



Using Technology Problems of the Week to Develop Mathematical Practices

Session 455: 11:00 - 12:00, Friday, April 27, 2012

Suzanne Alejandre, The Math Forum @ Drexel, Philadelphia, PA

Erin Igo, McCullough Middle School, New Castle, DE

Marie Hogan, Traweek Middle School, West Covina, CA



<http://mathforum.org/nctm/2012/session455.html>

Introductions

Let's Do Some Math!

Scenario Only

[View graphs](#)

What do you notice? What do you wonder?

Java Applet

[Runner Simulation Tool](#) from NCTM's Standards & Focal Points: *5.2 Understanding Distance, Speed, and Time Relationships Using Simulation Software*

Present the Problem

[tPoW: Runners](#)

Let's Reflect

How might we help students develop their Mathematical Practices?

How might we:

- develop questioning techniques that use students' responses to help inform the next steps of classroom instruction?
- maximize each student's "talk time" by using pairs and groups and targeted tasks?
- make the most of student accountability by encouraging students to engage in viable arguments and discuss their reasoning with others?

Stories from the Classroom

Quick Overview of Other tPoWs

Once you've set up your (free) [tPoW login](#), view these tPoWs:

[Balloon Booths](#)

[Building a House](#)

[Galactic Exchange](#)

[How Many Cubes?](#)

[Munching Bugs](#)

[Patio Stones](#)

[Tangrams](#)

[Temperature Change](#)

[Traffic Jam](#)

[Types of Triangles](#)

Resources - Problem Solving and Communication

Technology Problems of the Week (tPoWs)

(free but require login)

Math Forum **Videos**

Videos to prompt problem solving and/or demonstrate Math Forum's strategies in classrooms.

Suzanne's Classroom Videos

Video Clip to Encourage Students' Math Talk: Charlie's Gumballs

Video Clip to Encourage Students' Math Talk: Val's Values

Max Ray: Why 2 > 4: A Proof by Induction

Annie Fetter: Ever Wonder What They'd Notice?

Steve Weimar: Why Did You Do That?

Math Forum **Problem Solving Articles** (PDF downloads)

Articles that we have had published about problem solving with students.

Problem Solving--It Has to Begin with Noticing and Wondering Focus on Student Practice

Writing to Develop Understanding: The Math Forum @ Drexel's
PoWs

Math Forum **Blogs**

Thoughts, ideas, links, and opportunities to discuss developing students' problem solving and communication practices.

Elementary Mathematical Practices

Problems of the Week Blog (free scenarios posted weekly)

Suzanne at the Math Forum

The Max Ray Blog

Math Forum **Orientation Sessions** (free)

Each self-paced, online, asynchronous session includes activities to help teachers learn about the different features of these Math Forum services: Math Tools, Technology PoWs, PoWs

<http://mathforum.org/pd/#sessions/>

Making Effective Use of **Math Forum Resources**

focused on Grades K-2 and 3-5 <http://mathforum.org/pd/tour.html>

focused on Grades 6-8 and 9-12

<http://mathforum.org/pd/tour2.html>

Contact Information

Suzanne Alejandre -- suzanne@mathforum.org

Erin Igo -- eigo@colonial.k12.de.us

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