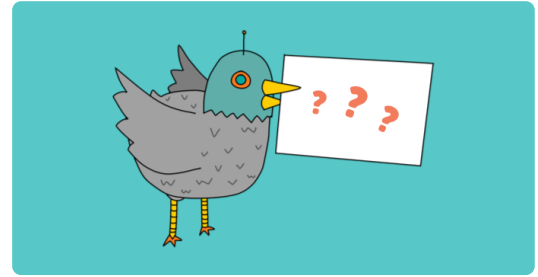


## Mystery Letter

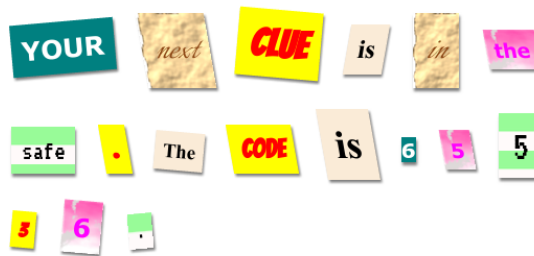
Create a mystery letter with lots of different styles.



### Step 1 Introduction

---

In this project, you'll create a mystery letter that looks like each word has been cut from a different newspaper, magazine, comic or other source.



#### Additional information for club leaders

If you need to print this project, please use the **Printer friendly version** (<https://projects.raspberrypi.org/en/projects/mystery-letter/print>).



## Club leader notes

### Introduction:

In this project, children are introduced to CSS classes. They use multiple CSS classes to style text and also learn how to use background images and free Google fonts in their projects.

### Online Resources

We recommend using **trinket** (<https://trinket.io/>) to write HTML & CSS online. This project contains the following trinket:

- **'Mystery Letter' starting point** – [jumpto.cc/web-letter](http://jumpto.cc/web-letter) (<http://jumpto.cc/web-letter>).

Children can also make use of this blank trinket ([jumpto.cc/html-blank](http://jumpto.cc/html-blank)) (<http://jumpto.cc/html-blank>) to write their own HTML & CSS, or alternatively they can use this template trinket ([jumpto.cc/html-template](http://jumpto.cc/html-template)) (<http://jumpto.cc/html-template>).

There is also a trinket containing a sample solution to the challenges:

- **'Mystery Letter Finished'** – [trinket.io/html/1d4d4c5ce1](https://trinket.io/html/1d4d4c5ce1) (<https://trinket.io/html/1d4d4c5ce1>)

### Offline Resources

This project can be **completed offline** (<https://rpf.io/html-offline>) if preferred. You can access the project resources by clicking the 'Project Materials' link for this project. This link contains a 'Project Resources' section, which includes resources that children will need to complete this project offline. Make sure that each child has access to a copy of these resources. This section includes the following files:

- mystery-letter/index.html
- mystery-letter/style.css
- mystery-letter/script.js
- mystery-letter/prefixfree.js
- mystery-letter/4 x .png images
- template/template.html
- template/style.css

You can also find a completed version of this project's challenges in the 'Volunteer Resources' section, which contains:

- mystery-letter-finished/index.html
- mystery-letter-finished/style.css
- mystery-letter-finished/script.js
- mystery-letter-finished/prefixfree.js
- mystery-letter-finished/4 x .png images

(All of the resources above are also downloadable as project and volunteer **.zip** files.)

### Learning Objectives

- This project introduces CSS classes and the ability to style HTML elements with multiple classes.
- Background images and Google fonts are also introduced.

This project covers elements from the following strands of the **Raspberry Pi Digital Making Curriculum** (<http://rpf.io/curriculum>):

- **Design basic 2D and 3D assets** (<https://www.raspberrypi.org/curriculum/design/creator>).

### Challenges

- "Style your message" – Apply provided CSS class styles;
- "Create a computer printout style" – Use CSS to recreate an example class using a background image and Google font.
- "Create your own styles" – Use CSS to create new styles.



