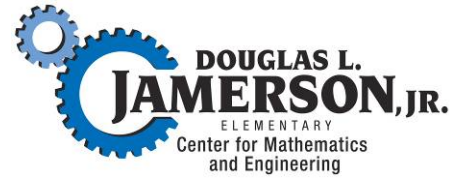
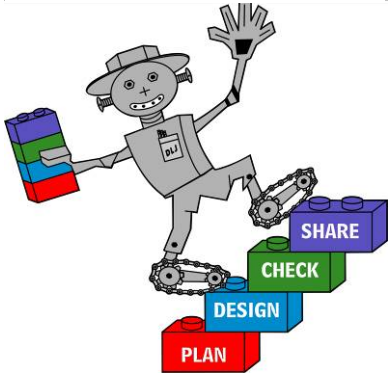


Engineering Exclusive



August 30, 2006

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A Little Engineering News

By Mrs. Little, Engineering Coach

Welcome to the first edition of Engineering Exclusive, a school-wide engineering newsletter that will be produced throughout the year. The purpose of this newsletter will be to update Jamerson families and friends on the exciting things that are happening in the world of engineering at Jamerson. Each grade level will highlight what they are doing in their classrooms in regards to their engineering units. School engineering events will be shared as well as any school engineering needs.

Today's edition will also include this school year's first The Engineering

Edge. This is an article written by our two University of South Florida engineering professors, Dr. Marilyn Barger and Dr. Richard Gilbert. They are actively involved in teaching our faculty the engineering concepts that in turn will be taught to our students through the engineering curriculum units. They write The Engineering Edges on topics that go along with Jamerson engineering units to help further educate our families.

We have many exciting things in the works. Watch for more details very soon.

Photo Release Correction

At the end of this newsletter, you will find a photo release form. Unlike previously stated in the first newsletter, we need to have this form on file each year for every student.

Please complete the form and return it to your child's teacher as soon as possible. If you do not want your child

to be photographed, please sign that section of the form. Jamerson is regularly "on display" by the media and at various engineering exhibits throughout the year for the many wonderful things that are happening.

We apologize for any confusion this might cause.

Jamerson Marble Run

On Wednesday, August 30, Jamerson plans to have a school-wide marble run. Since this newsletter is going home the same day, you will have to wait for photos and final results.

The purpose of having this event is to challenge the Jamerson community to create a school where teamwork is the standard operating procedure when working to meet a common goal. This goal is emphasized in the Nature of Science and Engineering Interaction engineering units.

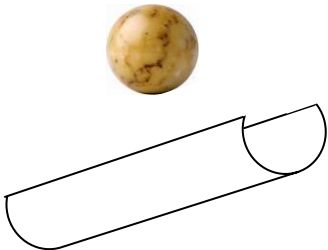
The design challenge is to move a large marble from the PE court to the portables with all 615 students taking

part in moving the marble in the shortest amount of time.

The design constraints include:

- Every student must be involved.
- Students may not touch the marble with their hands at any time. (If the marble drops, an adult will pick it up and start its forward motion again from the point at which it was dropped.)

Hopefully, the event was not rained out. If it was, we will reschedule the event. Weather permitting and everything goes as planned, ask your child for details of the event.



Kindergarten Engineering

During the first six weeks of school, the kindergarten classes will be studying animals as engineers. As you may know, each classroom has an animal mascot. Davenport's Frogs, Winsor's Bees, Maccini's Spiders, Stanton's Ants, Baker's Eagles, and Gomes' Beavers are undergoing an in depth study of their classroom mascot.

What the students learn now will support their future engineering experiences. The teachers use the study of these animals to build their classroom community and also to learn about life processes and ecosystems. The students learn about the life cycle of their animal, the basic needs of living things, and how various body parts of the animal are used in different ways to

meet the needs of that animal. The classes will study the environments of these animals and what effects their interactions with the various environments have in meeting basic needs of living things.

