/\*PCE-11 Modified by Pat McMahon 12/10/2022.Uses Pat's 20 Plug & Code Examples.

  Tone Pitch follower

   Connections-Piezo Sounder to Gnd & D9.Potentiometer to +5V,A0 & Gnd.

  Plays a pitch that changes based on a changing analog input

  circuit:

  - 8 ohm speaker on digital pin 9

  - photoresistor on analog 0 to 5V

  - 4.7 kilohm resistor on analog 0 to ground

  created 21 Jan 2010

  modified 31 May 2012

  by Tom Igoe, with suggestion from Michael Flynn

  This example code is in the public domain.

  https://www.arduino.cc/en/Tutorial/BuiltInExamples/tonePitchFollower

\*/

void setup() {

  // initialize serial communications (for debugging only):

  Serial.begin(9600);

}

void loop() {

  // read the sensor:

  int sensorReading = analogRead(A0);

  // print the sensor reading so you know its range

  Serial.println(sensorReading);

  // map the analog input range (in this case, 400 - 1000 from the photoresistor)

  // to the output pitch range (120 - 1500Hz)

  // change the minimum and maximum input numbers below depending on the range

  // your sensor's giving:

  int thisPitch = map(sensorReading, 400, 1000, 120, 1500);

  // play the pitch:

  tone(9, thisPitch, 10);

  delay(1);        // delay in between reads for stability

}