“Counting” on the Community- a Video Problem of the Day Project
How do we make math relevant to our students?

• We give them problems that have a real-world context.
Small Group Activity

• Get in 6 small groups.
• Discuss how these people use math in their jobs.
• Record your ideas on chart paper.
• Hang it up on the wall.
• Choose a spokesperson to share.
How is math used in their everyday lives?
Common Core Connection

- MP4, Model with Mathematics

“Mathematically proficient students can apply the mathematics they know to solve problems arising in everyday life, society, and the workplace. They routinely interpret their mathematical results in the context of the situation and reflect on whether the results make sense, possibly improving the model if it has not served its purpose” (CCSS, 2010).
What does research say?

• Students do not readily transfer classroom knowledge of mathematics to real world situations.

(Boaler, 1993; Stocker, 2006; Ryan et al., 2007).
### Second Grade Student Attitudes Towards Math

Average Student Response

<table>
<thead>
<tr>
<th>Category</th>
<th>Pre-assessment</th>
<th>Post-Assessment</th>
<th>Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Importance</td>
<td>4.2</td>
<td>4.6</td>
<td>0.4</td>
</tr>
<tr>
<td>Usefulness</td>
<td>3.6</td>
<td>4.3</td>
<td>0.7</td>
</tr>
</tbody>
</table>

Values were based on a scoring system from 1 to 5, going from very negative (1) to very positive (5), and 3 being neutral. Values above 3 were considered positive.
What has been tried so far?

- Tasks have been modified by adding an artificial “real-world” context.
- These problems include contrived and irrelevant situations to problems that adults face (Palm, 2008).
- These types of problems have little relevance to students’ lives and generally do not transfer over to solving similar type problems.
Example problems

• Mike went to sticker station he bought 28 animal stickers. How many more does he need to have 100 animal stickers. (3rd grade *Investigations*).
Example problems

• 4 friends want to share 3 loaves of bread. How much of a whole loaf does each person get? (5th grade *Envisions Math*)

• If a beaver weighs over 55 lbs, about how many beavers weigh the same as a 155 lb adult? (4th grade *Envision Math*)
What does research say?

• Students do not believe that the mathematics used in school, and the mathematics used in the real world, are consistent.

• They tend to approach school mathematics in a superficial, procedural way, rather than through reasoning (Palm, 2008)
Student Beliefs

• Math problems have only one solution

• Include all relevant information

• Easily solvable
Reasons for these beliefs

• Lack of real world experience (Palm, 2008).

• They do not know the types of problems that adults solve, or the context within which they solve them.

• Artificial problem solving experiences in school.
What can we do?

• Our answer to this question is a video problem of the day program.

• https://sites.google.com/a/johnston.k12.nc.us/mrs-hiatt-s-problem-of-the-day/
How it works

- Problems are recorded, then loaded onto a Google Site that is linked to our school web page.
- New problems are announced during morning announcements.
- Teachers can access the videos at any time during the day.
- Selected students record their solutions using Doceri® and solutions are posted.
What do students say about the program?

• I really liked it because it’s cool hearing about other people’s jobs.
• You don’t just add up numbers. The Eiffel Tower problem used meters. She didn’t just say you add numbers. She told a story.
• It was fun because you get to see what it was like to be in other people’s jobs.
• It’s pretty cool because other people get to make up their own math problems. It’s a great way to show problem solving.
“The Good Morning Powhatan Initiative has been a wonderful addition to our school. It has opened doors to the community and allowed business leaders to become a part of our instructional program.”

Sharon Johnson, Principal
How can you implement your own VPOD?

• Tell your teachers, PTA and community all about it!
• Send out a form letter
• Enlist help from your Chamber of Commerce
• Set up video booth
Technology

- Google site
- Doceri®
- Ipads or mini ipads
- Grant
Resources

Research

Graphics

- [link](http://www.degreefinders.com/jobs/how-to-become-a-banker.html)
- [link](http://si.wsj.net/public/resources/images/PJ-BJ829_INFORM_G_20120924152630.jpg)
- [link](http://ia.media-imdb.com/images/M/MV5BMTU0Mzg4MDgzNl5BMl5BanBnXkFtZTcwMDkxNzlwMw@@._V1._SX214_CR0,0,214,314_.jpg)
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- [link](http://www.aei-ideas.org/wp-content/uploads/2013/02/2.8.13-School-Children-Teacher.jpg)
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Questions and Comments