



Clock of Eras 2014

Notes for the Teacher

At Azoka, we review our curriculum materials regularly to align traditional Montessori methodology and current knowledge. We also enjoy discussion and debate when students "correct" information through their research and appreciate input from teachers. At all points we attempt to keep in mind each child's experience in working with our products.

For the 2014 Clock of Eras we relied on information from the International Commission on Stratigraphy. Our source is the Geologic Time Scale Foundation (<https://engineering.purdue.edu/Stratigraphy/>).

Our Clock of Eras 2014 has been adjusted to estimate the relationship between eras. We have migrated to ICAS colors that young scientists encounter now and will find in geology study for our color scheme. This required a good deal of thinking through given our attachment for Paleozoic blue, (representing the abundance of early life in the seas), Mesozoic brown, (representing an earth in upheaval with huge tectonic change and the first spread of life onto land), and Cenozoic green (representing the abundance of grasslands and their cosmic role preparing the earth for mammal advancements and eventually human life), When presenting the material, we suggest teachers continue to mention the symbolism of the original colors and share the fact that after many years scientists (for the most part) agree to new standard and different colors for geological clocks and time periods. This will not confuse elementary children. Those who work with the Azoka Time Line of Life may note that our most recent edition kept the "Montessori" colors for those three eras at the top with colors for the Paleozoic, Mesozoic, and Cenozoic as design features at the bottom.

Each Clock of Eras set contains a control chart, cut pieces for laying out on a mute clock face, and arrows with minimal descriptions of time periods, leaving room for children to research. The clock face is a twelve-hour analog model, with each bold tick mark denoting an hour and each minor tick representing 1/5 of an hour, or roughly 12 minutes. There is also a small card with a thin red line, representing human time on earth, a key impression for the material. This line is present on the control chart but otherwise difficult to represent in laying out the material. For this edition we've included supplementary sheets with the sectors for the Paleozoic, Mesozoic, and Cenozoic portions in traditional colors for comparison and discussion (or substitution) at the teacher's discretion. The arrows offer time periods based on ICAS data and include a certain amount of rounding off and estimating as transitions between periods may have taken a million or more years.

In revising this material, I reflected on the place of analog clock representations in a digital world. Digital time is easy to read. Analog time is challenging. The difference between the two is simple but substantial for our purposes. Digital time gives a precise link to a moment in time. Analog time places each moment in time in the context of a past, present, and future. They are different languages for the same phenomenon: the moments in time in which our children find their world.

If you have questions or comments, please don't hesitate to contact me at azoka@seacoastcenter.com.

With sincere thanks,

Gary Davidson
Azoka Company