2014 ICE CUBE COOLER PROJECT

(A printable PDF that includes all information below is available at Mr. Hanck’s web site: http://people.ucls.uchicago.edu/~ghanck/html/matter.html. The Cooler Project Checklist that shows all the steps and suggested deadlines needed to complete the project is also there.)

Each third grader must design and build a container at home that will keep a container of ice from melting for as long as possible. This project is a required assignment for all third graders in Mr. Hanck’s science classes.

All third graders will test their coolers at school on either Wednesday, December 3rd (Ruelas, Park, Weide, Palumbo classes) or on Thursday, December 4th (Davis and Sukenic classes).

• Each student's cooler has to be big enough to hold one "baby soda bottle" (approximately 12cm. tall by 2.5 cm. in diameter). (Picture of tube is on Mr. Hanck’s web site.)
• The cooler has to be designed in such a way that it is possible to check the ice to determine when the ice is completely melted. It must be possible to remove and then replace the "baby soda bottle" in the cooler.
• Commercial (store bought) coolers cannot be used. Students are expected to make their own coolers from everyday insulating materials and cannot put chemicals or any frozen or super cold materials in the cooler (no dry ice, ice, frozen metal, etc.) to keep the ice from melting.
• The cooler is meant to be an insulated container, not a refrigerator.
• Students are encouraged to test their coolers at home and to make improvements before bringing them to school. Any cooler tested at home should be tested indoors at room temperature.
• Students must bring their coolers to school on or before Monday, December 1st.
• Additional information about heat, conductors, and insulators that would be helpful to students can be found on Mr. Hanck’s Matter web page.
• This is meant to be a science experiment, not a competition or a contest.
• All students are expected to honestly and fairly report the results of their cooler experiments. A parent or responsible adult should witness any experiments completed at home and initial the Cooler Project Checklist and Time Tag to verify that the results were reported accurately.
• In cases where the reported results cannot be verified, or where the results are well beyond the range of normally expected results, students may be asked to bring their containers to school to repeat the experiment.