## Project materials

### Project resources

- .zip file containing all project resources (<https://rpf.io/p/en/mystery-letter-go>)
- Online Trinket containing all 'Mystery Letter' project resources (<http://jumpto.cc/web-letter>)
- Online Trinket template (<http://jumpto.cc/trinket-template>)
- Online blank Trinket (<http://jumpto.cc/trinket-blank>)
- [template/index.html](https://projects-static.raspberrypi.org/projects/mystery-letter/ba089e5b70138b46f2383e2127f5a04e42aa90de/en/resources/template-index.html) (<https://projects-static.raspberrypi.org/projects/mystery-letter/ba089e5b70138b46f2383e2127f5a04e42aa90de/en/resources/template-index.html>)
- [template/style.css](https://projects-static.raspberrypi.org/projects/mystery-letter/ba089e5b70138b46f2383e2127f5a04e42aa90de/en/resources/template-style.css) (<https://projects-static.raspberrypi.org/projects/mystery-letter/ba089e5b70138b46f2383e2127f5a04e42aa90de/en/resources/template-style.css>)
- [mystery-letter/index.html](https://projects-static.raspberrypi.org/projects/mystery-letter/ba089e5b70138b46f2383e2127f5a04e42aa90de/en/resources/mystery-letter-index.html) (<https://projects-static.raspberrypi.org/projects/mystery-letter/ba089e5b70138b46f2383e2127f5a04e42aa90de/en/resources/mystery-letter-index.html>)
- [mystery-letter/style.css](https://projects-static.raspberrypi.org/projects/mystery-letter/ba089e5b70138b46f2383e2127f5a04e42aa90de/en/resources/mystery-letter-style.css) (<https://projects-static.raspberrypi.org/projects/mystery-letter/ba089e5b70138b46f2383e2127f5a04e42aa90de/en/resources/mystery-letter-style.css>)
- [mystery-letter/prefixfree.js](https://projects-static.raspberrypi.org/projects/mystery-letter/ba089e5b70138b46f2383e2127f5a04e42aa90de/en/resources/mystery-letter-prefixfree.js) (<https://projects-static.raspberrypi.org/projects/mystery-letter/ba089e5b70138b46f2383e2127f5a04e42aa90de/en/resources/mystery-letter-prefixfree.js>)
- [mystery-letter/rough-paper.png](https://projects-static.raspberrypi.org/projects/mystery-letter/ba089e5b70138b46f2383e2127f5a04e42aa90de/en/resources/mystery-letter-rough-paper.png) (<https://projects-static.raspberrypi.org/projects/mystery-letter/ba089e5b70138b46f2383e2127f5a04e42aa90de/en/resources/mystery-letter-rough-paper.png>)
- [mystery-letter/canvas.png](https://projects-static.raspberrypi.org/projects/mystery-letter/ba089e5b70138b46f2383e2127f5a04e42aa90de/en/resources/mystery-letter-canvas.png) (<https://projects-static.raspberrypi.org/projects/mystery-letter/ba089e5b70138b46f2383e2127f5a04e42aa90de/en/resources/mystery-letter-canvas.png>)
- [mystery-letter/pink-pattern.png](https://projects-static.raspberrypi.org/projects/mystery-letter/ba089e5b70138b46f2383e2127f5a04e42aa90de/en/resources/mystery-letter-pink-pattern.png) (<https://projects-static.raspberrypi.org/projects/mystery-letter/ba089e5b70138b46f2383e2127f5a04e42aa90de/en/resources/mystery-letter-pink-pattern.png>)
- [mystery-letter/computer-printout-paper.png](https://projects-static.raspberrypi.org/projects/mystery-letter/ba089e5b70138b46f2383e2127f5a04e42aa90de/en/resources/mystery-letter-computer-printout-paper.png) (<https://projects-static.raspberrypi.org/projects/mystery-letter/ba089e5b70138b46f2383e2127f5a04e42aa90de/en/resources/mystery-letter-computer-printout-paper.png>)

