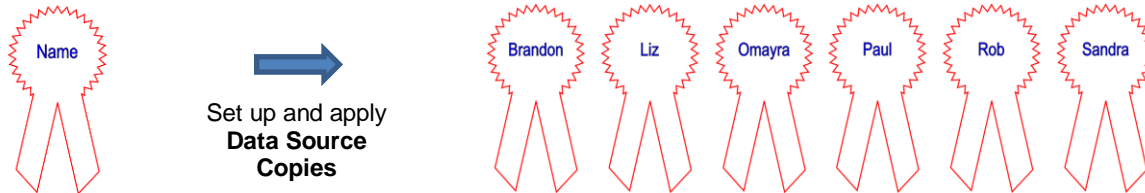


# SCAL6 Data Source Copies- Expanded Tutorial

- In *Section 7.27*, the **Data Source Copies** purpose and steps are briefly explained. The following presents the same initial section plus details for all 5 steps of the process.

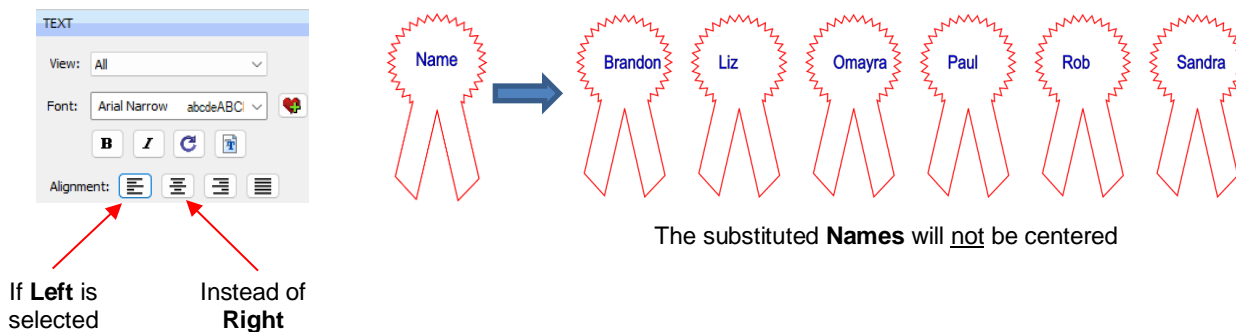


## 7.27 Introduction

- **Data Source Copies** is a powerful feature which generates duplicates of your original design but customizing each one based on changing selected elements in that design. Some typical applications include:
  - ◇ Address labels
  - ◇ Name tags
  - ◇ Escort cards
  - ◇ Student id cards (and other school applications)
  - ◇ Product serial number labels
- The types of options (called **Data Source**) for changing the data include the following:
  - ◇ **Code** or number sequencing in which each duplicate has a different increasing number with the interval you require
  - ◇ **CSV** importing in which you import a .csv file that contains information which can include text items (such as names, addresses, team assignments, table assignments), as well as color and image paths
  - ◇ **Date** sequencing in which each duplicate has a different increasing date in a variety of available date formats and with the interval you desire
  - ◇ **Text** in combinations with all 3 of the above in which you can add any text you want repeated in each duplicate along with any of the other items you've already made using **Code**, **Date**, **CSV** or other **Text**.
- The **Data Source Copies** process involves five steps:
  - (1) Creating your original design to be duplicated with the various elements you'll want changed in each copy
  - (2) Going to the **Data Source** window to define each **Data Source** that will be changed
  - (3) Assigning each element in the original design to one of the **Data Sources** created in *Step (2)*
  - (4) Accessing a **Preview** window to set up the rows and columns on each page, spacing, number of pages required and verifying the **Preview** looks correct
  - (5) Generating the pages with the duplicates
  - ◇ The following sections present each of these 5 steps with various examples of the **Data Source** options.

