# POTTERY NOTES:
# 11. TEMPERATURE, CONES & FIRING

| Cone | Temperature |
|---|---|
| 022 | 590 |
| 021 | 617 |
| 020 | 638 |
| 019 | 695 |
| 018 | 734 |
| 017 | 763 |
| 016 | 796 |
| 015 | 818 |
| 014 | 838 |
| 013 | 861 |
| 012 | 882 |
| 011 | 894 |
| 010 | 915 |
| 09 | 930 |
| 08 | 956 |
| 07 | 987 |
| 06 | 1013 |
| 05 | 1044 |
| 04 | 1077 |
| 03 | 1104 |
| 02 | 1122 |
| 01 | 1138 |
| 1 | 1154 |
| 2 | 1164 |
| 3 | 1170 |
| 4 | 1183 |
| 5 | 1207 |
| 6 | 1243 |
| 7 | 1257 |
| 8 | 1271 |
| 9 | 1280 |
| 10 | 1305 |
| 11 | 1315 |
| 12 | 1326 |

Overglaze & decal firings
Cone 022 to Cone 013

Bisque firing
Cone 08 to Cone 04

Earthenware firing
Cone 06 to Cone 4

Mid fire Stoneware
Cone 4 to Cone 7

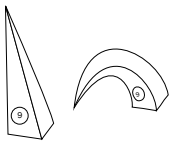
Stoneware
Cone 8 +

Temperature that will be reached for a regular self supporting Orton cone at a heating rate of 150 C/hour.

## TEMPERATURE AND CONES

You may notice that the term cone is used for firing clay and glaze. The cone number corresponds to temperature over a certain period of time (heatwork). A pyrometric cone allows heatwork to be measured.

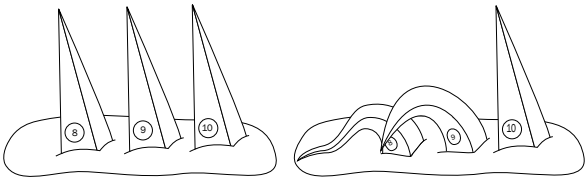
Physically a cone is a triangular pyramid of ceramic material. It bends after a certain amount of heatwork.



Cones are numbered and the number corresponds to a temperature for a particular rate of heating.

So if a glaze is a Cone 9 glaze it means that it has been formulated to be fired to 1280° C (at a rate of 150° C per hour).

Most kilns these days have pyrometers that tell us the temperature of the kiln (some controllers even calculate the heatwork). Cones are still useful in checking that a kiln is firing to the required temperature. They are also useful in checking variation in temperature in different parts of the kiln .
Three consecutively numbered cones (known as a cone pack) can show the progress of the firing.




- note the difference the 0 makes in the numbering and how the sequence runs from 022 (cool) to 12 (hot).