### Club leader resources

- .zip file containing all completed project resources (<https://rpf.io/p/en/mystery-letter-go>)
- Online completed Trinket project (<https://trinket.io/html/1d4d4c5ce1>)
- [mystery-letter-finished/index.html](https://projects-static.raspberrypi.org/projects/mystery-letter/ba089e5b70138b46f2383e2127f5a04e42aa90de/en/resources/mystery-letter-finished-index.html) (<https://projects-static.raspberrypi.org/projects/mystery-letter/ba089e5b70138b46f2383e2127f5a04e42aa90de/en/resources/mystery-letter-finished-index.html>)
- [mystery-letter-finished/style.css](https://projects-static.raspberrypi.org/projects/mystery-letter/ba089e5b70138b46f2383e2127f5a04e42aa90de/en/resources/mystery-letter-finished-style.css) (<https://projects-static.raspberrypi.org/projects/mystery-letter/ba089e5b70138b46f2383e2127f5a04e42aa90de/en/resources/mystery-letter-finished-style.css>)
- [mystery-letter-finished/prefixfree.js](https://projects-static.raspberrypi.org/projects/mystery-letter/ba089e5b70138b46f2383e2127f5a04e42aa90de/en/resources/mystery-letter-finished-prefixfree.js) (<https://projects-static.raspberrypi.org/projects/mystery-letter/ba089e5b70138b46f2383e2127f5a04e42aa90de/en/resources/mystery-letter-finished-prefixfree.js>)
- [mystery-letter-finished/rough-paper.png](https://projects-static.raspberrypi.org/projects/mystery-letter/ba089e5b70138b46f2383e2127f5a04e42aa90de/en/resources/mystery-letter-finished-rough-paper.png) (<https://projects-static.raspberrypi.org/projects/mystery-letter/ba089e5b70138b46f2383e2127f5a04e42aa90de/en/resources/mystery-letter-finished-rough-paper.png>)
- [mystery-letter-finished/canvas.png](https://projects-static.raspberrypi.org/projects/mystery-letter/ba089e5b70138b46f2383e2127f5a04e42aa90de/en/resources/mystery-letter-finished-canvas.png) (<https://projects-static.raspberrypi.org/projects/mystery-letter/ba089e5b70138b46f2383e2127f5a04e42aa90de/en/resources/mystery-letter-finished-canvas.png>)
- [mystery-letter-finished/pink-pattern.png](https://projects-static.raspberrypi.org/projects/mystery-letter/ba089e5b70138b46f2383e2127f5a04e42aa90de/en/resources/mystery-letter-finished-pink-pattern.png) (<https://projects-static.raspberrypi.org/projects/mystery-letter/ba089e5b70138b46f2383e2127f5a04e42aa90de/en/resources/mystery-letter-finished-pink-pattern.png>)
- [mystery-letter-finished/computer-printout-paper.png](https://projects-static.raspberrypi.org/projects/mystery-letter/ba089e5b70138b46f2383e2127f5a04e42aa90de/en/resources/mystery-letter-finished-computer-printout-paper.png) (<https://projects-static.raspberrypi.org/projects/mystery-letter/ba089e5b70138b46f2383e2127f5a04e42aa90de/en/resources/mystery-letter-finished-computer-printout-paper.png>)

## Step 2 Choose Your Message

---

Mystery letters are used in films and books to send secret messages.

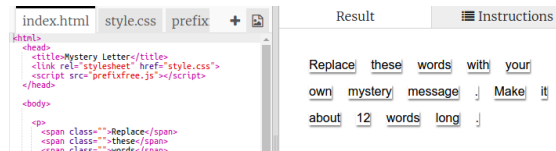
- Think of a mystery message; 12 words is about the right length. If you can't think of a message you can use the example: 'Your next clue is in the safe. The code is 65536.'
- Either make a note of your message or remember it.

## Step 3 Editing Your Message

Let's get your message onto a webpage.

- Open this trinket: [jump.to/cc/web-letter](http://jump.to/cc/web-letter) (<http://jump.to/cc/web-letter>).

The project should look like this:



- The `<p>` paragraph tag is introduced in the 'Happy Birthday' project. The `<span>` tag is used to group smaller pieces of text inside a paragraph so that we can style them.

```
<body>
  <p>
    <span class="">Replace</span>
    <span class="">these</span>
    <span class="">words</span>
    <span class="">with</span>
    <span class="">your</span>
    <span class="">own</span>
    <span class="">mystery</span>
    <span class="">message</span>
    <span class="">.</span>
    <span class="">Make</span>
    <span class="">it</span>
    <span class="">about</span>
    <span class="">12</span>
    <span class="">words</span>
    <span class="">long</span>
    <span class="">.</span>
  </p>
</body>
```

- Change the words to your message by putting one word in each `<span>`. You will need to add or remove `<span>` tags if your message is a different length.



- Click the Run button to test your trinket.

If you look at the words, you can see that they've been styled to look like they've been stuck onto the page.

## Step 4 Using Class Styles

---

- Did you notice the `class=""` in the `<span>` tags? You can use this to style more than one thing in the same way.
- Add the `magazine1` class to a few of your `<span>` tags and test your webpage.

```
<p>
<span class="magazine1">Your</span>
<span class="">next</span>
<span class="">clue</span>
<span class="">is</span>
<span class="">IN</span>
<span class="">the</span>
<span class="">safe</span>
<span class="">The</span>
<span class="">code</span>
<span class="">is</span>
<span class="">6</span>
<span class="">5</span>
<span class="">5</span>
<span class="">3</span>
<span class="">6</span>
</p>
```

