want it
- Click **OK**



TRACE COMMON PROBLEMS

8. Common problems when tracing

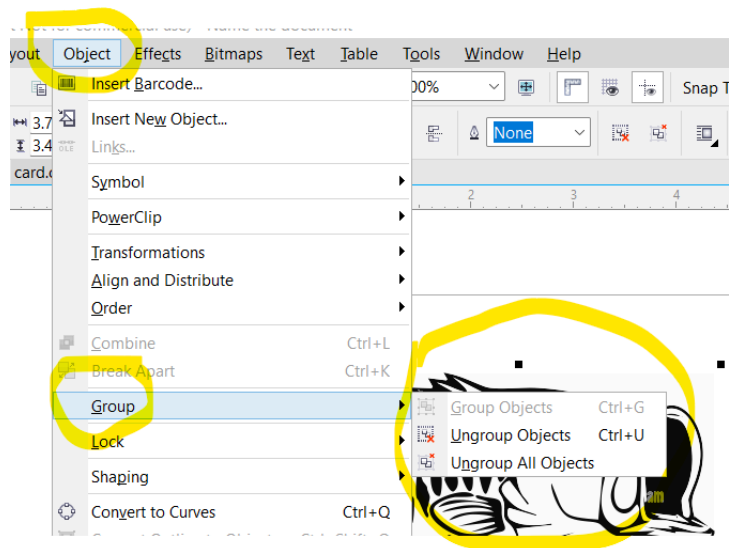
8.1 Picture didn't copy/paste correctly

It might be a **copyright issue** — some images are locked and can't be copied. Find a different picture and try again.

8.2 Extra stuff you want to delete

Sometimes the trace picks up things you don't want — like a black bar across the bottom, or a stray watermark.

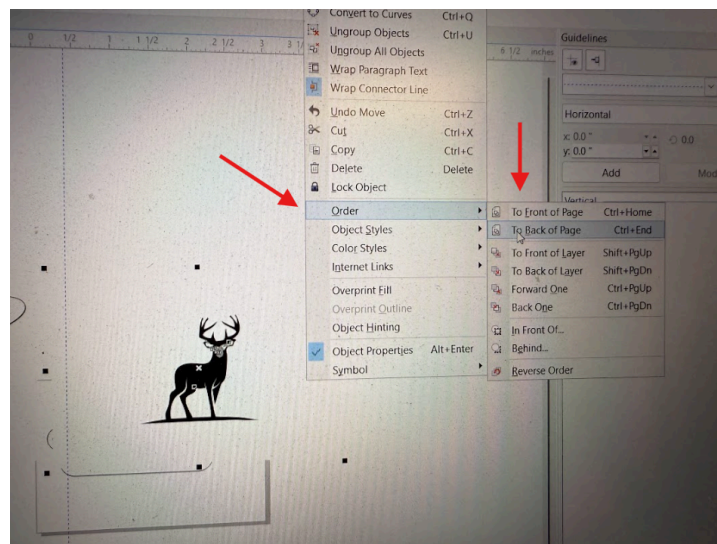
- Select the traced picture
- Go to **Object** → **Group** → **Ungroup Objects** (or **Ungroup All Objects** for more layers)
- Click the part you don't want and press **Delete**
- When you're done, select everything and **Group** it back together



8.3 Picture covers up your drawing

The pasted picture sometimes lands on top of your keychain outline and hides it.

- Right-click the picture
- Click **Order**, then **To Back of Page** (or Forward One / Back One to nudge it)



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9. Add text

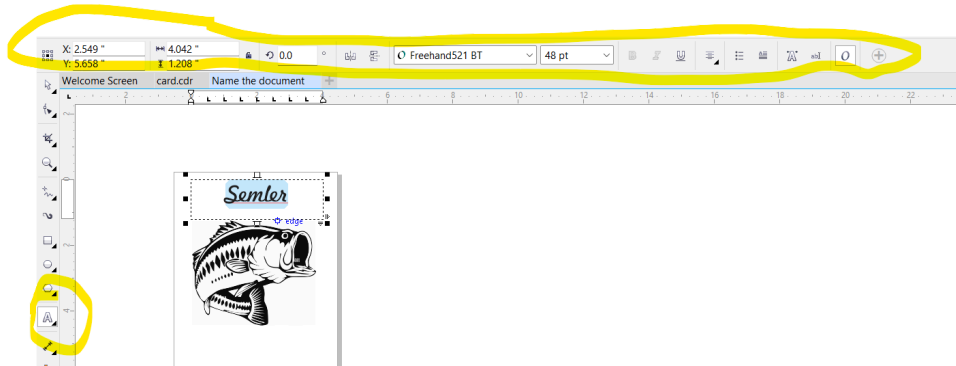
9.1 Make a text box

Use the **A tool** on the left toolbar (Text tool) to make a text box. Click on the page and start typing — your name, your initials, or any short word.

