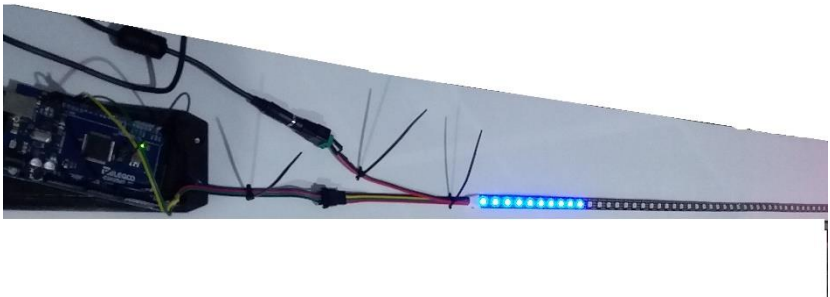


# Teddywaddy Code Club

## Activity 3d

### Collision



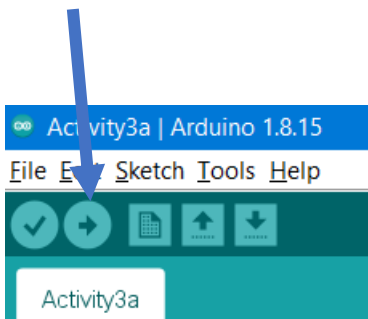
# Collision

Open the activity3d.ino code using the Arduino program. In this code, two sets of lights collide.

Part of the code is shown on the next page. You will be making some changes.

Take care to make sure you find the correct piece of code to change.

After you make some changes, press the right arrow button.



# The two trains

Take care to make sure you find the correct piece of code to change.

Change the colours of  
the light trains.  
They can be different.

```
while (downDot>upDot) {  
  
    // Set up the colours for each light train  
  
    setDotColour(upDot,CRGB::Blue);    // Colour of up train  
    setDotColour(downDot,CRGB::Blue); // Colour of down train
```

```
// Set how fast the trains approach the collision - smaller number is faster  
delay(100);
```

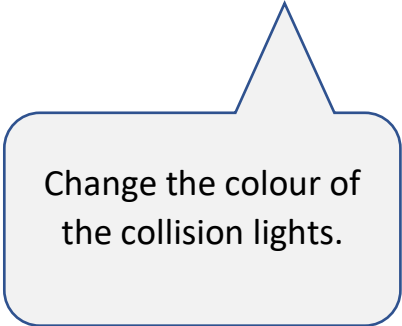
Change the speed of the light trains.  
A smaller number is faster.

# Collision type

The collision can be one of three types.

The code for the first collision type is shown below.

```
// Collision types  
  
// Two light collision zone  
setDotColour(29, CRGB::Red);  
setDotColour(30, CRGB::Red);
```



Change the colour of  
the collision lights.

# Expanding collision

For a different type of collision, you can change the code as follows.

```
// Collision types  
  
// Expanding collision zone  
setDotColour(29-dot, CRGB::Red);  
setDotColour(30+dot, CRGB::Red);
```

You can also still change the colour of the collision.

Change the code like this.  
Change both lines.

# Flashing collision

To make the lights flash where the collision happens is a bit complicated.

You need to type in two very long lines of code.

Make sure you replace the existing two lines.

```
// Collision types

// Flashing collision zone
if(dot%2 != 0) setDotColour(29,CRGB::Red); else setDotColour(29,CRGB::Black);
if(dot%2 != 0) setDotColour(30,CRGB::Red); else setDotColour(30,CRGB::Black);
```

Flashing colour 1

Flashing colour 2

You can also change how fast the collision happens.

Make sure you find the correct piece of code.

```
// Set how fast the collision happens - smaller number is faster
delay(100);
```

Smaller number is faster