

Elementary Principals Mathematics and Science Leadership Academy  
2010-11

Making Time for Science

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1. Science Task: Surface area and ice. Use the real world problem at [Figure This: Real World Application](#). Give the students three small ice blocks and an ice block the equivalent to the size of all three smaller blocks. Have the students find the surface area of the block and each cube. Have them create a hypothesis about which will melt faster – the intact ice block or the cubes. Have the students perform the experiment by observing and measuring the time it takes for the block to melt and for all three cubes to melt. How does the melting time compare to the surface area exposed? Generalize the relationship. Extension: Can you create a formula to show the relationship?
2. Reflection: Take 5 minutes and reflect: How much time per day and per week is allocated to science instruction in your school in the primary grades? How about the intermediate grades? Share with your small group. Share out.
3. We have all heard that there have been instructional shifts in elementary schools since the passage of NCLB. Do you think that has been the case in your schools? Have ELA and Math instructional time increased at the expense of other content areas, including science? A look at the research: CEP report on instructional time in elementary schools. Take about 10 minutes and read the report. What message does it give you?
4. Case Study – Biodiversity In A City Schoolyard. Skim it over and look for evidences of how students and teachers allocated time in the school day for science. What is different? What is innovative? Where do you see evidences of integration with other subjects? Where do you see evidences of science as practice?
5. Two tasks – divide into small groups. Do the task. Report.