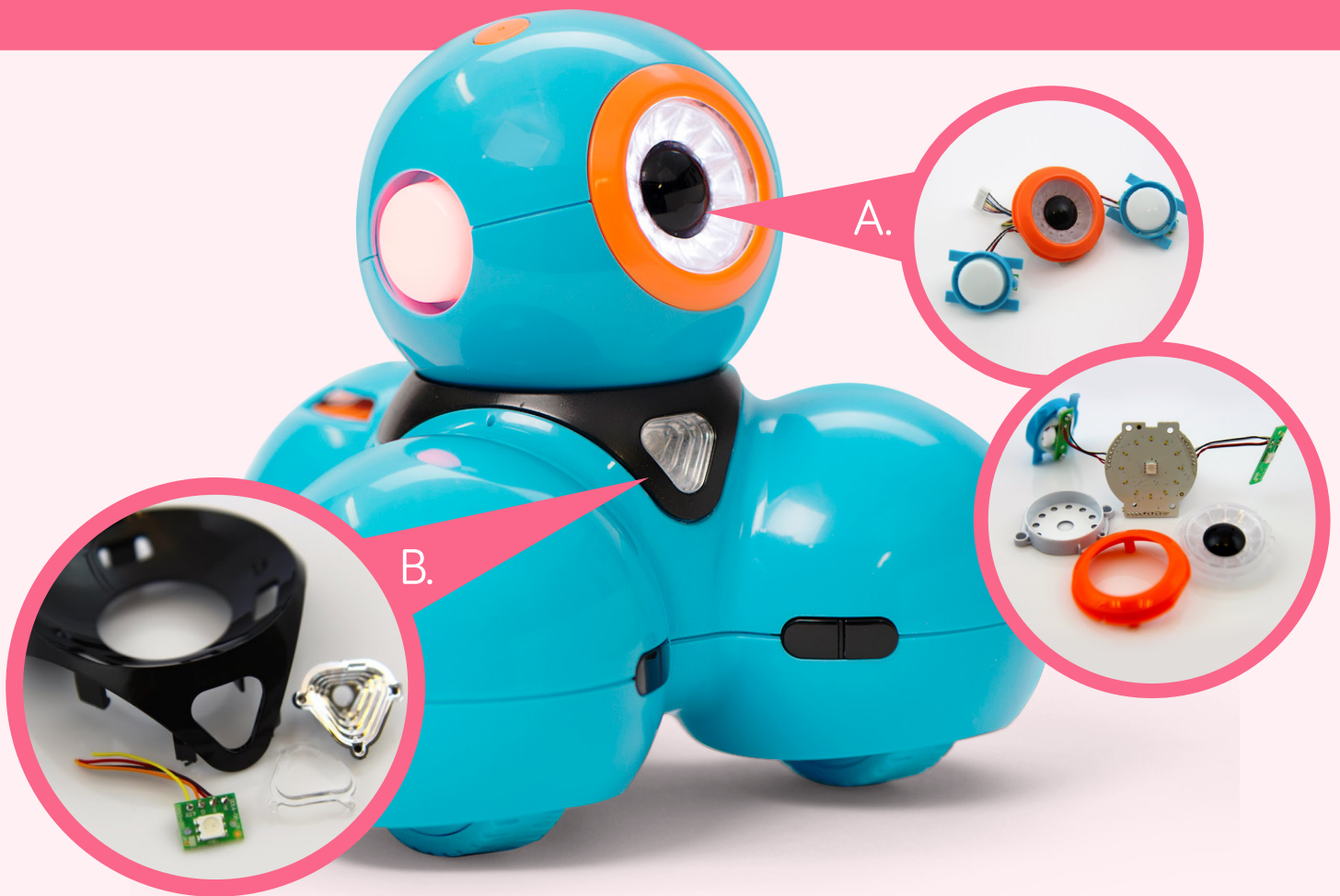# Robot Guts

Have you ever wondered what **robot guts** look like? We're giving you a sneak peek into how Dash expresses emotions. In this edition, we are giving you the inside scoop on all of Dash's lights!

A.

B.

A) Eye lights

Dash's eye is made up of 12 individual lights. Each light is powered by an **LED, or light emitting diode**. Each of these lights is programmable. In Go or Blockly, you can try turning each light on and off or making patterns with the eye lights. Sometimes you may notice Dash & Dot blinking. All of these eye expressions are programmed using the same 12 LEDs! In this photo, you can get an up close look at what the LEDs look like beneath Dash's eye.

B) Chest light

Dash can express a rainbow of moods using the chest light. This light is also an LED, but is called an **RGB LED**. The RGB stands for Red, Green, Blue. Did you know that these three colors of light can be added together in many ways to produce virtually all of the colors in the rainbow? That is how Dash's chest light can be programmed using Go or Blockly to show emotions through a spectrum of colors.

C) Ear lights

Dash's ear lights are also each programmable through RGB LEDs. You can change each color on its own in Blockly, or create a general mood for both ears and the chest light to help you tell a story! In this photo, you can see what the ear light LED looks like from inside Dash's head!

D) Tail light

You may have noticed that there are two lights on the back of Dash! We call these two lights together the "tail light," and it is made up of two... you guessed it, LEDs. The LEDs in the tail light are red in color, and can be turned on and off in Blockly. How might you use the tail light to show how Dash is feeling?