

```

1  /*
2  * This is the .h file for calculating MRT and OT
3  * This code was written entirely by Team 26
4  * using formulas found in Literature.
5  */
6  #ifndef CALCULATE_MRT_H
7  #define CALCULATE_MRT_H
8
9  #if ARDUINO >= 100
10     #include "Arduino.h"
11 #else
12     #include "WProgram.h"
13 #endif
14
15 class mrt_and_ot {
16     public:
17         mrt_and_ot(void);
18
19         void calculate_mrt_and_ot(float T_g, float T_a);
20         float get_mrt(void);
21         float get_ot(void);
22
23     private:
24         float calculate_convection_coefficient(float T_g, float T_a);
25         float h;
26         float T_mrt;
27         float T_ot;
28         float T_a;
29         float T_g;
30         float convection_coefficient;
31
32         const float epsilon = 0.94;
33         const float diameter = 0.04;
34         const float diameter_to_power = pow(diameter, 0.4);
35         const float kelvin_conversion = 273.15;
36 };
37 #endif
38

```