9.2 Style the text

With the text selected, use the toolbar at the top to:

- Choose your **font** (bold fonts engrave the cleanest — skinny script can disappear)
- Choose your **font size**
- Adjust the text box size as needed
- Center the text on your keychain
- Bold, italic, etc. if you want



STOP

10. Teacher sign-off — design check

Show Mr. Semler your finished keychain on the screen. He'll check that the outline is Hairline, the hole is Hairline, the picture traced cleanly, and your text fits.

STOP Teacher Sign Off: _____

SAVE

11. Save your file to a thumb drive

11.1 Find a thumb drive

Thumb drives are attached to coasters and live in the following spots around the shop:

- Front of the **ShopSabre 23 CNC** computer
- Back of the **ShopSabre 23 CNC** computer
- In or by the **laser computer**
- In or by one of the **Tormach CNCs**
- On my **yellow cart**
- On my **desk**

11.2 Save As

Insert the thumb drive into your computer.

- Go to **File** → **Save As**
- Locate the **USB drive** on the left side of the Save dialog
- Find the folder labeled **keychains**
- Make sure your file is **named** (your name)
- Click **Save**

LASER COMPUTER

12. Move your file to the laser computer

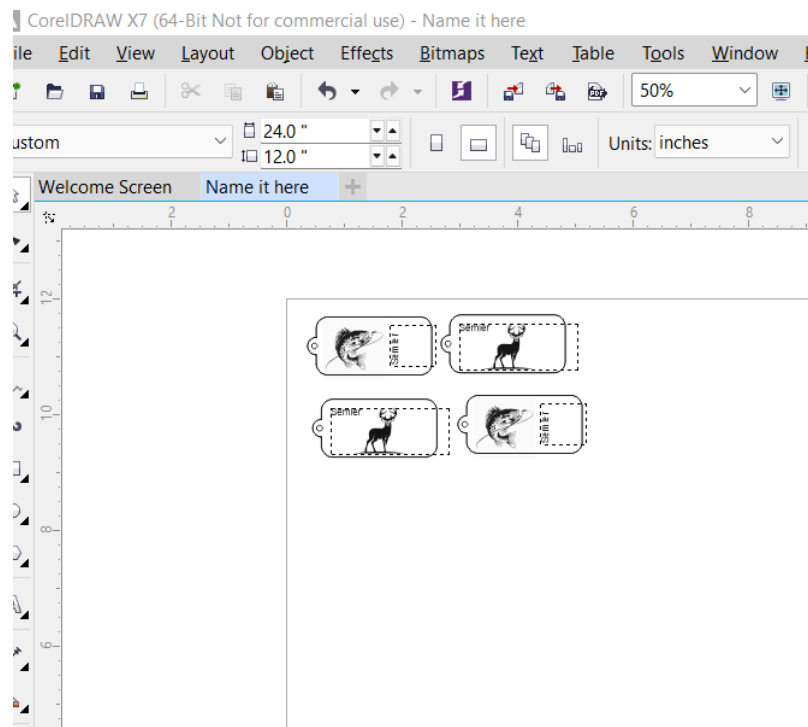
12.1 Open your project on the laser computer

Plug the thumb drive into the **laser computer**. Open the project file (first part of your email + your lunch number).

12.2 Import 3–5 of your friends' keychains

On the laser computer, **import 3–5 of your classmates' keychain files** onto the same page as yours. We batch them so one laser run cuts a bunch of keychains at once — way more efficient than running them one at a time.

- Arrange the keychains so they fit on the open area of the scrap
- Don't overlap them — leave a small gap between each one



STOP

13. Teacher sign-off — laser-ready

Show Mr. Semler the laser computer screen with your batched keychains. Once approved, you may use the Epilog Laser directions to cut them out.

STOP Teacher Sign Off: _____

SELF-CHECK

14. Grading checklist

Before you turn this in, check off each item. Anything missing = points off.

- | | |
|--|---|
| <input type="checkbox"/> Document created at 3" × 2", inches (2 pts) | <input type="checkbox"/> Picture found, copied in, and traced (Line Art) (3 pts) |
| <input type="checkbox"/> Rectangle 2" × 1" with 0.2" rounded corners (2 pts) | <input type="checkbox"/> 'Delete original' was checked — no leftover bitmap (2 pts) |
| <input type="checkbox"/> 0.3" circle welded to one end (midpoint snap) (3 pts) | <input type="checkbox"/> Text added with a clean, readable font (2 pts) |
| <input type="checkbox"/> Keychain outline set to Hairline (2 pts) | <input type="checkbox"/> First teacher sign-off complete (2 pts) |
| <input type="checkbox"/> 0.1" keyring hole, centered in the loop end (2 pts) | <input type="checkbox"/> File saved to USB drive → keychains folder, named (2 pts) |
| <input type="checkbox"/> Keyring hole set to Hairline (2 pts) | <input type="checkbox"/> 3–5 friends imported on the laser computer (2 pts) |

Total: ____ / 26 Mr. Semler's notes: _____