- You can add more than one class to an element. Just leave a space in between. Add the `big` class to one of your `<span>` tags. Test your page.

```
<p>
<span class="magazine1 big">Your</span>
<span class="">next</span>
<span class="">clue</span>
<span class="">is</span>
<span class="">IN</span>
<span class="">the</span>
<span class="">safe</span>
<span class="">The</span>
<span class="">code</span>
<span class="">is</span>
<span class="">6</span>
<span class="">5</span>
<span class="">5</span>
<span class="">3</span>
<span class="">6</span>
</p>
```

## Step 5 Challenge: Style Your Message

---

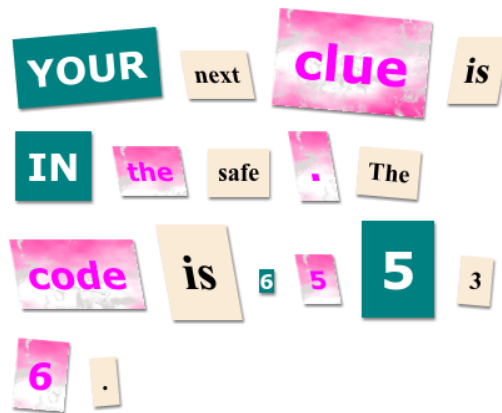
Use the provided styles to make your message look like a mystery letter.

Add these classes to your `<span>` tags:

- `newspaper`, `magazine1`, `magazine2`
- `medium`, `big`, `reallybig`
- `rotateleft`, `rotateright`
- `skewleft`, `skewright`

Don't add more than one from each line to a particular `<span>`.

This is how your letter could look:



## Step 6 Editing Classes

---

- Click on the 'style.css' tab. Find the style for the `newspaper` CSS class that you have been using.

```
.newspaper {  
  background-color: antiquewhite;  
  font-family: "Times New Roman";  
  font-weight: bold;  
}
```

- Notice that there's a dot (full stop) "." before the name of the class in the CSS file but not in the `<span>` tag in your HTML document.
- Now look at the other CSS classes that you used to style your mystery letter. Can you find:
  - How the `magazine1` style changes the text to all uppercase (capital) letters.
  - How the `magazine2` style puts an image behind the text.

```
.magazine1 {  
  background-color: teal;  
  color:white;  
  font-family: Verdana;  
  font-weight: 900;  
  text-transform: uppercase;  
}  
  
.magazine2 {  
  background-image: url('pink-pattern.png');  
  color: fuchsia;  
  font-family: Verdana;  
  font-weight: 900;  
}
```

- What happens if you change the `background-image` for `magazine2` to `canvas.png`? If you prefer `pink-pattern.png` you can change it back.

You can also change the colours in the magazine styles if you like.

- Find the CSS used to rotate and skew (tilt) your words:

```
.rotateleft {  
  transform: rotate(-5deg);  
}  
  
.rotateright {  
  transform: rotate(5deg);  
}  
  
.skewleft {  
  transform: skewX(10deg);  
}  
  
.skewright {  
  transform: skewX(-10deg);  
}
```

Try changing the numbers to create different effects and then testing your page.

## Step 7 Create a New Class

Let's create a style that looks like it has been cut from a Comic. [jumpto.cc/web-fonts](http://jumpto.cc/web-fonts) (<http://jumpto.cc/web-fonts>) provides loads of fonts that are free to use.

- Add a `comic` class in the `style.css` file. After `magazine2` is a good place. Don't forget the dot in front of the class name.

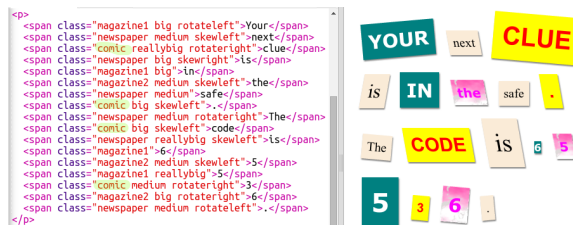
```
.magazine2 {  
  background-image: url('pink-pattern.png');  
  color: fuchsia;  
  font-family: Verdana;  
  font-weight: 900;  
}  
  
.comic {  
}
```

Don't worry if you get a warning saying that 'The Rule is empty'; you'll fix that next.