In September, the teachers will be sending home information regarding ordering class t-shirts featuring the kindergarten engineering animals. The plan is for the shirts to feature the animal group graphic (see left) as well as the words "Jamerson Kindergarten." Each classroom will have a special color. The teachers would like for the t-shirts to be worn on field trips and throughout the year to show excitement about engineering in kindergarten!



Meet the six engineering animal mascots of the kindergarten classes.

First Grade Engineering

First grade students are learning the Jamerson Engineering Design Process in their Nature of Science and Engineering Interaction unit. They will be given many opportunities to put the steps in practice throughout this unit as well as in the other units during the year.

One project they are doing in this unit will be to plan and design a hat for Pam and Dan, two characters they've been reading about in their reading books. The design challenge is to keep the hat on their heads while walking without using their hands to keep it in place. The class will check their hat designs,

share and compare their results. They will be given an opportunity to redesign and recheck their hats.

In addition to the design steps, the students are learning about what it means to work as a team.

Take turns.

Everyone participates.

Attitudes are positive.

Meet a common goal.

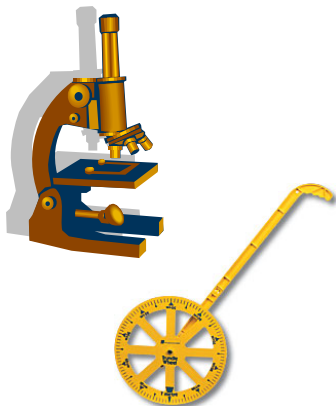


Second Grade Engineering

The second grade Nature of Science and Engineering Interaction unit will attempt to answer the following essential questions:

- Why do we observe people and things?
- Why is it important to work together?
- Why is it important to work in an organized manner?
- Why do scientists use tools?

Students spent the first week of school observing and describing themselves and their surroundings. They will be learning to use observation skills while exploring science tools that measure and magnify. Students will work in teams to design engineering projects using the Jamerson Engineering Design Process, culminating with a weeklong design challenge in which the students use what they have learned to plan, design, check, and share Lego towers.



Third Grade Engineering

Third grade began a great year of discovery learning as they dove into the Nature of Science and Engineering Interaction unit. In this unit, the students will better understand the way that science and engineering overlap and compliment one another.

Third graders will become more familiar with the Jamerson Engineering Design

Process (plan, design, check, and share) that they will be using to work through many great engineering feats during the year.

Through designing clay projects and conducting experiments in this unit, the students will be developing cooperative learning skills and strategies.



Fourth Grade Engineering

Fourth grade has been working in the unit called Nature of Science and Engineering Interaction. Throughout this unit, the students will focus on how engineers and scientists are the same and how they are different. They will be identifying traits that an engineer must have in order to be successful.

Students will be researching famous engineers and constructing a timeline that will include major events in that person's life. Along with this, the students will be practicing with many tools an engineer might use, such as microscopes, motion sensors, proscopes, and balances. These tools help

engineers make sense of their world. The students will practice using descriptive language and observational skills along with these tools. These are important concepts that will be used throughout their lives.

Many opportunities will be given to the students to use their knowledge of the Jamerson Engineering Design Process in engineering projects, such as designing and building a desk name plate and making a team mobile that meet specific design criteria. Through projects like these, learning to think and work like an engineer will become a natural way of work.



Fifth Grade Engineering

Jamerson fifth grade engineers are off to a terrific start! They have started working on the Nature of Science and Engineering Interaction unit. The young engineers have designed and marketed a household kitchen utensil.

As a team building activity and a refresher to the Jamerson Engineering Design Process, the fifth graders worked on designing and constructing a free-standing shelter that could provide shelter for all team members using only the materials provided (newspaper and masking tape). Teams worked under a stringent design constraint of having only 45 minutes to build. Do you think you could meet the challenge?

Students are currently using technology to investigate and research the contributions of various scientists and engineers to everyday household objects. This study began by the classes examining a toilet and its innovations and changes over time. If your child hasn't shared some of the interesting facts they learned, please ask him or her about their new knowledge. Students have been challenged to work in teams as well as individually to complete their research and prepare a presentation.