## 7.27.1 Step 1 Creating the Design

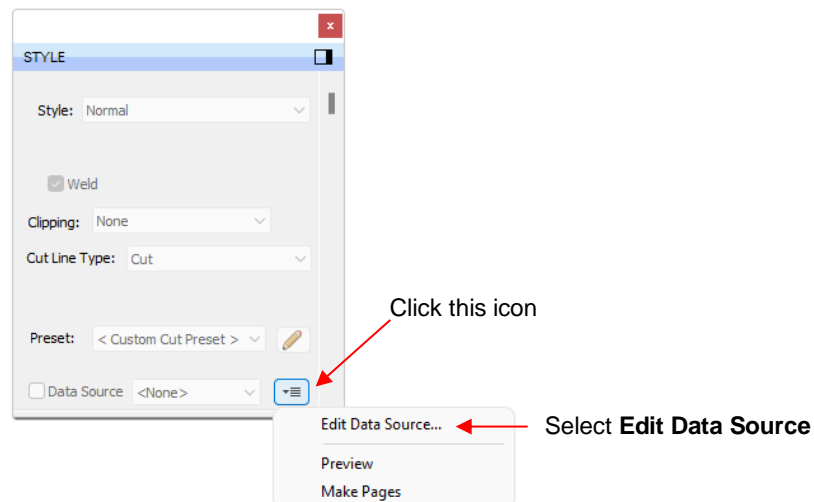
- The design you plan to fill can be virtually anything you need. The elements that can be replaced in each duplicate need to be one of the following:
  - ◇ A text shape (“freshly typed” and has not had other “destructive” functions applied such as **Merge**, **Offset Path**, **Union**, **Rounded Corners**, etc. Note that you can use the **Weld** option on the **Style Panel** as it isn’t applied until the shape is sent to the cutter. The text shape will be used for text, dates, and numbers.
  - ◇ A vector shape in which you wish to change its **Fill** color for one or more of the duplicates. For example, you might want a frame around the design to use different colors from an imported csv file.
  - ◇ A raster image, such as clipart or photos in which you want the image to use other raster images in which their location is in an imported csv file.
- Pay attention to alignment. For example, in the ribbon example initially shown, if the text had remained with **Left Alignment** selected on the **Text Panel** instead of **Center Alignment** the results would have been this:



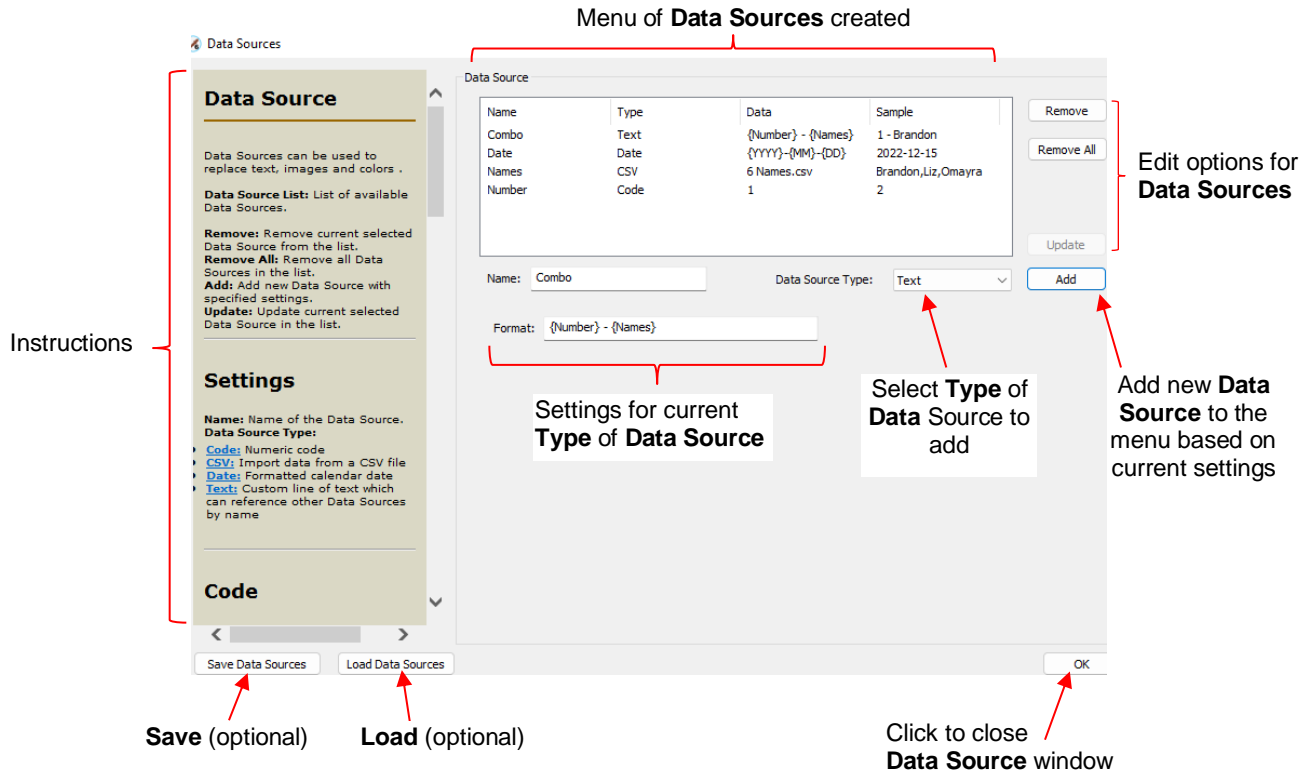
- Before generating the copies, also make sure any changes in assignments on the **Style Panel** have been made, such as **(Print+Cut) Print Only** versus **(Print+Cut) Cut Only** versus **Cut**. Refer to *Section 8.01*.
- Further, you may wish to apply **Object>Group** on the design to keep the **Layers Panel** more organized.

