Dear Fourth Grade Parent,

We had so much fun in the STEAM Lab! We were trying to answer the question: How can computer code be written efficiently? We used a free app for the iPad called Cargo-Bot, which makes “thinking like a computer” a fun puzzle game. The goal is to tell a robot arm how to move colored boxes around on a platform into different patterns. Watching the claw do something I didn’t expect or crash into the side of the wall and break made me want to alter my programming. I learned to solve these puzzles efficiently, because shorter programs earned me more points. This lesson incorporated many standards:

Talented and Gifted Creative Problem Solving 2. The student designs, applies, evaluates, and adapts a variety of innovative strategies to when problem solving (e.g., recognizes problems, defines problems, identifies possible solutions, selects optimal solution, implements solution, and evaluates solution).

Talented and Gifted Creative Problem Solving 4. The student demonstrates skills in fluency and flexibility to solve problems or create new products.

Talented and Gifted Creative Problem Solving 10. The student monitors and reflects on the

creative process of problem solving for future applications.

Talented and Gifted Higher Order Thinking 5. The student predicts probable consequences of

decisions.

Science CS 4 Students will use ideas of system, model, change, and scale in exploring scientific

and technological matters.

a. Observe and describe how parts influence one another in things with many parts.

b. Use geometric figures, number sequences, graphs, diagrams, sketches, number lines, maps, and stories to represent corresponding features of objects, events, and processes in the real world.

The Tellus Science Museum would be a great family field trip to learn more about the effects of changing technology. Check out the Resources page of the STEAM Lab website for ideas on where to find more fun technology projects like this one, including *Alice* and *Gamestar Mechanic*. <http://oceesteamlab.weebly.com/>

With scientific creativity,

Your young problem-solver