Cooling Coffee Lab Report

The purpose of this lab was to first experimentally test the rate of the cooling ‘coffee’. Following this we modeled the behavior that was observed from the experiment.

Materials used:

* 10oz cup of water
* Digital Thermometer
* Timer

The experiment was conducted by placing a thermometer in a cup of hot water(see table) and measured every minute with the thermometer suspended in the middle of the water.

| Time in Minutes | Temperature in Celcius |
| --- | --- |
| 0 | 82.9 |
| 1 | 81.7 |
| 2 | 79.2 |
| 3 | 77.1 |
| 4 | 75.6 |
| 5 | 74.1 |
| 6 | 72.7 |
| 7 | 71.5 |
| 8 | 69.7 |
| 9 | 68.7 |
| 10 | 67.1 |
| 11 | 66.4 |
| 12 | 65.3 |
| 13 | 64.2 |
| 14 | 63.1 |
| 15 | 62.3 |
| 16 | 61.3 |
| 17 | 60.2 |
| 18 | 59.5 |
| 19 | 58.7 |
| 20 | 58.1 |
| 21 | 57.3 |
| 22 | 56.6 |
| 23 | 55.7 |
| 24 | 55.1 |
| 25 | 54.4 |
| 26 | 53.8 |
| 27 | 53.1 |
| 28 | 52.2 |
| 29 | 51.8 |
| 30 | 51.4 |
| 31 | 50.8 |
| 32 | 50.4 |
| 33 | 49.8 |
| 34 | 49.1 |
| 35 | 48.7 |
| 36 | 48.4 |
| 37 | 47.9 |
| 38 | 47.5 |
| 39 | 46.9 |
| 40 | 46.4 |
| 41 | 46 |
| 42 | 45.5 |
| 43 | 45.2 |
| 44 | 44.8 |

Below is a graphic representation of the experimental values plotted with the simulated values from the lab.

