

**Central Michigan University-North Art Studio Ceramic Handbook 4<sup>th</sup> Edition**  
**Recommended for Art 210-710 David Bolton NAS Coordinator**

## TABLE OF ORTON STANDARD CONES AND TEMPERATURES

Temperatures apply to large cones heated at the rate of 270 degrees F per hour in an air atmosphere.

<i>Cone</i>	<i>°C</i>	<i>°F</i>	<i>Color</i>	<i>What Happens to Clay</i>	<i>Type of Ware and Glazes</i>
□	0	32	□	Water freezes	□
□	100	212	□	Water boils	□
□	470	878	Visible	Lowest point where red glow can be seen in the dark	□
□	□	□	□	□	□
□	573	1063	□	Quartz Inversion	□
O22	605	1121	□	Lowest cone temperature	Metallic lusters (gold, platinum, etc.)
O21	614	1137	□	□	□
O20	635	1175	□	□	□
O19	683	1261	□	□	Overglaze colors or enamels
O18	717	1323	Dull	□	□
O17	747	1377	Red	□	□
O16	792	1458	□	Organic matter burns out	□
O15	804	1479	□	□	□
O14	838	1540	□	□	□
O13	852	1566	□	□	Inglaze lusters
O12	884	1623	Cherry	□	□
O11	894	1641	Red	□	Raku
O10	905	1661	□	Body reduction started	Chromium red glazes
O9	923	1693	Dark	□	Lowfire lead glazes
O8	955	1751	Orange	Kiln kept in neutral	Lowfired bisque
O7	984	1803	□	□	Lowfire earthenware
O6	999	1830	□	□	□
O5	1031	1888	□	Some red clays mature	Average bisque
O4	1060	1940	Orange	□	□
O3	1101	2014	□	□	Earthenware
O2	1120	2048	□	Buff clays mature	□
O1	1137	2079	Dark	□	□
1	1154	2109	Yellow	□	Highfire earthenware
2	1162	2124	□	□	Semi-vitreous ware
3	1168	2134	□	Some red clays melt	Sanitary ware
4	1186	2167	Yellow	□	Bone China glazes
5	1196	2185	□	Glaze reduction	Lowfire stoneware
6	1222	2232	Bright	Stoneware clays mature	Salt glazes
7	1240	2264	Yellow	□	□
8	1263	2305	□	□	Stoneware
9	1280	2336	□	□	China bodies--bisque
10	1305	2381	□	□	□
11	1315	2399	White	Porcelain matures	□
12	1326	2419	□	□	Porcelain
13	1346	2455	□	□	□
14	1366	2491	□	□	□