## 7.27.2 Step 2 Building the Data Sources

- The second step is to set up the various **Data Sources** that will be needed to provide substitutions in your duplicates. There are two ways to open the **Data Source** window:
  - ◇ Go to **Page>Data Source Copies>Edit Data Source**
  - ◇ Click the menu icon on the **Style Panel** and select **Edit Data Source**:



- The following window opens:



- The general procedure when setting up a new **Data Source** follows these steps:
  - ◇ Provide a new name for the **Data Source** which can match the element in the design or can be completely different. Later you will be linking the two, so having the same or a similar name can be handy.
  - ◇ Select a **Data Source Type** from the menu of options: **Code**, **Date**, **CSV**, or **Text**.
  - ◇ Enter all required settings for this **Data Source** (as will be presented).
  - ◇ Click on **Add** which will then show this new **Data Source** in the menu.
  - ◇ Click on **OK** when you have added all the required **Data Sources** to the menu.
  - ◇ Optionally, you can always return to this window to make changes, save this **Data Source** for use in another project or load a previously saved **Data Source**.
- A **Code Data Source** is used for number sequencing in which each duplicate has a different increasing number with the interval you need. For example, the following label will have duplicates created with increasing serial numbers:



- ◇ In the **Data Source** window, a single **Data Source** is created based on the **Type** selection being **Code**. Note that the first number can be set to whatever is required and the **Auto Increment** set to the desired interval:

1. Enter a Name

2. Select Code

3. Enter starting number

4. Select desired Increment

5. Click Add

◇ After clicking on **Add**, click on **OK** to close the window and then proceed to the **Style Panel**. Link the *Serial Number* layer in your design to the *Serial Data Source* you created (refer to the next section: *Step 3*).

- A **CSV Data Source** is used when you need to import a .csv file that contains information which can include text items (such as names, addresses, team assignments, table assignments), as well as color and image paths.
- ◇ A .csv file is typically made up of rows of data separated by commas and can be exported from applications such as **Excel**, **Google Sheet**, and **Numbers**. For example:

Excel table of data

	A	B	C	D	E
1	First Name	Last Name	Team	Color	Image
2	Bob	McCauley	1	#0000FF	C:\Users\14804\Documents\Images\Cartoon Gorilla.png
3	Sandy	McCauley	1	#FF00FF	C:\Users\14804\Documents\Images\Cartoon Chicken.png
4	Jay	McCauley	3	#7F25DA	C:\Users\14804\Documents\Images\Cartoon Dragon.png
5	Gabriella	Lex	3	#FF8080	C:\Users\14804\Documents\Images\Cartoon Cow.png
6	Lourdes	Maldonado	3	#FE7070	C:\Users\14804\Documents\Images\Cartoon Elephant.png
7	Max	McCauley	2	#800000	C:\Users\14804\Documents\Images\Cartoon Zebra.png
8	Jean	Gallagher	2	#FFFF00	C:\Users\14804\Documents\Images\Cartoon Penguin.png
9	Nancy	Gallagher	2	#C9F1A0	C:\Users\14804\Documents\Images\Cartoon Squirrel.png
10	Jagger	McCauley	1	#B2D2F1	C:\Users\14804\Documents\Images\Cartoon Dino 2.png
11	Mila	McCauley	1	#F1D1F1	C:\Users\14804\Documents\Images\Cartoon Cat .png

