

PLAYING WITH SOUND

Our problem is that sometimes there is too much noise in class and it's uncomfortable.

To solve this problem we could create something similar to a traffic light, when there is a lot of noise it turns red, when there is less noise it turns yellow and when there is almost no noise it turns green, and that could be programmed with an arduino.

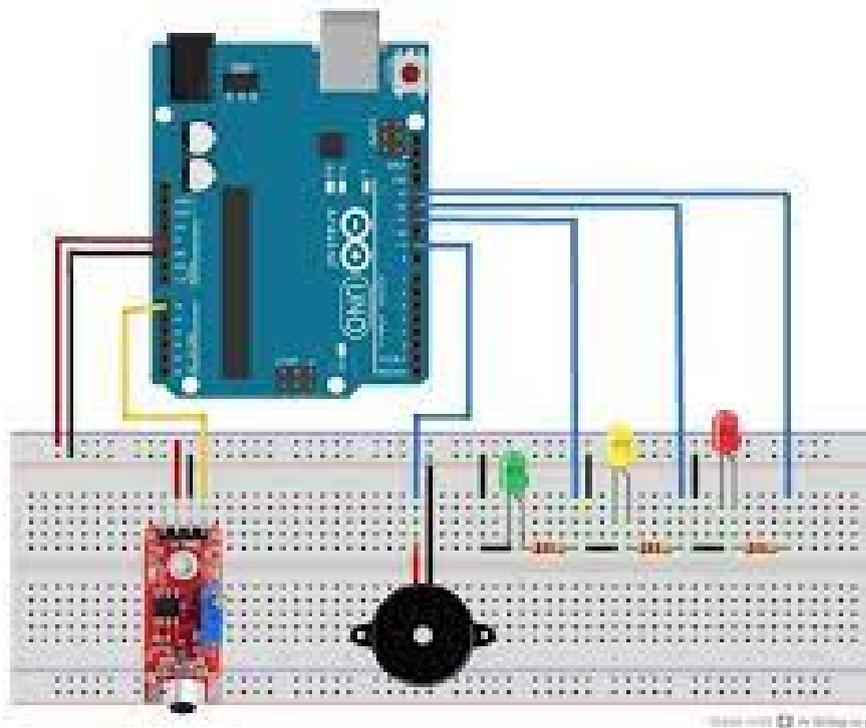
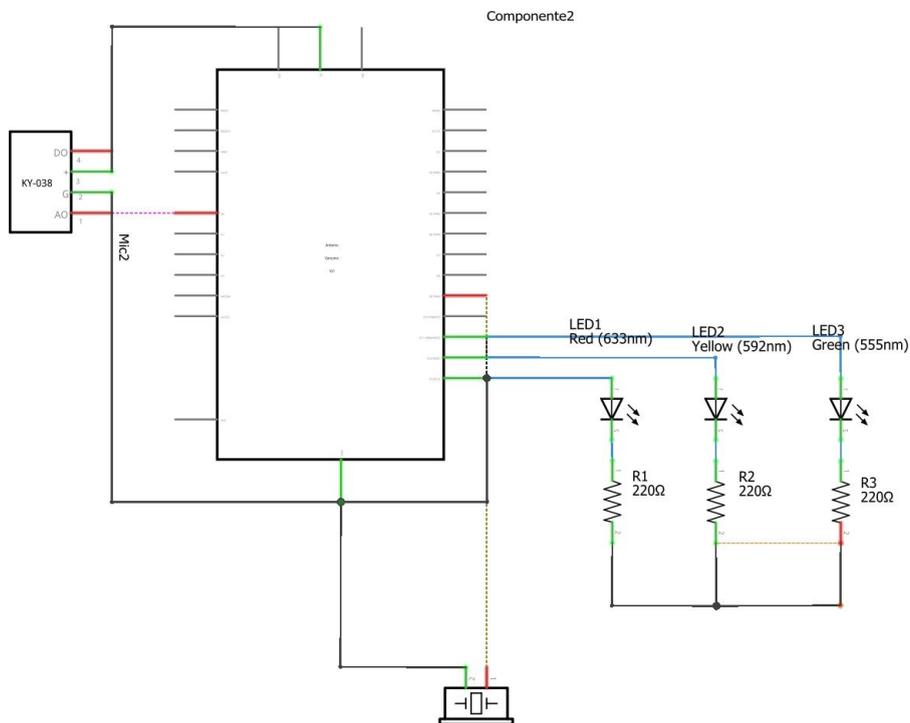
Information about the project of the traffic lights :

The project is **based on calibrating the noise level in classrooms** so that students are aware of the noise that is generated on some occasions.

With a **sound sensor the noise level in the classroom is measured. Depending on the level at which it is, an LED will light up.** If the level is low, the green LED will light up, if the level is intermediate, the yellow one will light up and if it is high, the red one will light up.

The **material** we have used to do the project were 3 leds of different colors, a green one, a yellow one and finally a red one. **3 resistors of 220 ohms**, an **arduino**, a **sound detector with headers**.

The esquema we have used is this:

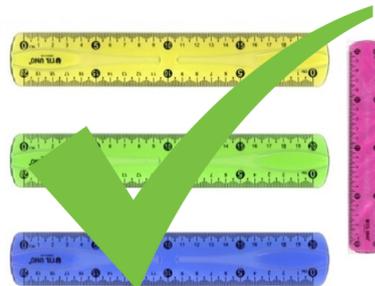


IDEAS TO REDUCE THE SOUND:

Our first idea to reduce the sound of class is to put some **rubber bands** and put them on **the legs of our chairs and tables**; that rubber bands will be **made from recycled wheels**.



The **second idea** we thought, was **not using metallic school supplies**, because when these materials are accidentally dropped, they make a noise that is quite irritating, and if this action is repeated successively it could be quite annoying. For example, **instead of using a metallic ruler use a silicone ruler**.



We have come up with an idea that is not within our reach at the moment, but we could do it in the future.

As our school is located next to the road, it is quite uncomfortable to hear vehicles all the time. In addition, they have just built a fire station and the works have been very annoying but now that the fire department is going to be located here, we will hear the sirens every time there is an emergency and that will be uncomfortable. Every time there is an emergency, we will hear the sirens and that won't be very comfortable.

To reduce these noises our idea would be to soundproof the outside of the highschool, we know that it is a very expensive project but we could do it in the future.

To soundproof the noise, acoustic screens could be placed around the school, in this way, there will be almost no noise and a high level of comfort would be obtained.



Acoustic screens can be made of metal or wood.

-(Find the prices of the two options and compare).