Part 6A: Arduino Traffic Light Challenge Answers

Example of circuit for running a stop light with breadboard and Arduino:

Red light—connected to pin 11
Yellow light—connected to pin 12
Green light—connected to pin 13
Black wire—connected to ground and red/+ on breadboard

Example of coding for running a traffic light with Arduino:

/*
   Activity 6a: Traffic Light
*/
Turn on a green external LED on for 5 seconds then off for 7 seconds, then a yellow external LED for two seconds then off for 10, then a red external LED turns on for 5 seconds then off for 7 seconds, repeatedly.

// Identify the digital pin to which each LED is connected:
int led = 11; // green light
int led2 = 12; // yellow light
int led3 = 13; // red light

// The setup() routine runs only once:
void setup() {
    // Set the digital pin as an output.
    pinMode(led, OUTPUT);
    pinMode(led2, OUTPUT);
    pinMode(led3, OUTPUT);
}

// The loop routine runs over and over again forever:
void loop() {
    digitalWrite(led, HIGH);
    digitalWrite(led2, LOW);
    digitalWrite(led3, LOW);
    delay(5000);

    digitalWrite(led, LOW);
    digitalWrite(led2, HIGH);
    digitalWrite(led3, LOW);
    delay(2000);

    digitalWrite(led, LOW);
    digitalWrite(led2, LOW);
    digitalWrite(led3, HIGH);
    delay(5000);
}