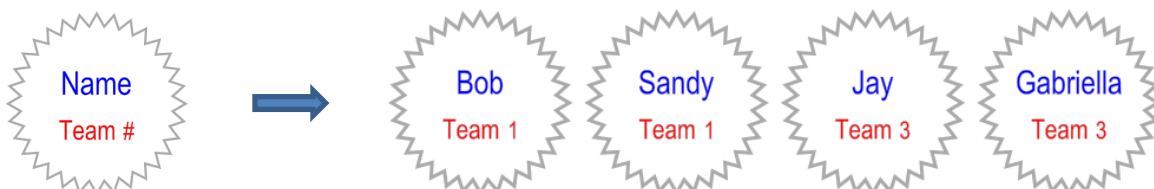
Exported as a .csv file

```

First Name,Last Name,Team,Color,Image
Bob,McCauley,1,#0000FF,C:\Users\14804\Documents\Images\Cartoon Gorilla.png
Sandy,McCauley,1,#FF00FF,C:\Users\14804\Documents\Images\Cartoon Chicken.png
Jay,McCauley,3,#7F25DA,C:\Users\14804\Documents\Images\Cartoon Dragon.png
Gabriella,Lex,3,#FF8080,C:\Users\14804\Documents\Images\Cartoon Cow.png
Lourdes,Maldonado,3,#FE7070,C:\Users\14804\Documents\Images\Cartoon Elephant.png
Max,McCauley,2,#800000,C:\Users\14804\Documents\Images\Cartoon Zebra.png
Jean,Gallagher,2,#FFFF00,C:\Users\14804\Documents\Images\Cartoon Penguin.png
Nancy,Gallagher,2,#C9F1A0,C:\Users\14804\Documents\Images\Cartoon Squirrel.png
Jagger,McCauley,1,#B2D2F1,C:\Users\14804\Documents\Images\Cartoon Dino 2.png
Mila,McCauley,1,#F1D1F1,C:\Users\14804\Documents\Images\Cartoon Cat .png

```

- As an example, a design is made that will contain the *First Name* and *Team* for each row in the table:



- ◇ In the **Data Source** window, two **Data Sources** will be created based on the **Type** selection being **CSV** for both. For the first **Data Source**:

1. Enter a **Name**

3. Click **Choose** and browse to find the **.csv** file

6. Select which column to use

2. Select **CSV**

5. Enable if row 1 has column names

7. Click **Add**

4. Click to see the imported data

1	2	3	4	5
1	First Name	Last Name	Team	Color
2	Bob	McCauley	1	#0000FF
3	Sandy	McCauley	1	#FF00FF
4	Jay	McCauley	3	#7F25DA

- ◇ After clicking on **Add**, repeat with a new **Name** for the **Team** and change the **Start Column**:

1. Enter a **Name**

3. Same **.csv** file to be used

6. Change to column with **Team**

2. Still set to **CSV**

5. Keep enabled

7. Click **Add**

4. Click again to see the imported data

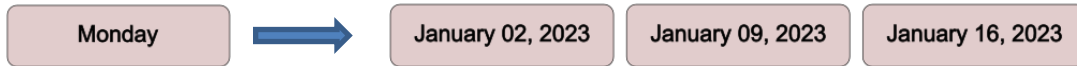
1	2	3	4	5
1	First Name	Last Name	Team	Color
2	Bob	McCauley	1	#0000FF
3	Sandy	McCauley	1	#FF00FF
4	Jay	McCauley	3	#7F25DA

- ◇ After clicking on **Add**, click on **OK** to close the window and then proceed to the **Style Panel**. Link the two text layers in your design (**Name** and **Team #**) to the two **Data Sources** (**First** and **Team**) you created (refer to the next section: **Step 3**).

- ◇ In some situations, the text field could be quite long, such as with a product description. Please refer to **Section 7.27.7** on how to wrap text for a **Data Source**.

- A **Date Data Source** is used when you need each duplicate to have a different increasing date. A variety of available date formats can be selected and, as with **Code**, the interval you desire.

- ◇ For example, the following labels will have every Monday's date for the year 2023:



- ◇ In the **Data Source** window, a single **Data Source** is created based on the **Type** selection being **Date**. There are various date formats from which to choose, including creating a custom one. A starting point is selected, along with the desired **Auto Increment** in both the time span units and size you need:

- ◇ After clicking on **Add**, click on **OK** to close the window and then proceed to the **Style Panel**. Link the *Monday* layer in your design to the **Date Data Source** you created (refer to the next section: *Step 3*).

- A **Text Data Source** is used to combine text with other **Data Sources** to create a new **Data Source**.