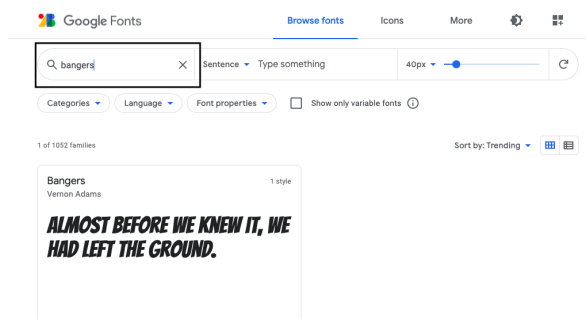
- Now add some CSS to the comic CSS class. You can use different colours if you like. There's a list of loads of colours at [jumpto.cc/colours](http://jumpto.cc/colours) (<http://jumpto.cc/colours>).

```
.comic {  
  background-color: yellow;  
  color: red;  
  font-weight: bold;  
}
```

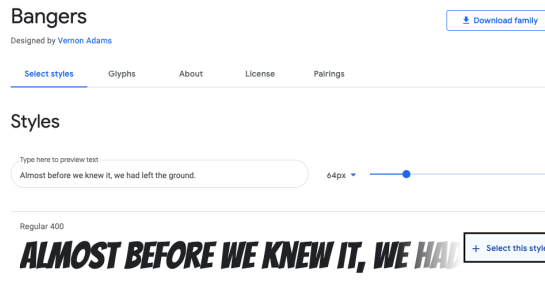
- Use the comic style in some of the `<span>` tags in your HTML document and test your page:



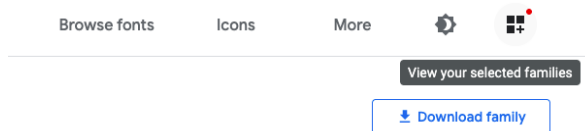
- Now you can add a fun font. Open a new browser tab or window. Go to [jumpto.cc/web-fonts](http://jumpto.cc/web-fonts) (<http://jumpto.cc/web-fonts>) and search for 'bangers':



- Click on the font preview box then click on '+ Select this style':



View your selected fonts by clicking on the 'View your selected families' icon in the top right menu bar:



- Go to the 'Use on the web' section, copy the text from the box:

### Use on the web

To embed a font, copy the code into the <head> of your html

<link>  @import

```
<link rel="preconnect" href="http
s://fonts.gstatic.com">
<link href="https://fonts.googleap
is.com/css2?family=Bangers&display
=swap" rel="stylesheet">
```

- Paste the <link> code that you just copied from Google fonts into the <head> of your webpage:

```
<html>
<head>
<title>Mystery Letter</title>
<link rel="stylesheet" href="style.css">
<link href="https://fonts.googleapis.com/css2?family=Bangers" rel="stylesheet">
```

This allows you to use the Bangers font in your webpage.

- Return to Google fonts and scroll further down to copy the CSS font-family code:

### CSS rules to specify families

```
font-family: 'Bangers', cursive;
```

- Now go back to your 'style.css' file in trinket and paste the font-family code into the comic style:

```
.comic {
background-color: yellow;
color: red;
font-weight: bold;
font-family: 'Bangers', cursive;
}
```

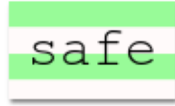
- Test your webpage. The result should look something like this:

YOUR next CLUE is  
IN the safe . The  
CODE is 6 5 5 3  
6 .

## Step 8 Challenge: Create A Computer Printout Style

---

Create an old-fashioned computer printout style and apply it to some of the words:



You will need:

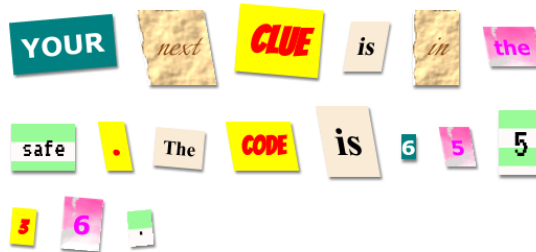
- The `VT323` font family from [jumpto.cc/web-fonts](http://jumpto.cc/web-fonts) (<http://jumpto.cc/web-fonts>). Look back at Step 5 if you need a reminder on using Google fonts.
- The `computer-printout-paper.png` background image. Look back at Step 4 if you need a reminder on using background images.

## Step 9 Challenge: Create Your Own Styles

---

Now create your own class styles and make your mystery letter even more interesting. Use the CSS that you have learnt in previous projects and look at the examples in **style.css** for ideas.

Here's an example:



You can see the images that are available to use by clicking on the Images tab in trinket. Try setting image backgrounds using one of the included images:

- `rough-paper.png`
- `canvas.png`

If you have a trinket account, you can upload images of your own as you did in the 'Tell a Story' Project.

Find fonts that you like on [jump.to/cc/web-fonts](http://jump.to/cc/web-fonts) (<http://jump.to/cc/web-fonts>) and copy their `<link>` and CSS code into your trinket to use them.

---

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View project & license on GitHub (<https://github.com/RaspberryPiLearning/mystery-letter>)