This board shows us how a robot communicates back to us. It does this by turning on LEDs, rows of lights and graphical displays that can show a picture of our robot’s face.

LEDs, or Light-Emitting-Diodes, are a simple and low-cost way for a robot to tell us what is going on in its microcontroller brain. LEDs come in single colors or you can get one that does red, green and blue. If you have a LOT of LEDs that you want to use, you can put them in a row and make them look like things are moving around. This is called a “NeoPixel” strip. Our students LOVE these strips because they are easy to program and are great for costumes.

There are also many other types of displays that range in cost, brightness and functionality. If you just want to display a number, the seven-segment display is a great option.

On the lower right is our favorite display – the large OLED display. OLED for “organic” LED, is a bright and high-contrast display. Our kids love them because they can see the numbers and graphics even when standing up.

What display would you like to design in your robot?