- ◇ For example, a new **Date Data Source** is created and will be combined with the *Serial Data Source* (created in the first example) to then be linked to a design element with both:



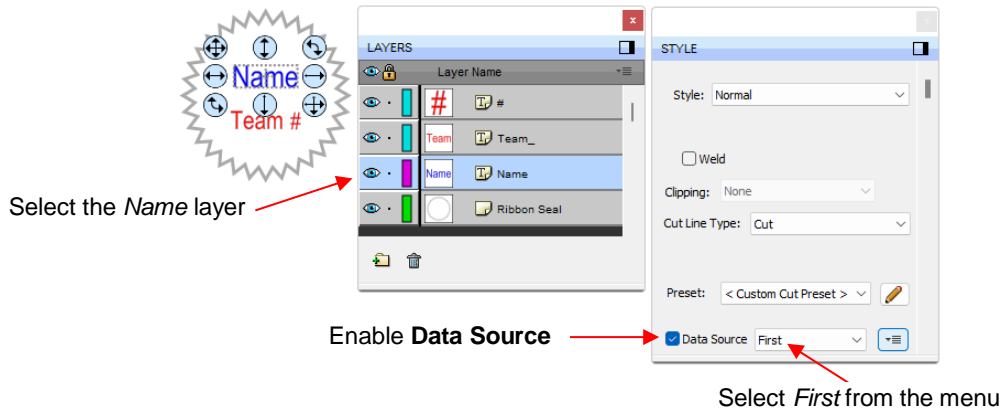
- ◇ In the **Data Source** window, the *Date* and *Serial Data Source* items are already added. A new **Data Source** based on the **Type** selection being **Text** is then created. Note how curly brackets are placed around existing **Data Sources**:

Name	Type	Data	Sample
Date	Date	{YYYY}-{MM}-{DD}	2023-01-02
Serial	Code	0001	0008

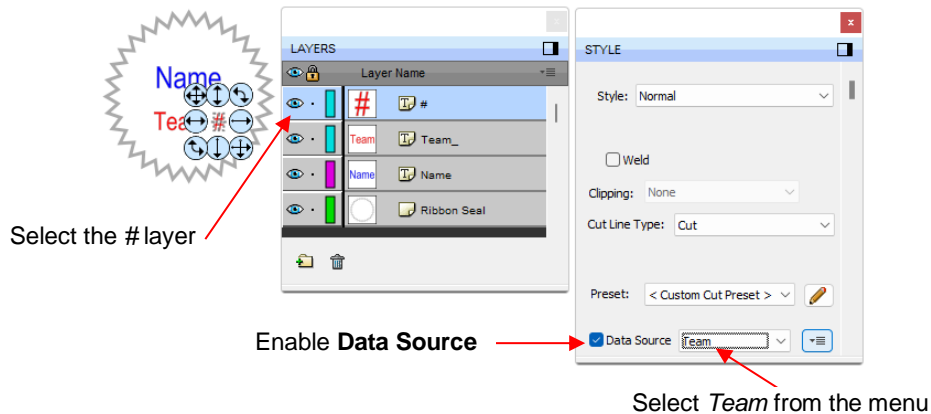
- ◇ After clicking on **Add**, click on **OK** to close the window and then proceed to link the *Info* layer in your design to the **Combo Data Source** you created (refer to the next section: *Step 3*).

### 7.27.3 Step 3 Assign Layers

- The next step in the process is to match up the layers in your designs with the **Data Source** elements created. This involves selecting a layer and, on the **Style Panel**, enabling the **Data Source** option and then selecting the corresponding **Data Source** to use.
  - ◇ For example, in the CSV example, there were two **Data Sources** created. Each of the two layers in the design needs to be selected and then assigned. Starting with *Name*:

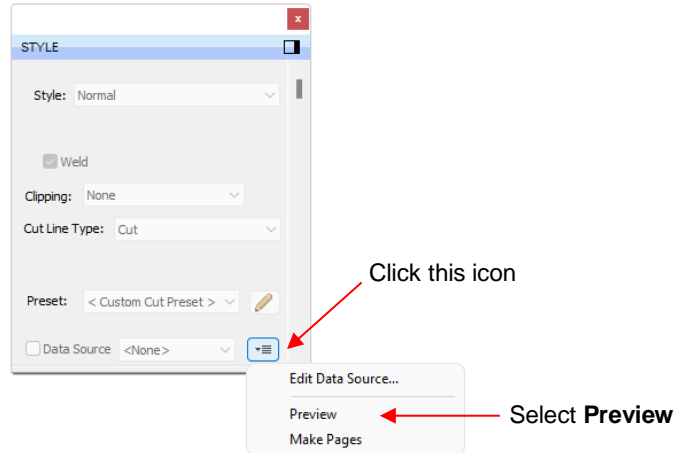


- ◇ Then repeat for the *#* layer:

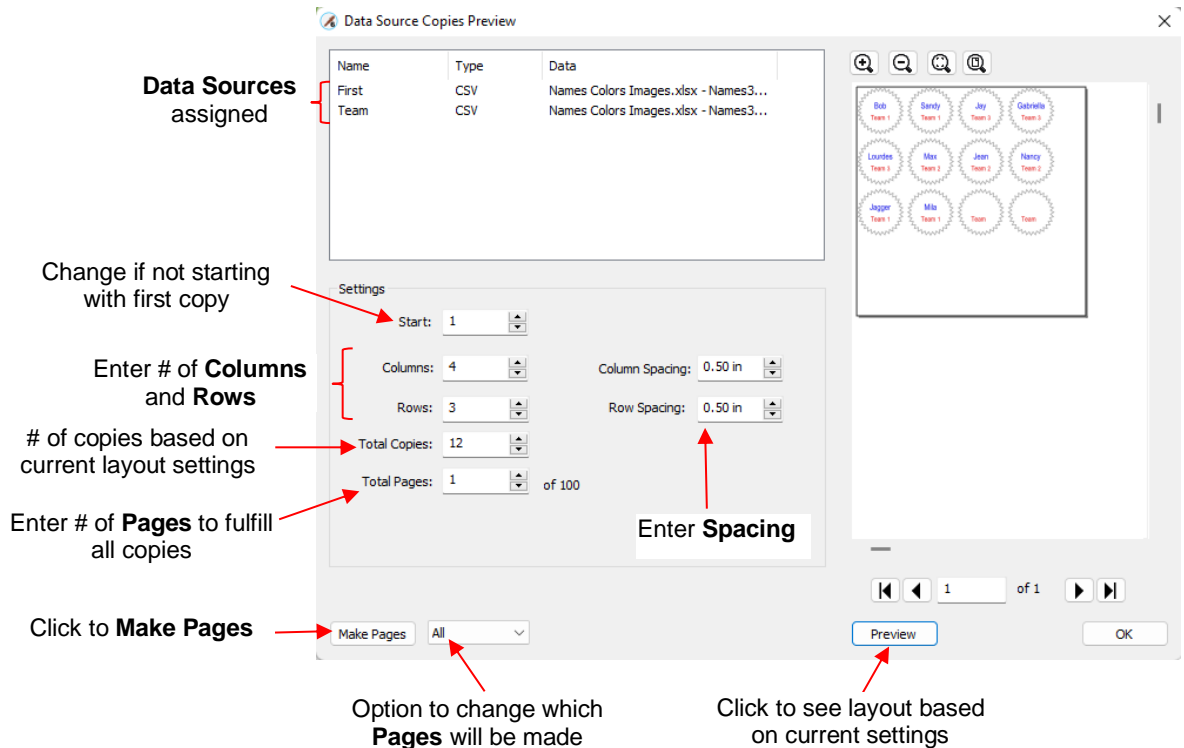


### 7.27.4 Step 4 Preview (and Page Layout)

- After matching relevant layers to their **Data Source**, open the **Preview** window either by going to **Page>Data Source Copies>Preview** or by selecting from the **Data Source** menu on the **Style Panel**:



◇ The following window opens where you can set up a layout for your copies and preview the results:



### 7.27.5 Step 5 Make Pages

- Once all settings are made, you can click on **Make Pages** to generate new pages in your file containing the copies or you can click on **OK** to close the **Preview** window and generate the pages by either going to **Page>Data Source Copies>Make Pages** or by select **Make Pages** from the **Data Source** menu on the **Style Panel**.





### 7.27.6 Data Source Copies with Color and/or Image Changes

- As mentioned in before, the CSV file can also contain colors in RGB Hex format and paths to raster images.
- To set up a **Data Source** color:

The image shows the 'Data Source' dialog box with the following annotations:

1. Enter a **Name** (points to the 'Name' field containing 'Actual Color')
2. Select **CSV** (points to the 'Data Source Type' dropdown menu)
3. Click **Choose** and browse to find the .csv file (points to the 'Choose...' button)
4. Click to see the imported data (points to the 'View Data' button)
5. Enable if row 1 has column names (points to the 'Has Column Header' checkbox)
6. Select which column to use (points to the 'Start Column' field containing '9')
7. Select **Color** (points to the 'Data Type' dropdown menu)
8. Click **Add** (points to the 'Add' button)

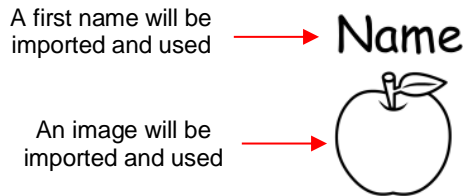
The 'View Data' window shows a table with the following content:

	5	6	7	8	9
§ PA...	R	G	B	HEX VALUE	Hashtag
ne ...	123	182	97	FFB100	#FFB100
ne ...	49	4R	4R	313030	#313030

- ◇ Initially, a **Color Name Data Source** is added. Then an **Actual Color Data Source** is set up. Note in *Step 7*, the **Data Type** must be changed from **Text** to **Color** so that the color hex value will be processed as a color.
- ◇ After assigning the two layers in the design to the new **Data Sources**, setting up a layout in the **Preview** window, and applying **Make Pages**, a color palette is created. Here's a small sampling of it:



- For images, use **File>Place Image** to import any image onto the **Page** and incorporate that image into your design:



- The CSV file needs a path location to each image:

	A	B	C	D	E
1	First Name	Last Name	Team	Color	Image
2	Bob	McCauley	1	#0000FF	C:\Users\14804\Documents\Images\Cartoon Gorilla.png
3	Sandy	McCauley	1	#FF00FF	C:\Users\14804\Documents\Images\Cartoon Chicken.png
4	Jay	McCauley	3	#7F25DA	C:\Users\14804\Documents\Images\Cartoon Dragon.png
5	Gabriella	Lex	3	#FF8080	C:\Users\14804\Documents\Images\Cartoon Cow.png
6	Lourdes	Maldonado	3	#FE7070	C:\Users\14804\Documents\Images\Cartoon Elephant.png
7	Max	McCauley	2	#800000	C:\Users\14804\Documents\Images\Cartoon Zebra.png
8	Jean	Gallagher	2	#FFFF00	C:\Users\14804\Documents\Images\Cartoon Penguin.png
9	Nancy	Gallagher	2	#C9F1A0	C:\Users\14804\Documents\Images\Cartoon Squirrel.png
10	Jagger	McCauley	1	#B2D2F1	C:\Users\14804\Documents\Images\Cartoon Dino 2.png
11	Mila	McCauley	1	#F1D1F1	C:\Users\14804\Documents\Images\Cartoon Cat.png

Path location for images

- ◇ When setting up the CSV file, a quick way to obtain the path location is to locate the image copy/paste its path location into your spreadsheet or table:
  - On a PC: In Explorer, right click on the image and select **Copy as Path**. Then right click and select **Paste** into your table.
  - On a Mac: In Finder, press **control+left click** on image to open a menu. Press and hold **option** to change menu and click on **Copy "filename" as Pathname**. Then use **command+V** to paste the path into your table.
- ◇ You can also use various shortcuts, such as **{home}**, **{documents}**, and **{desktop}** to shorten/simplify the path. Refer to the instructions on the left side of the **Data Sources** window.
- To set up a **Data Source** image:

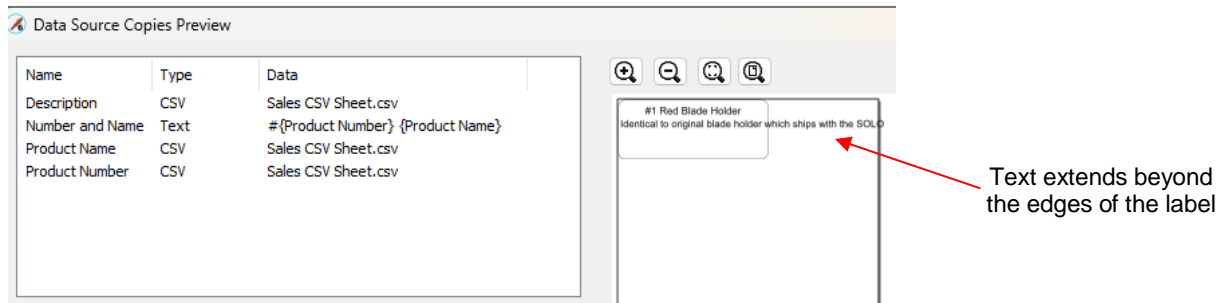
- ◇ Initially, a *First Name Data Source* is added. Then an *Animal Data Source* is set up. Note in *Step 7*, the **Data Type** must be changed from **Text** to **Image** so that the path name will be processed as an image.
- ◇ After assigning the two layers in the design to the new **Data Sources**, setting up a layout in the **Preview** window and applying **Make Pages**, the following copies are made:



### 7.27.7 Data Source Sizing

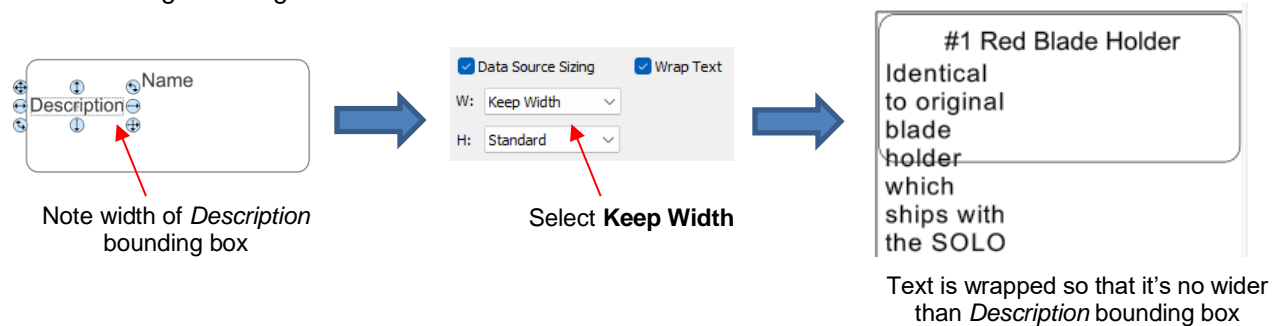
- In some applications, you may need to control the overall sizing of the entries into your **Data Source** copies and/or apply text wrapping to split long text into more than one line.
- After a layer is assigned to a **Data Source** and is selected, a new setting appears on the **Position & Size Panel**. In the following example, a product description is one of the fields imported from a CSV file:

- If no changes are made to the default settings, the **Data Source Preview** window shows that the *Description* will extend beyond the cut line border of the design:

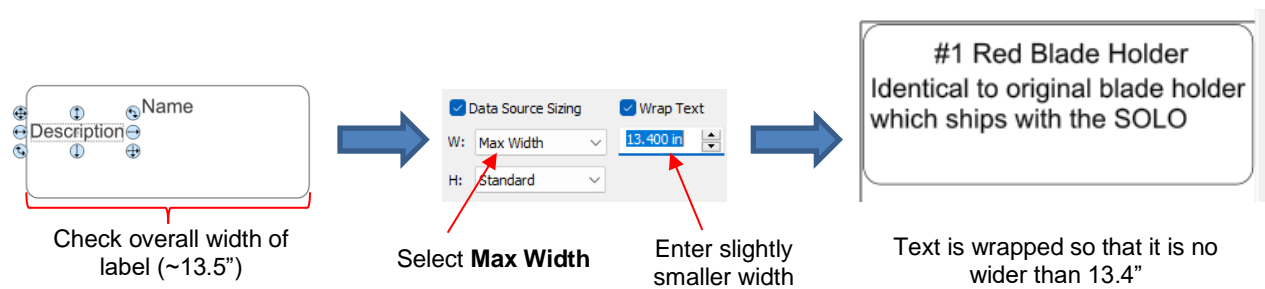


- Enable the **Wrap Text** option, and then note the effects of the various other options besides **Standard** in the **W** menu:

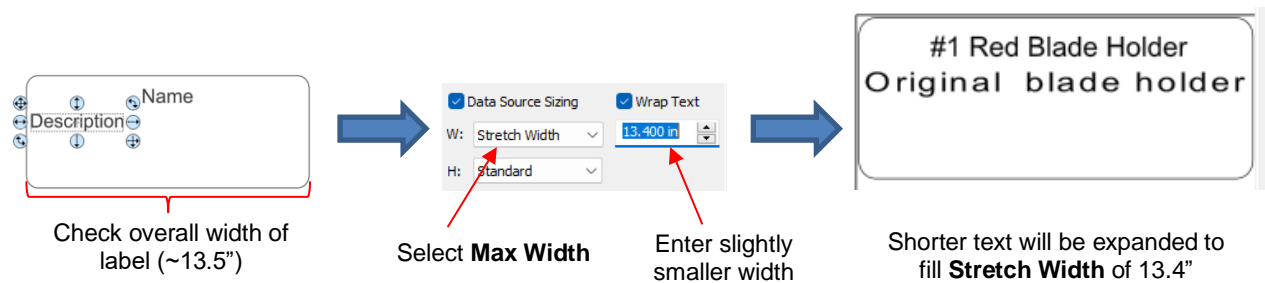
- ◇ **Keep Width**- The text will be wrapped so that the maximum width is whatever the width of that shape is in the original design:



- ◇ **Max Width**- You can enter a maximum allowable width for the text. In this example, because the design's **Width** is 13.5", the **Max Width** for **Description** will be set to 13.4":



- ◇ **Stretch Width**- This is used to force a text entry to fill a specific width. For example, let's say the imported text entry was *Solo Blade Holder*:



- In a similar way, the height of text can also be adjusted when needed.